

The logo for NORKA, featuring the word "NORKA" in a bold, red, sans-serif font. The letters are outlined with a thick red border, and the top and bottom bars of the letters are slightly thicker than the vertical stems.

LED PRODUCT RANGE 2026/2027

High-quality lighting solutions
for extreme conditions

Valid from 1st of April 2026

MADE IN GERMANY



U1 Norderstedt Mitte

Ohlstedt / Großhansdorf U1

NORKA LED LUMINAIRES

The solution for demanding surroundings

What do you expect from lighting? Good visibility, high efficiency and a long service life? These requirements are not always easy to meet in technical installations. High temperatures, extreme humidity and moisture or harmful gases attack plastics and electronics. The consequences are reduced light output, shorter service life or luminaire failure.

HIGH PROTECTION REQUIREMENTS: OUR SPECIALITY

NORKA specialises in these difficult environmental conditions and offers LED luminaires that can withstand dust, moisture, extreme temperatures and other harmful influences over the long term.


LUMINAIRES AS INDIVIDUAL AS YOUR PROJECT: LIGHT PERFECTED.

Thanks to our wide range of variants and options, we can offer you products that are optimally tailored to your project.


MADE IN GERMANY.

Our development, testing laboratory and production facilities are located in Germany. The advantage: we know our luminaires inside out. This enables us to support you as a solution provider, even in tricky cases.

FIT FOR THE FUTURE: EXTEND THE LIFE OF YOUR LUMINAIRES WITH easy eXchange

Thanks to their high durability, NORKA luminaire housings often outlast the life cycles of the electronic components installed in them. With our  easy eXchange concept, you can replace outdated components, thereby avoiding new purchases and conserving resources.

EFFICIENT LIGHTING: XARA LIGHTING CONTROL

The precise conversion of existing systems to LED and the use of lighting control saves energy. From consulting on hardware and software to commissioning and training, our  XARA® lighting control system provides you with everything you need from a single source.

We look forward to working with you to realise projects in challenging environments!








Nicole Sass



Florian Schönfeld



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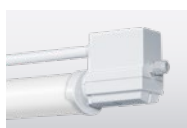
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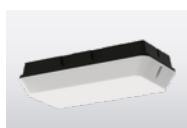
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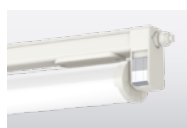
LUMINAIRES FOR RECESSED MOUNTING AND INSTALLATION



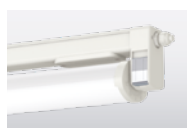
BEBRA LED 62



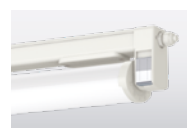
BERLIN LED 66



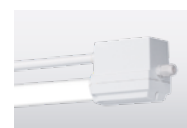
BITBURG LED 76



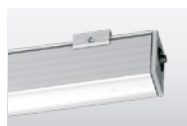
BITBURG LED EXTREME 78



BITBURG LED INDUSTRY 80



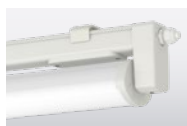
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BRIG 84



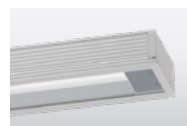
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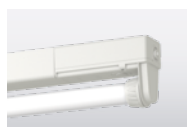
FULDA LED 110



GENF 112



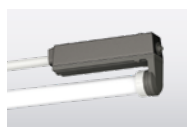
GERA LED 114



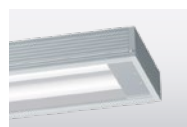
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JENA LED 120



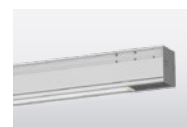
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MÜNCHEN LED 140



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SPANDAU LED 168



TALON 174



LUMINAIRES FOR EXPLOSION-PROOF AREAS



BASEL LED 60



BERN LED EX 72



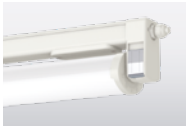
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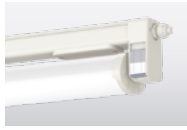
WEIMAR 184



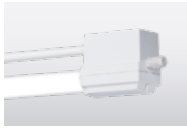
HIGH AND LOW TEMPERATURE LUMINAIRES



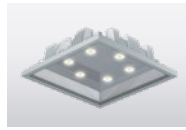
BITBURG LED EXTREME **78**



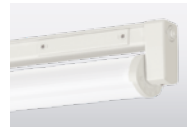
BITBURG LED INDUSTRY **80**



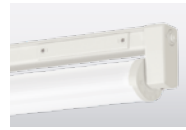
BREMERHAVEN LED **82**



CENTAURUS **88**



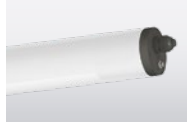
ERFURT LED EXTREME **102**



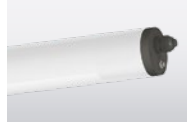
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EMERGENCY AND SAFETY LUMINAIRES + EMERGENCY LIGHTING SUPPLY UNIT



COBURG LED **90**



MEPPEN **136**



PASSAU LED **148**



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STEGLITZ **172**



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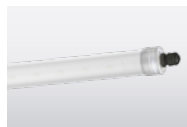
TUBULAR LUMINAIRES



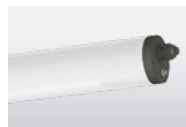
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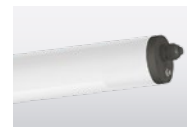
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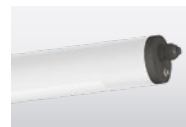
LUZERN 38 LED **134**



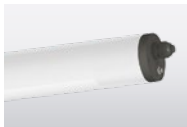
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CENTAURUS 88



MERKUR LED 138



POLARIS 162



SPICA LED 170



URANUS 180



URANUS PF 182



VANDALISM-PROOF LUMINAIRES



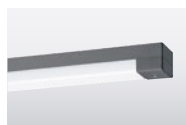
BELFAST 64



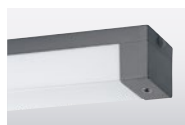
PHALANX 430 150



PHALANX 620 152



PHALANX LINEAR 75 154



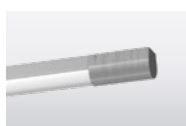
PHALANX LINEAR 115 156



PHALANX LINEAR 200 158



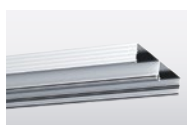
PHALANX LINEAR 240 160



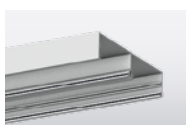
ZUG LED AL 192



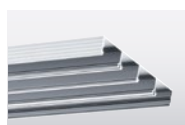
TRUNKING SYSTEM AND MOUNTING RAILS



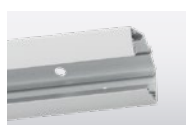
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TRUNKING SYSTEM BELFAST 208



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NORKA is your specialist when it comes to lighting for extreme ambient conditions such as water and moisture, dust, high temperatures or chemical load.

LIGHT SOLUTIONS FOR EVERY AREA

Our themed ranges will guide you along the way

High temperatures, extreme humidity, moisture or harmful gases – these are just some of the physical challenges that luminaires are exposed to in tough environments. This may result in lower luminous flux, shorter service life or luminaire failures. NORKA is an expert when it comes to these tricky environmental conditions. For over 75 years, we have been developing and producing luminaires in Germany that withstand dust, moisture, extreme temperatures and other harmful influences over the long term.



Rail and local public transport
10



Industry
12

REQUIREMENTS AND TECHNICAL INFORMATION

42

Sustainable light

Our luminaire housings are designed to ensure a long service life. That's why you can usually replace the inner workings of NORKA luminaires – in fact, **eXchange** makes this job really simple.



Public buildings
16



Water industry
18



Food production
20

38

eXchange XARA® lighting control system

To meet all requirements, a well-designed lighting control system is the ideal solution. For example, different light scenes can be controlled from one control panel.

22

IFS and HACCP

Hygiene and safety play a major role, especially in the food sector. Manufacturer's declarations provide guidance on the suitability of the respective products.





Emergency lighting 32

54

Additional information on emergency lighting

Emergency lighting can be provided in different designs. Environments with extreme temperatures in particular require suitable designs and solutions.



Tunnel and traffic 30

50

Protection against environmental factors

Extreme environments require special precautions and protection ratings and classes, such as labelling for impermeability or impact resistance, not to mention knowledge of the chemical resistance of the materials.



Sports and events venues 26

28

Chlorine and more

Sports facilities, especially indoor swimming pools, place special demands on lighting technology. Resistance to chlorine is essential in this case. In sports facilities in general, flicker-free lighting and ball impact resistance are required.



Agriculture and animal husbandry 24

47

Temperature and service life

Temperature plays a special role in LED illumination and its service life. The service life specifications provide precise information about the durability of the LED.

40

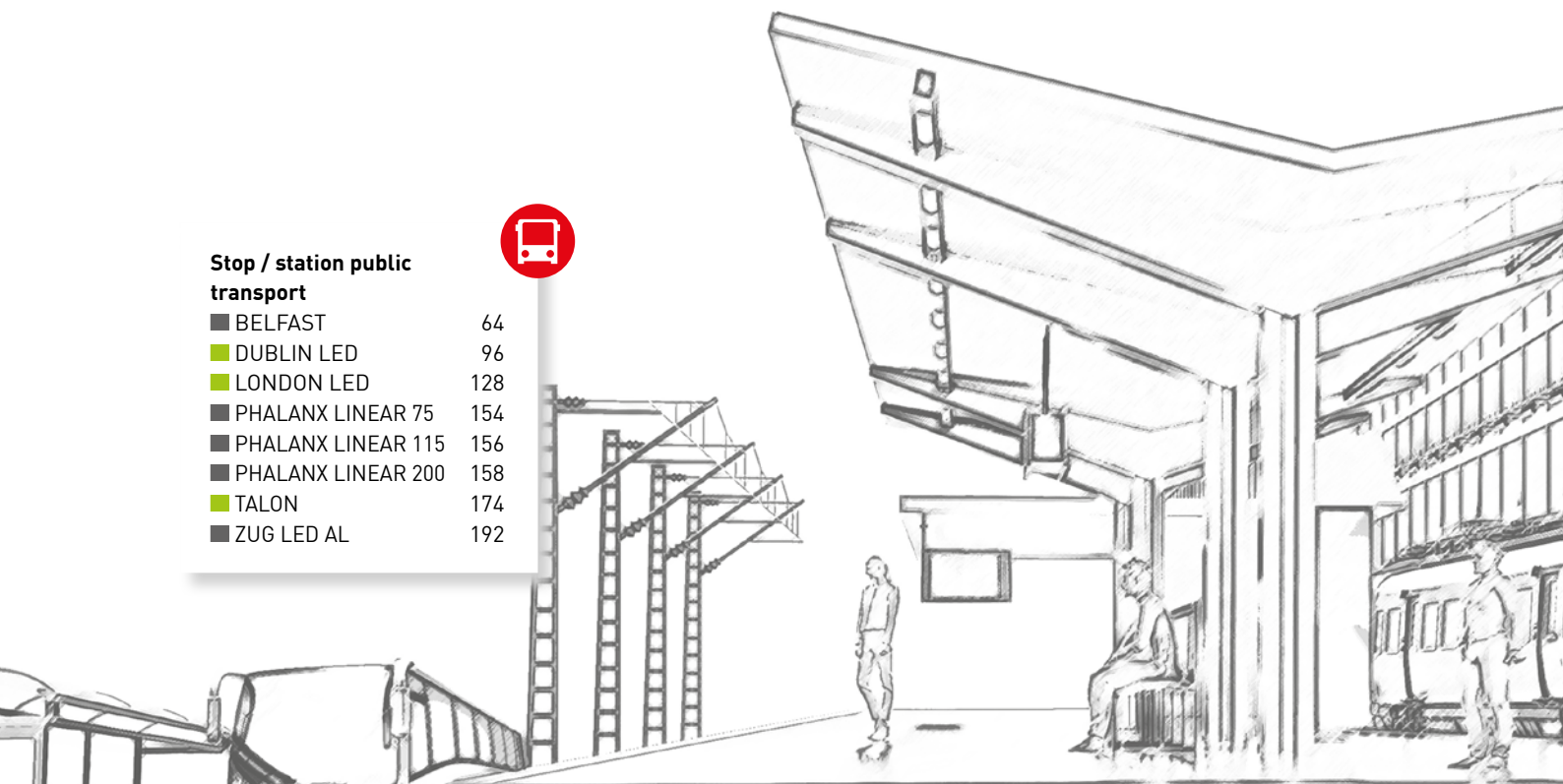
Technical data and options

To provide a more in-depth picture, we explain technical features and options such as temperature specifications or transient filters in more detail here.

LIGHT SOLUTIONS FOR BUS AND TRAIN OPERATIONS

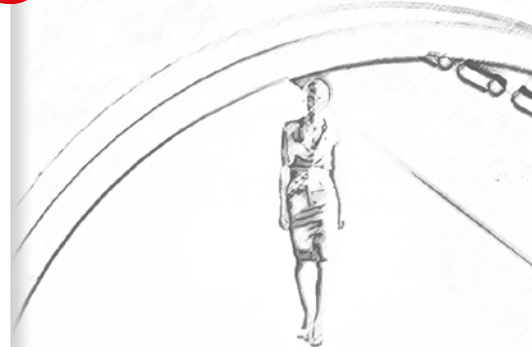
Stop / station public transport

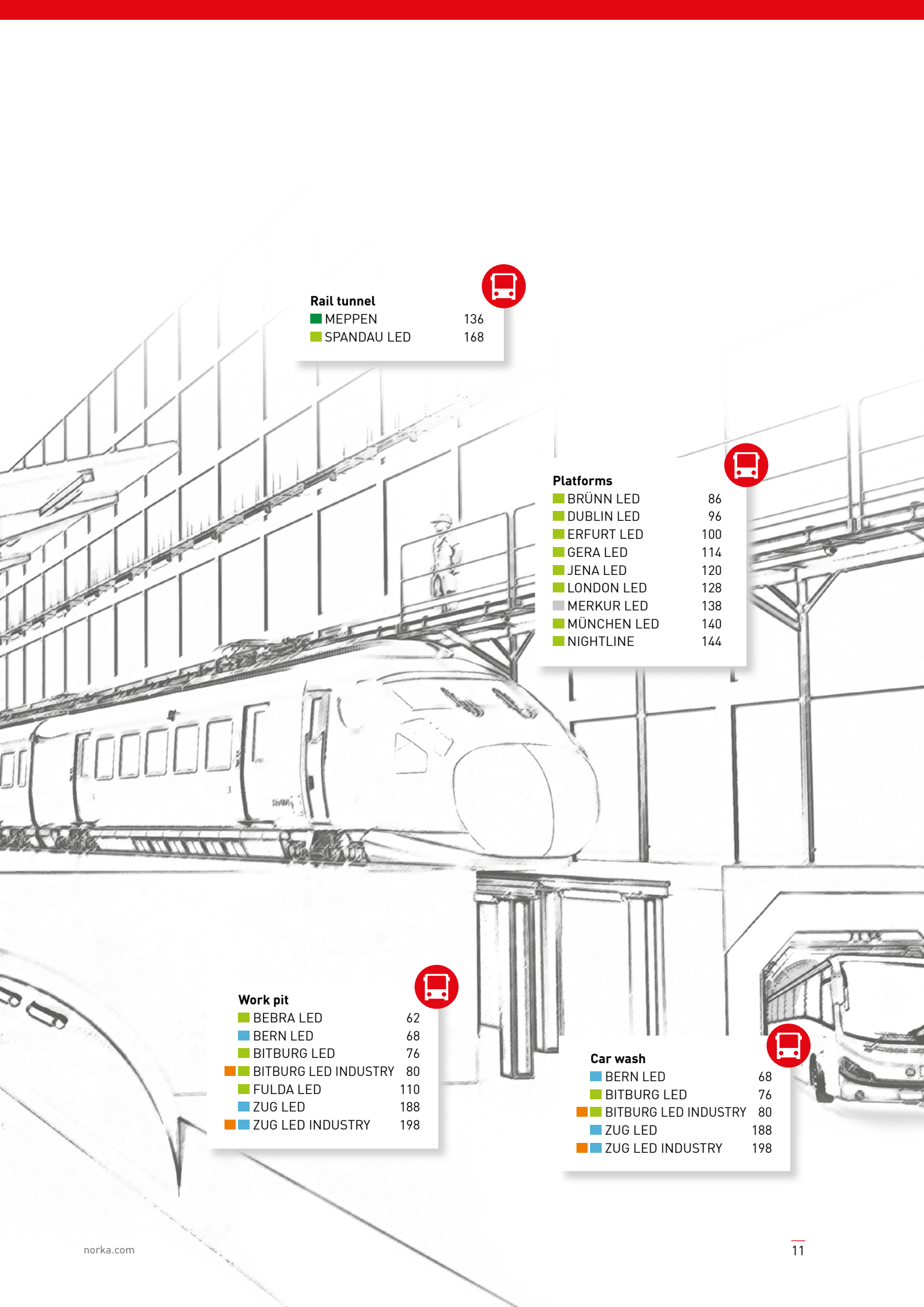
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Pedestrian tunnel

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| ■ ERFURT LED | 100 |
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Work pit

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| ■ BITBURG LED | 76 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ FULDA LED | 110 |
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| ■ ZUG LED INDUSTRY | 198 |



Car wash

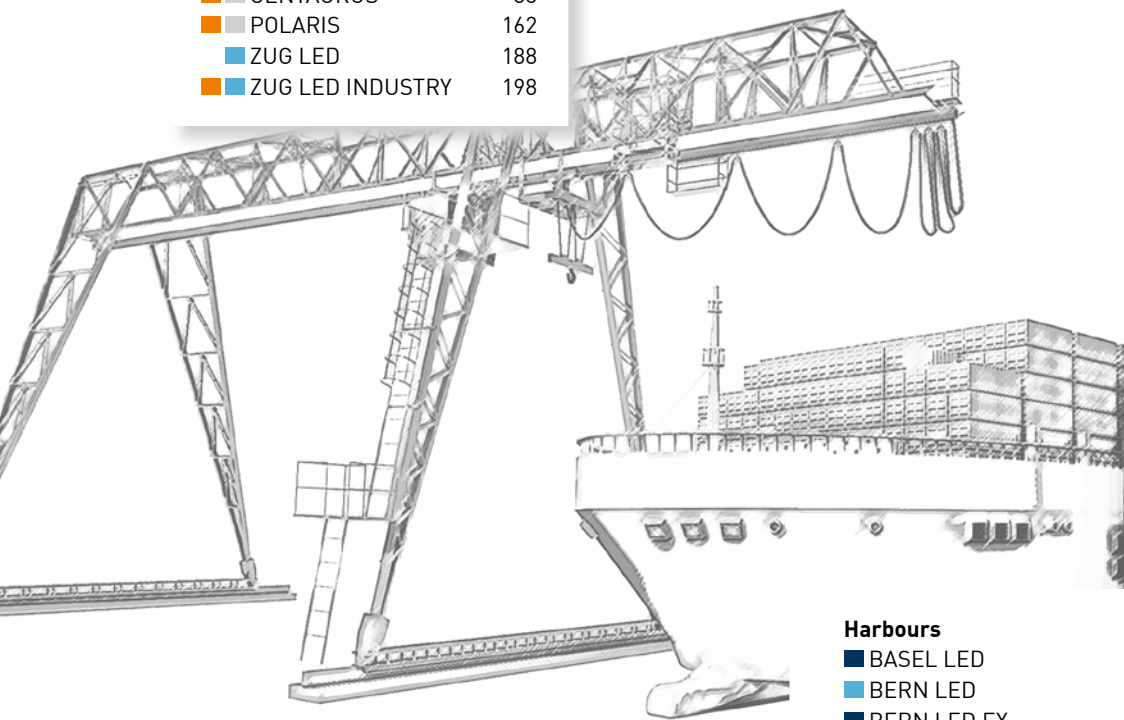
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| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
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LIGHT SOLUTIONS FOR INDUSTRIAL APPLICATIONS

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| ■ BERN LED | 68 |
| ■ CENTAURUS | 88 |
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Harbours

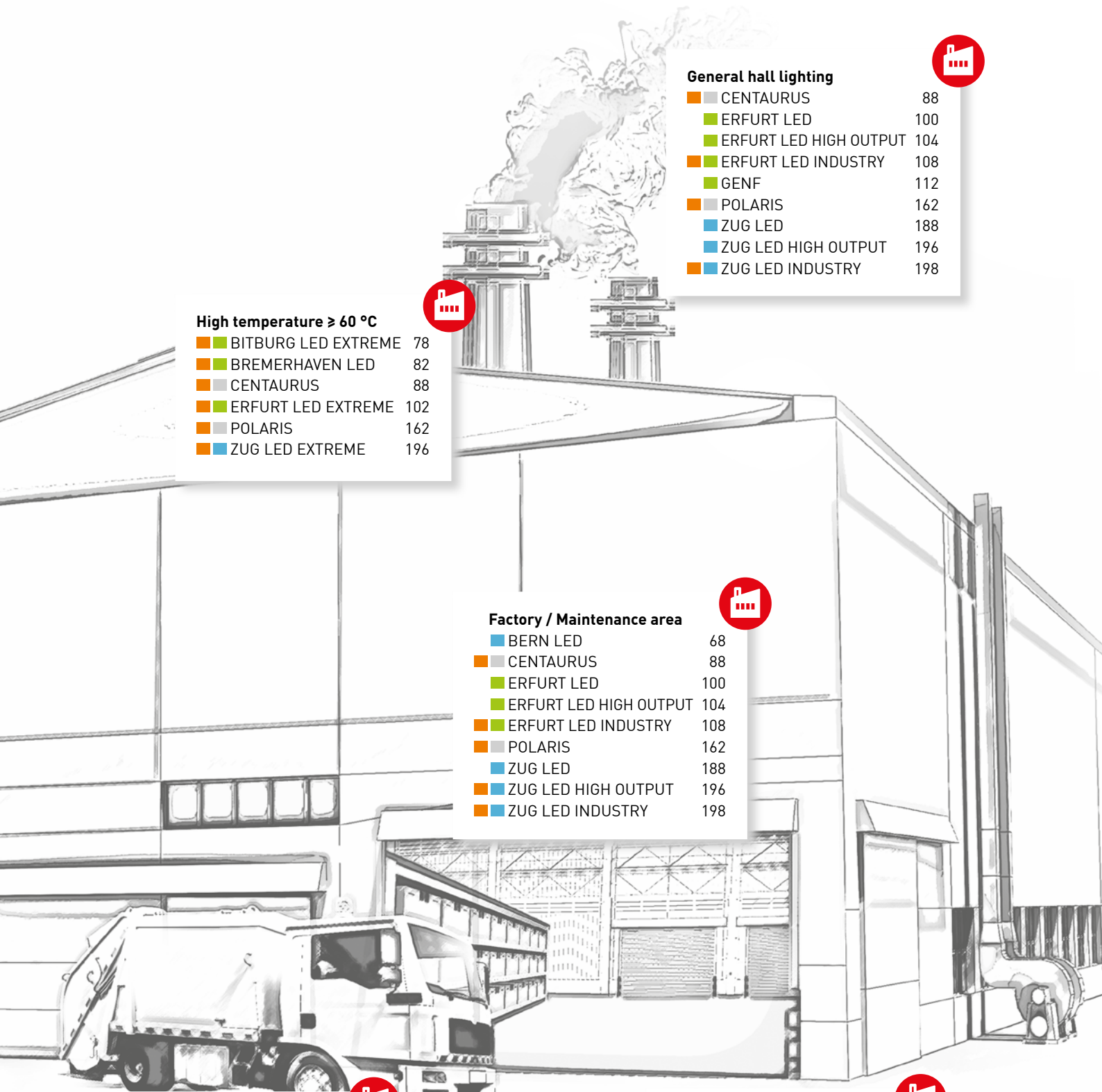
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| ■ BASEL LED | 60 |
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Salt storage

| | |
|--------------|-----|
| ■ ERFURT LED | 100 |
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High temperature $\geq 60\text{ }^{\circ}\text{C}$

| | |
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General hall lighting

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| ■ ERFURT LED | 100 |
| ■ ERFURT LED HIGH OUTPUT | 104 |
| ■ ERFURT LED INDUSTRY | 108 |
| ■ POLARIS | 162 |
| ■ ZUG LED | 188 |
| ■ ZUG LED HIGH OUTPUT | 196 |
| ■ ZUG LED INDUSTRY | 198 |



Waste disposal / Recycling

| | |
|-------------|-----|
| ■ CENTAURUS | 88 |
| ■ LUGANO | 132 |
| ■ POLARIS | 162 |



Underground mining

| | |
|----------------------|-----|
| ■ ERFURT LED EXTREME | 102 |
|----------------------|-----|



LIGHT SOLUTIONS FOR INDUSTRIAL APPLICATIONS



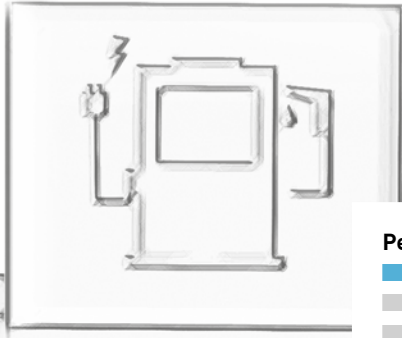
| | |
|--------------------|-----|
| Paint shops | |
| ■ BASEL LED | 60 |
| ■ BERN LED EX | 72 |
| ■ POLARIS | 162 |



Explosion-endangered areas

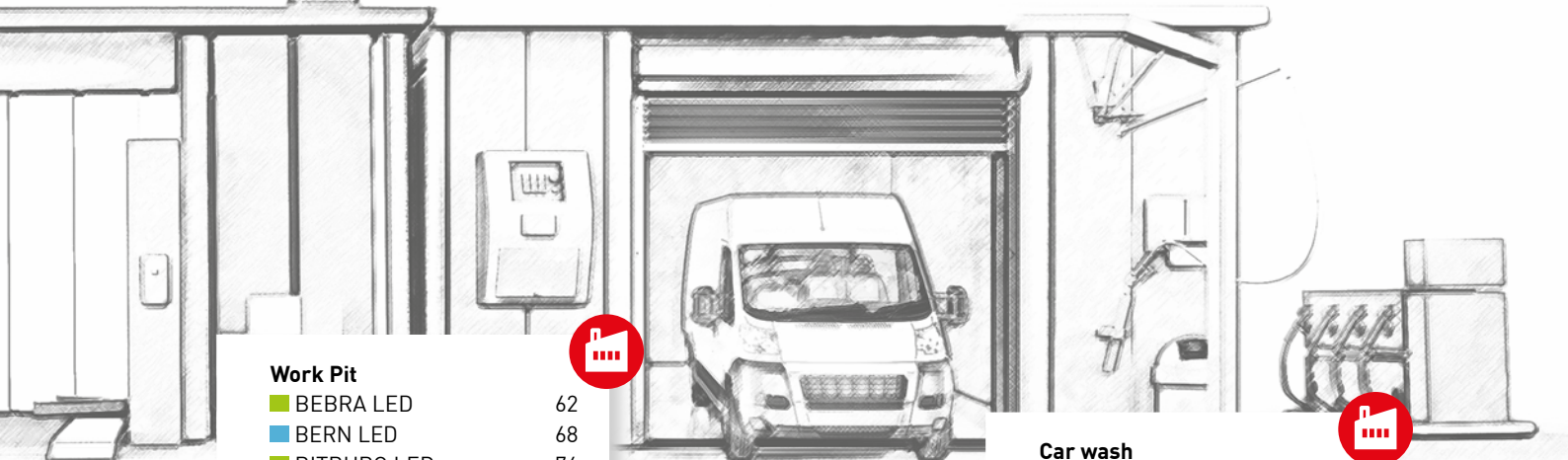
| | |
|---------------|-----|
| ■ BASEL LED | 60 |
| ■ BERN LED EX | 72 |
| ■ LAUSANNE | 126 |
| ■ WEIMAR | 184 |





Petrol stations

| | |
|---------------|-----|
| ■ BERN LED EX | 72 |
| ■ URANUS | 180 |
| ■ URANUS PF | 182 |



Work Pit

| | |
|------------------------|-----|
| ■ BEBRA LED | 62 |
| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ FULDA LED | 110 |
| ■ ZUG LED | 188 |
| ■ ZUG LED INDUSTRY | 198 |

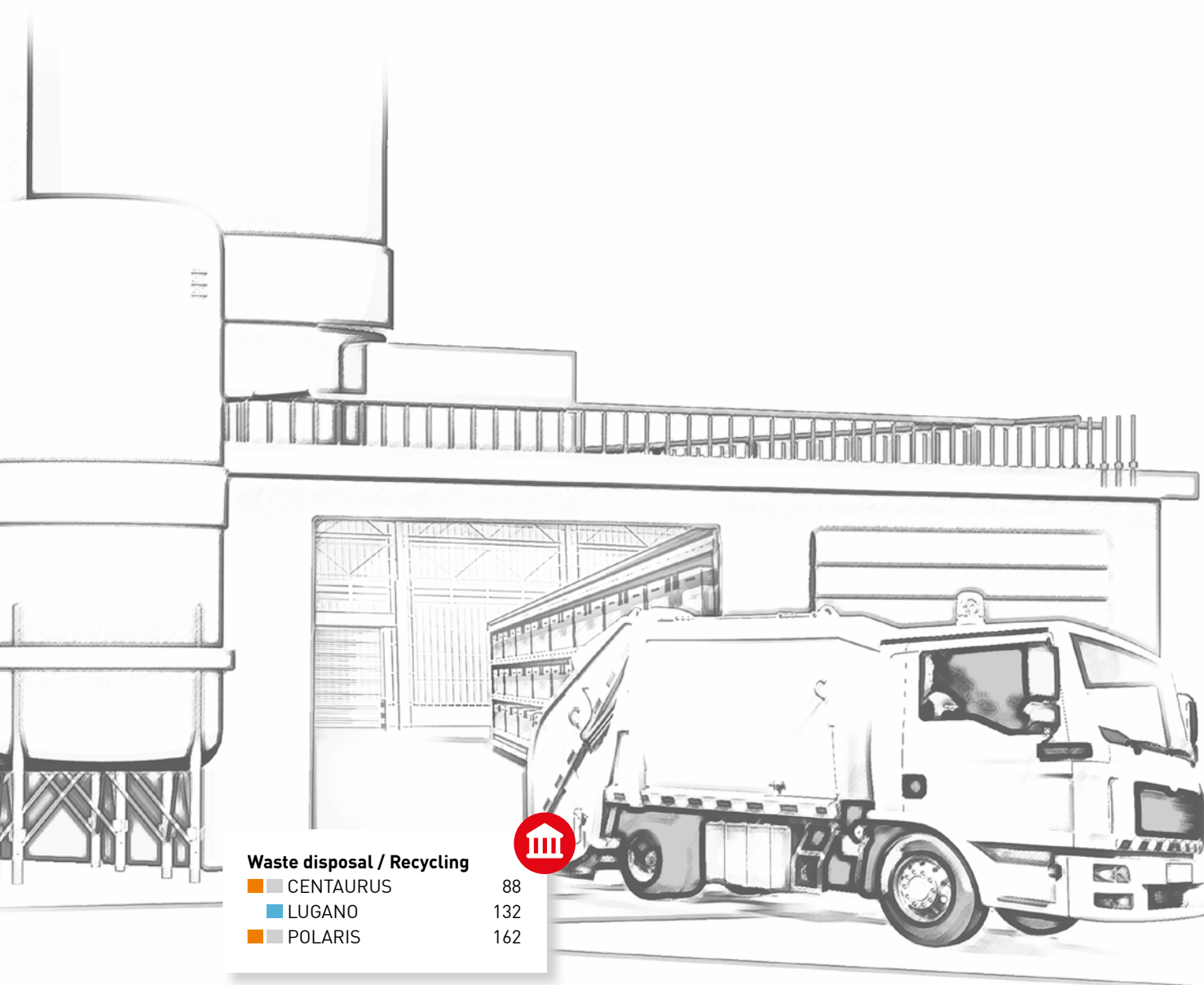


Car wash

| | |
|------------------------|-----|
| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ ZUG LED | 188 |
| ■ ZUG LED INDUSTRY | 198 |



LIGHT SOLUTIONS FOR STATE AND MUNICIPALE FACILITIES





Pedestrian tunnel

| | |
|----------------------|-----|
| ■ BELFAST | 64 |
| ■ BRÜNN LED | 86 |
| ■ DUBLIN LED | 96 |
| ■ LONDON LED | 128 |
| ■ MERKUR LED | 138 |
| ■ MÜNCHEN LED | 140 |
| ■ PHALANX 430 | 150 |
| ■ PHALANX 620 | 152 |
| ■ PHALANX LINEAR 75 | 154 |
| ■ PHALANX LINEAR 115 | 156 |
| ■ PHALANX LINEAR 200 | 158 |
| ■ PHALANX LINEAR 240 | 160 |
| ■ ZUG LED AL | 192 |



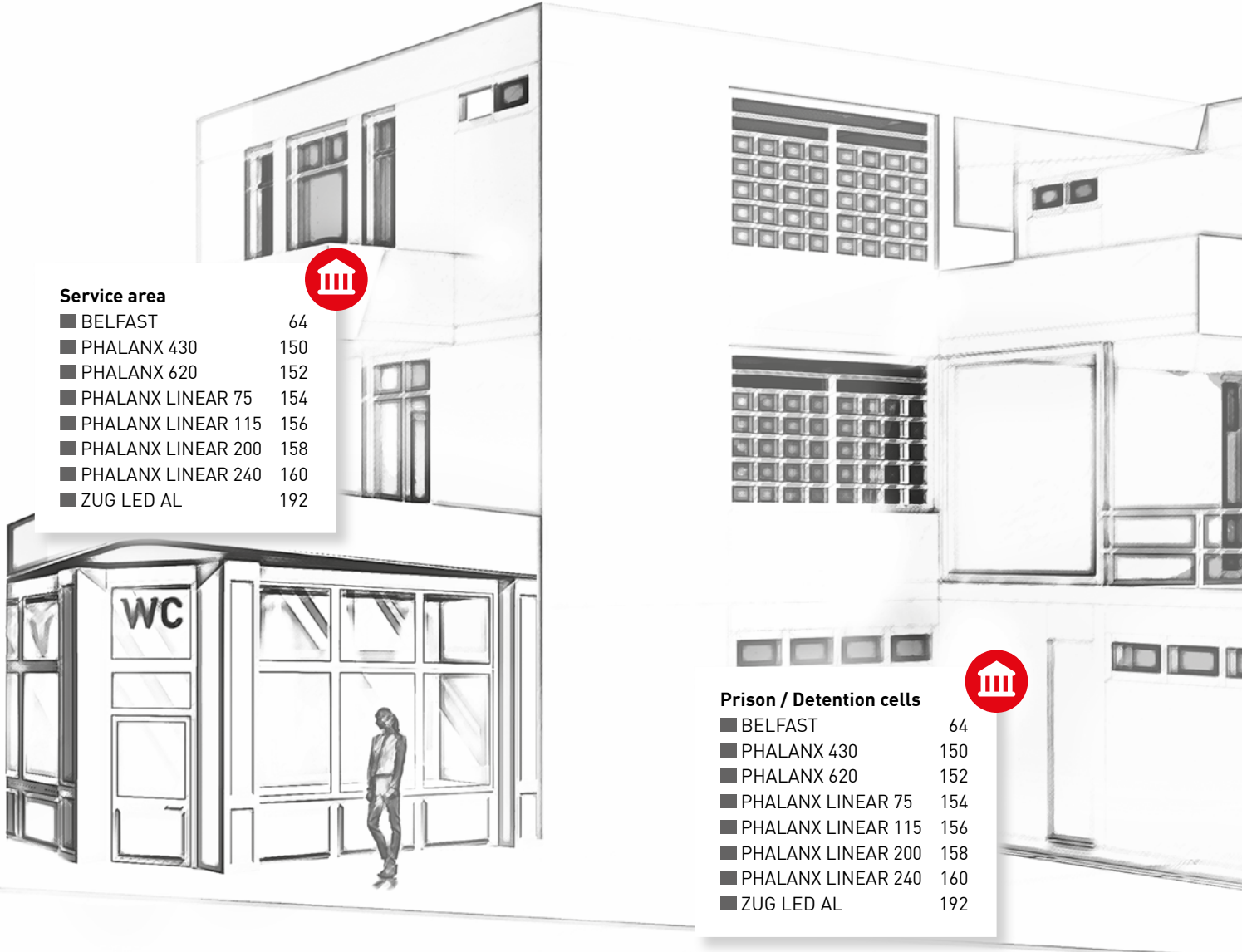
Service area

| | |
|----------------------|-----|
| ■ BELFAST | 64 |
| ■ PHALANX 430 | 150 |
| ■ PHALANX 620 | 152 |
| ■ PHALANX LINEAR 75 | 154 |
| ■ PHALANX LINEAR 115 | 156 |
| ■ PHALANX LINEAR 200 | 158 |
| ■ PHALANX LINEAR 240 | 160 |
| ■ ZUG LED AL | 192 |



Prison / Detention cells

| | |
|----------------------|-----|
| ■ BELFAST | 64 |
| ■ PHALANX 430 | 150 |
| ■ PHALANX 620 | 152 |
| ■ PHALANX LINEAR 75 | 154 |
| ■ PHALANX LINEAR 115 | 156 |
| ■ PHALANX LINEAR 200 | 158 |
| ■ PHALANX LINEAR 240 | 160 |
| ■ ZUG LED AL | 192 |



SOLUTIONS FOR WATER SUPPLIERS AND WASTE WATER TREATMENT PLANTS



**Waste water treatment
plants: Mechanical cleaning**

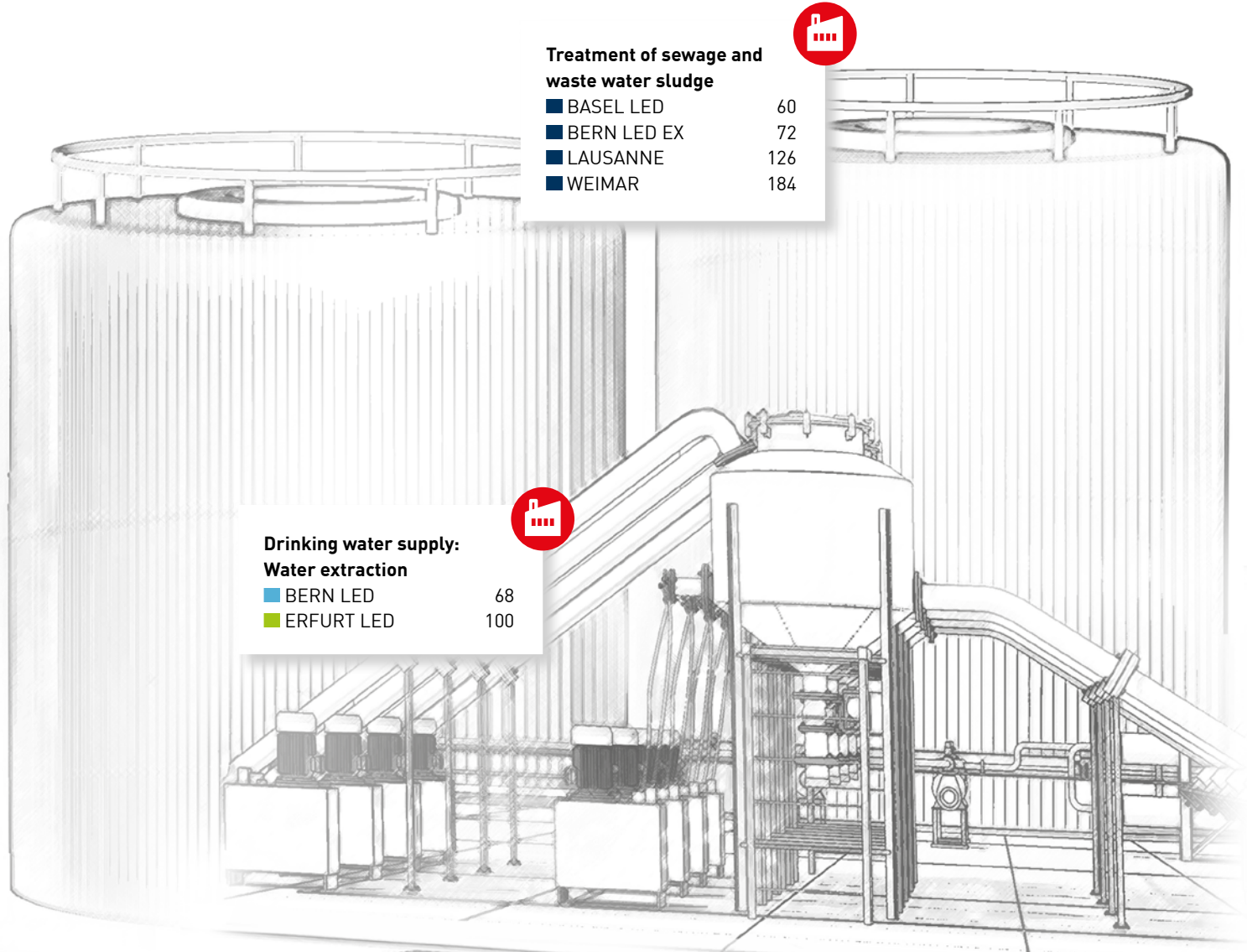
| | |
|--------------|-----|
| ■ ERFURT LED | 100 |
| ■ ZUG LED | 188 |



**Waste water treatment
plants: Biological &
chemical cleaning**

| | |
|-----------------|-----|
| ■ COESFELD | 92 |
| ■ LUGANO | 132 |
| ■ LUZERN 38 LED | 134 |





Treatment of sewage and waste water sludge

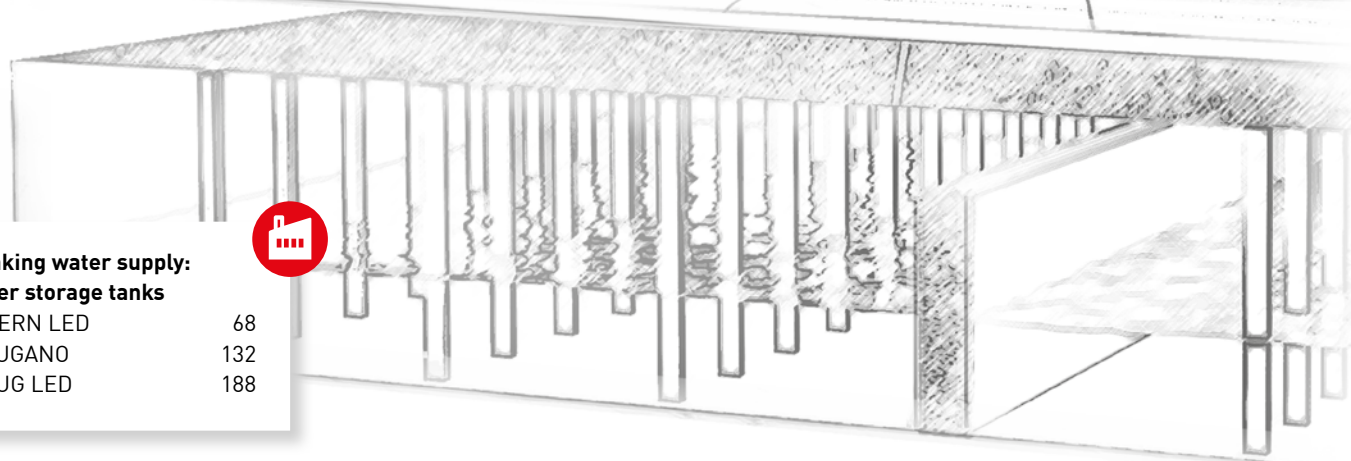


| | |
|---------------|-----|
| ■ BASEL LED | 60 |
| ■ BERN LED EX | 72 |
| ■ LAUSANNE | 126 |
| ■ WEIMAR | 184 |

**Drinking water supply:
Water extraction**



| | |
|--------------|-----|
| ■ BERN LED | 68 |
| ■ ERFURT LED | 100 |

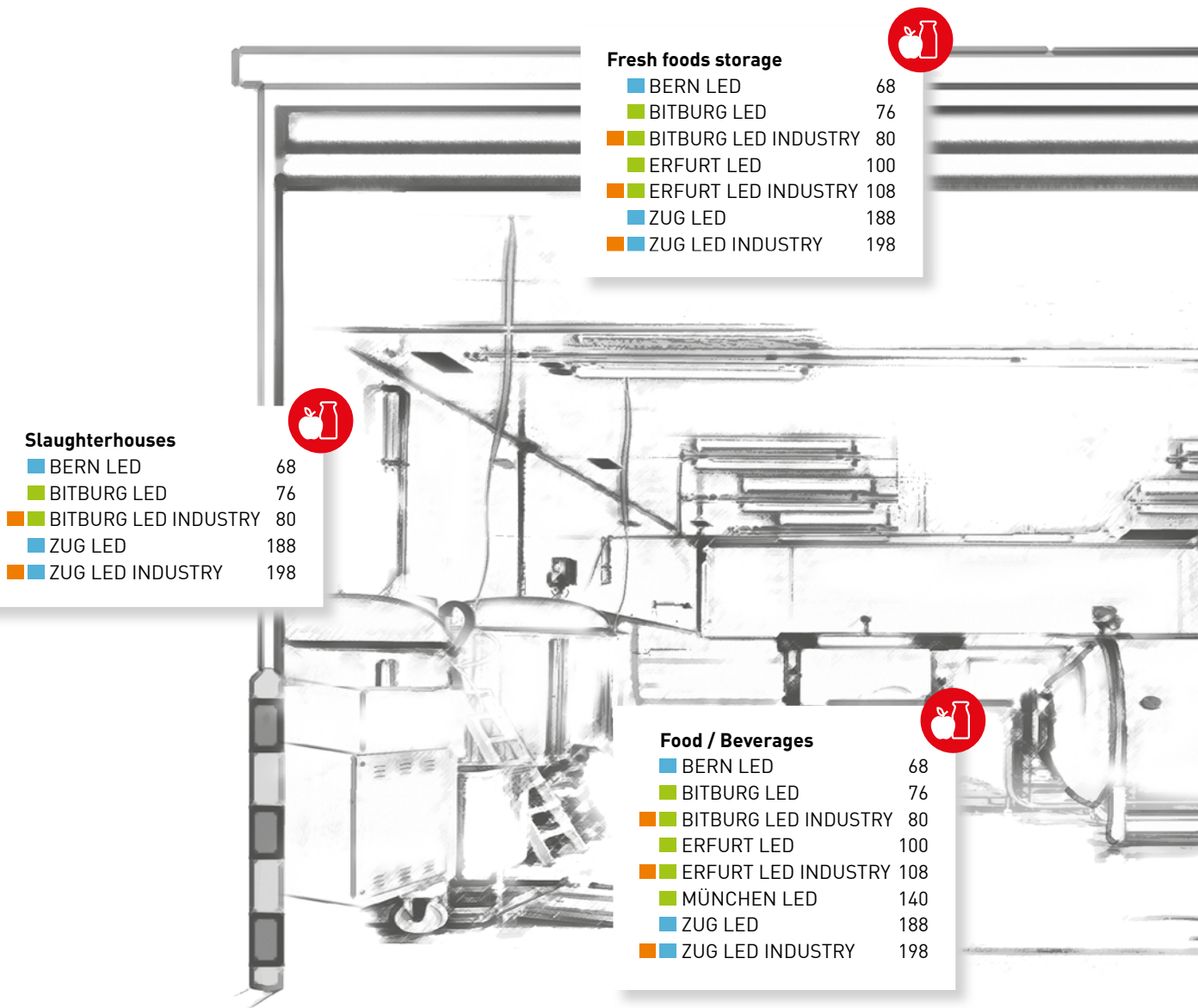


**Drinking water supply:
Water storage tanks**



| | |
|------------|-----|
| ■ BERN LED | 68 |
| ■ LUGANO | 132 |
| ■ ZUG LED | 188 |

LIGHT SOLUTIONS FOR THE FOOD-PROCESSING INDUSTRY



Slaughterhouses

| | |
|------------------------|-----|
| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ ZUG LED | 188 |
| ■ ZUG LED INDUSTRY | 198 |


Fresh foods storage

| | |
|------------------------|-----|
| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ ERFURT LED | 100 |
| ■ ERFURT LED INDUSTRY | 108 |
| ■ ZUG LED | 188 |
| ■ ZUG LED INDUSTRY | 198 |

Food / Beverages


| | |
|------------------------|-----|
| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ ERFURT LED | 100 |
| ■ ERFURT LED INDUSTRY | 108 |
| ■ MÜNCHEN LED | 140 |
| ■ ZUG LED | 188 |
| ■ ZUG LED INDUSTRY | 198 |

High temperature $\geq 60\text{ }^{\circ}\text{C}$




| | |
|-----------------------|-----|
| ■ BITBURG LED EXTREME | 78 |
| ■ BREMERHAVEN LED | 82 |
| ■ CENTAURUS | 88 |
| ■ ERFURT LED EXTREME | 102 |
| ■ POLARIS | 162 |
| ■ ZUG LED EXTREME | 196 |

Low temperature $< -25\text{ }^{\circ}\text{C}$



| | |
|------------------------|-----|
| ■ BITBURG LED EXTREME | 78 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ CENTAURUS | 88 |
| ■ ERFURT LED EXTREME | 102 |
| ■ ERFURT LED INDUSTRY | 108 |
| ■ POLARIS | 162 |
| ■ ZUG LED EXTREME | 196 |

Cold store ($\geq -25\text{ }^{\circ}\text{C}$)



| | |
|---------------|-----|
| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
| ■ CENTAURUS | 88 |
| ■ ERFURT LED | 100 |
| ■ POLARIS | 162 |
| ■ ZUG LED | 188 |



IFS AND HACCP

Requirements in food production

HACCP AS A PART OF IFS

IFS, a conglomerate of commercial and industrial companies, sets international standards for production and services in various industries: from food production and logistics to the manufacturing of packaging materials or personal care products. These standards are developed and recognised by trade and industry to ensure maximum product safety. To meet the IFS Food standard, for example, the HACCP concept must be applied.

CONFORMITY FROM START TO FINISH

IFS Food certification is often demanded as a requirement for food suppliers. HACCP and IFS requirements not only apply to the IFS-certified company itself, but also to suppliers of equipment, machines or packaging materials.

UNPACKAGED FOOD

Unpackaged food poses a particular challenge: injuries caused by contaminants in food can have serious consequences. Great care must therefore be taken when handling unpackaged goods, including lighting.

> Risk of breakage minimised

To prevent contamination, luminaires must be secured with splinter protection. Alternatively, the risk of breakage can be minimised by the mounting. The use of fracture proof materials lends itself particularly well here. Our profiles made of fibreglass-reinforced polymer and polycarbonate minimise the risk of contamination.

> Captive components

Luminaire components should not be able to contaminate the goods. NORKA designs use captive screws or arrester threads to provide extra safety during mounting and maintenance.

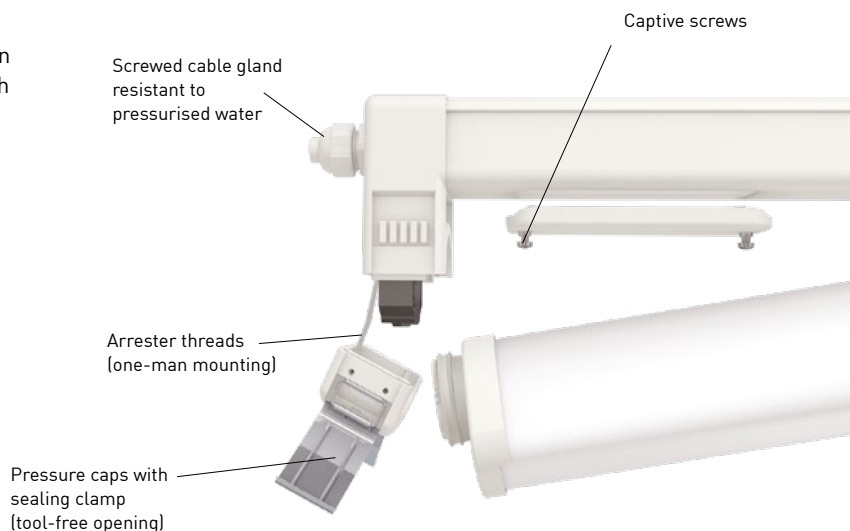
> Hygiene and cleaning

The installed luminaires must be able to withstand aggressive cleaning agents and high-pressure cleaning. The design should simplify cleaning. NORKA offers luminaires with high protection ratings and special coatings.

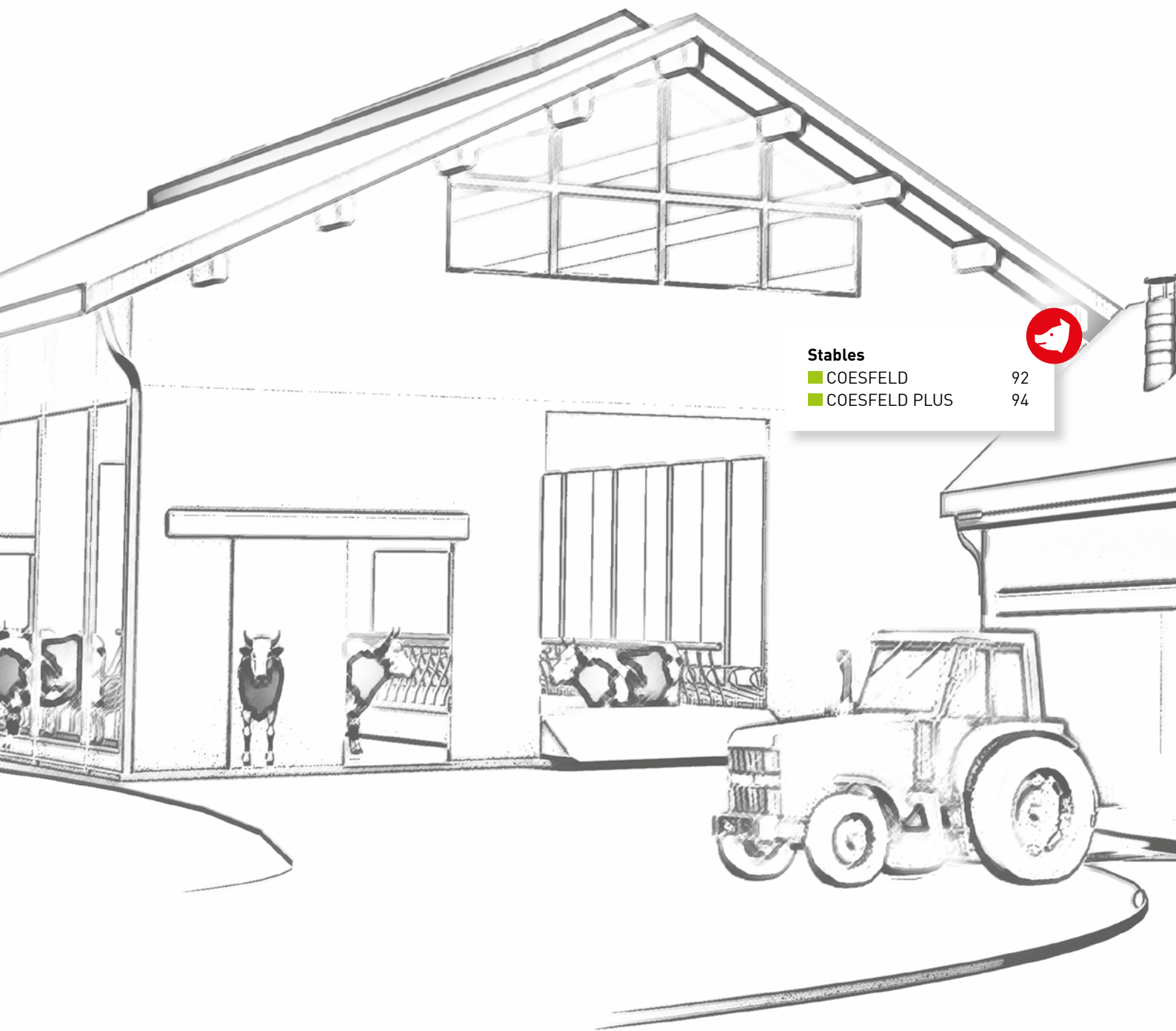
OVERVIEW: LUMINAIRES FOR USE IN IFS-CERTIFIED COMPANIES*

| Production area | Luminaire family |
|--|--|
| 1 A Handling of raw goods or unpackaged products, additional intensive cleaning processes using high-pressure cleaners (cold/warm) with cleaning agents | BERN LED, BITBURG LED, BITBURG LED EXTREME, BITBURG LED INDUSTRY, ZUG LED, ZUG LED EXTREME, ZUG LED HIGH OUTPUT, ZUG LED INDUSTRY, with coating providing increased resistance to acids, bases and cleaning agents. |
| 1 B Handling of raw goods or unpackaged products, additional intensive cleaning processes using high-pressure cleaners (cold/warm) | BERN LED, BITBURG LED, BITBURG LED EXTREME, BITBURG LED INDUSTRY, ZUG LED, ZUG LED EXTREME, ZUG LED HIGH OUTPUT, ZUG LED INDUSTRY |
| 2 Handling of raw goods or unpackaged products | BERN LED, BREMERHAVEN LED, BITBURG LED, BITBURG LED EXTREME, BITBURG LED INDUSTRY, ERFURT LED, ERFURT LED EXTREME, ERFURT LED HIGH OUTPUT, ERFURT LED INDUSTRY, MÜNCHEN LED, ZUG LED, ZUG LED EXTREME, ZUG LED HIGH OUTPUT, ZUG LED INDUSTRY |
| 3 Packaging and storage of raw goods | BERN LED, BREMERHAVEN LED, BITBURG LED, BITBURG LED EXTREME, BITBURG LED INDUSTRY, ERFURT LED, ERFURT LED EXTREME, ERFURT LED HIGH OUTPUT, ERFURT LED INDUSTRY, MÜNCHEN LED, ZUG LED, ZUG LED EXTREME, ZUG LED HIGH OUTPUT, ZUG LED INDUSTRY |
| 4 Storage of packaged finished products | BERN LED, BITBURG LED, BITBURG LED EXTREME, BITBURG LED INDUSTRY, CENTAURUS, ERFURT LED, ERFURT LED EXTREME, ERFURT LED HIGH OUTPUT, ERFURT LED INDUSTRY, MÜNCHEN LED, ZUG LED, ZUG LED EXTREME, ZUG LED HIGH OUTPUT, ZUG LED INDUSTRY |

*The corresponding manufacturer's declarations can be found on our website in the information on the respective products.



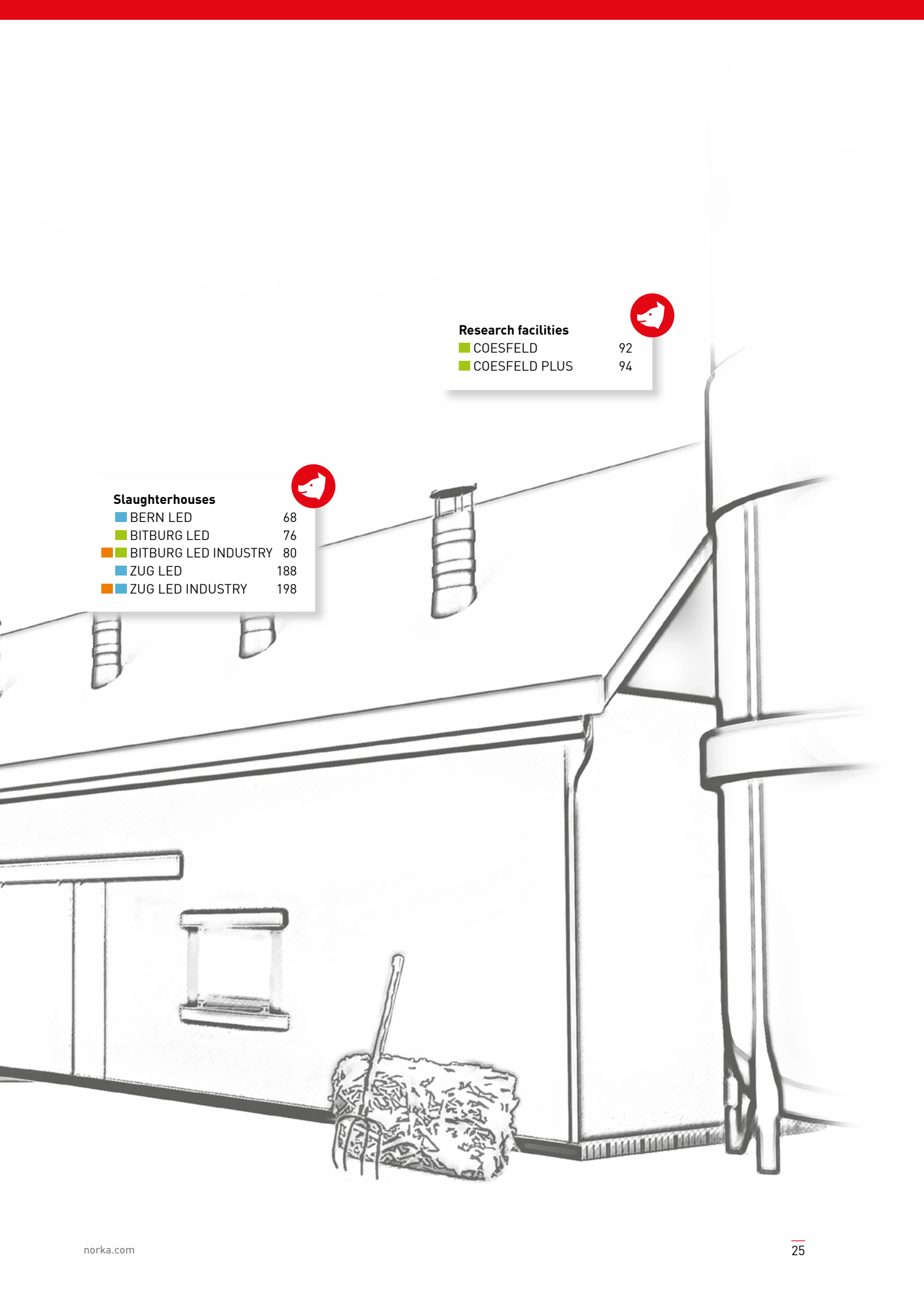
LIGHT SOLUTIONS FOR POULTRY, PIGS AND CO.



Stables

- COESFELD 92
- COESFELD PLUS 94





Slaughterhouses

| | |
|------------------------|-----|
| ■ BERN LED | 68 |
| ■ BITBURG LED | 76 |
| ■ BITBURG LED INDUSTRY | 80 |
| ■ ZUG LED | 188 |
| ■ ZUG LED INDUSTRY | 198 |



Research facilities

| | |
|-----------------|----|
| ■ COESFELD | 92 |
| ■ COESFELD PLUS | 94 |



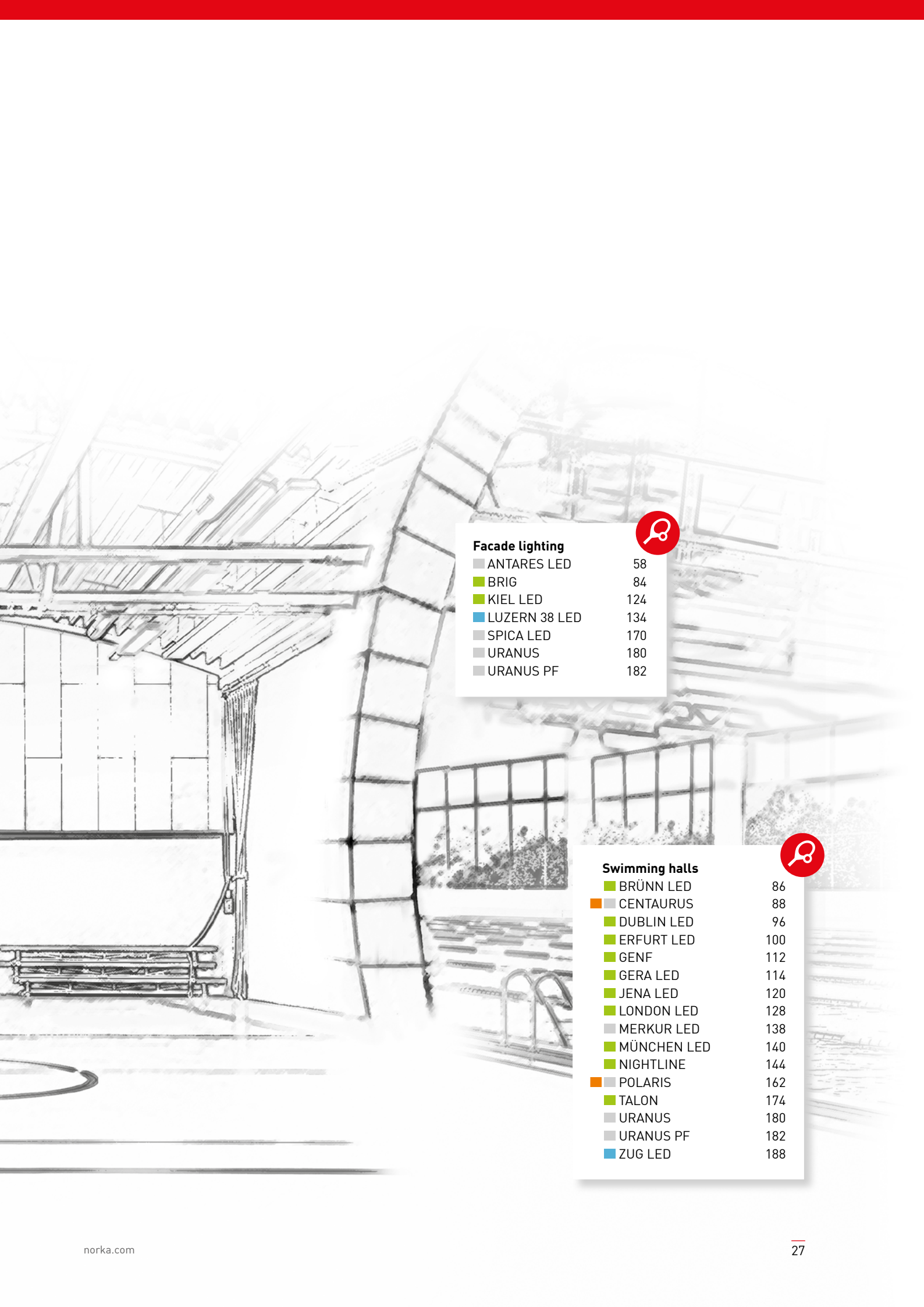
LIGHT SOLUTIONS FOR SPORTS HALLS, SWIMMING POOLS AND OTHER FACILITIES

Sports / Multi purpose halls

| | |
|---------------|-----|
| ■ CENTAURUS | 88 |
| ■ DUBLIN LED | 96 |
| ■ LONDON LED | 128 |
| ■ MERKUR LED | 138 |
| ■ MÜNCHEN LED | 140 |
| ■ POLARIS | 162 |

Shower rooms

| | |
|---------------|-----|
| ■ MERKUR LED | 138 |
| ■ MÜNCHEN LED | 140 |



Facade lighting

| | |
|-----------------|-----|
| ■ ANTARES LED | 58 |
| ■ BRIG | 84 |
| ■ KIEL LED | 124 |
| ■ LUZERN 38 LED | 134 |
| ■ SPICA LED | 170 |
| ■ URANUS | 180 |
| ■ URANUS PF | 182 |



Swimming halls

| | |
|---------------|-----|
| ■ BRÜNN LED | 86 |
| ■ CENTAURUS | 88 |
| ■ DUBLIN LED | 96 |
| ■ ERFURT LED | 100 |
| ■ GENF | 112 |
| ■ GERA LED | 114 |
| ■ JENA LED | 120 |
| ■ LONDON LED | 128 |
| ■ MERKUR LED | 138 |
| ■ MÜNCHEN LED | 140 |
| ■ NIGHTLINE | 144 |
| ■ POLARIS | 162 |
| ■ TALON | 174 |
| ■ URANUS | 180 |
| ■ URANUS PF | 182 |
| ■ ZUG LED | 188 |



CHLORINE AND MORE

Special challenges in swimming pools and sports halls

BALL IMPACT RESISTANCE

Whether volleyball, football or handball – balls do not always end up in the goal, but can stray onto the walls or ceiling. Even luminaires can be hit an odd ball in the process. Depending on the skill of the player, high speeds may be reached – up to 140 km/h for professional handball players, for example. As a result, paying attention to the ball impact resistance of luminaires is vital in order to minimise the risk of injury in the event of a stray ball.

The test for ball impact resistance is defined by DIN EN 12193. The stand-

ard-compliant test requires that the luminaire withstands 36 shots at an impact speed of 60 km/h from a handball from three directions without significant damage or loosening of parts. This applies not only to the luminaires themselves, but also to accessories and assembly parts, such as mounting rails or trunking systems.

FLICKER-FREE FOR FAST BALLS AND HD TRANSMISSION

In high-speed sports, such as ice hockey or table tennis, flicker-free lighting plays a crucial role in ensuring good visibility. The fast movements of a puck or ball can appear erratic or choppy in the “wrong” light. In this case, light quality in the form of zero flicker can decide victory or defeat. In television broadcasts, it is also important to ensure that the illumination is suitable for HD transmissions and that flickering does not impair the image. In addition, clearly defined minimum illumination levels and uniformities are usually required.



Choose the swimming pool version option!

ENSURING NOTHING RUSTS – CHLORINE ON THE SCREEN

The use of chlorine to disinfect water in indoor swimming pools is intended to protect the health of the users. Chlorine is also released into the atmosphere in the process. As a strong oxidant, chlorine leads to corrosion on metallic surfaces, also affecting aluminium and stainless steel.

For this reason, it is essential to pay attention to the chlorine resistance of products in swimming pools. NORKA offers the “swimming pool version” option for all suitable products. In this case, the luminaire is modified during production so that all components are suitable for use in chlorinated environments. Accessories such as mounting clamps or mounting rails must also be selected according to the application environment.



Sports at professional level and TV broadcasts require high-quality light with uniform illumination, low glare and no flickering.

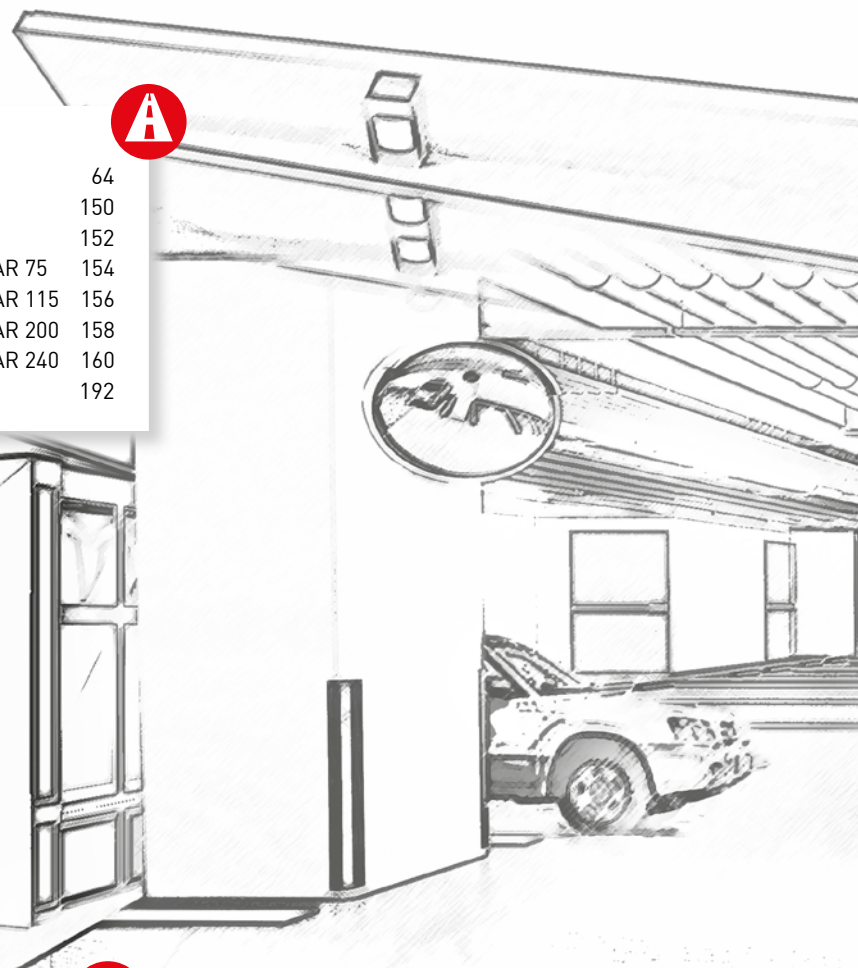
LIGHT SOLUTIONS FOR TRAFFIC-RELATED AREAS

Service area

| | |
|----------------------|-----|
| ■ BELFAST | 64 |
| ■ PHALANX 430 | 150 |
| ■ PHALANX 620 | 152 |
| ■ PHALANX LINEAR 75 | 154 |
| ■ PHALANX LINEAR 115 | 156 |
| ■ PHALANX LINEAR 200 | 158 |
| ■ PHALANX LINEAR 240 | 160 |
| ■ ZUG LED AL | 192 |

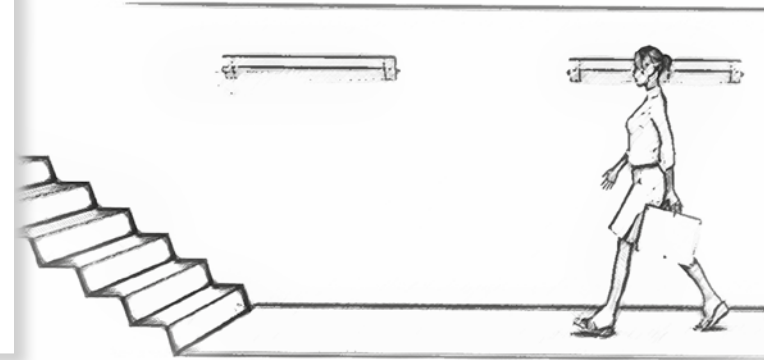


WC










Pedestrian tunnel

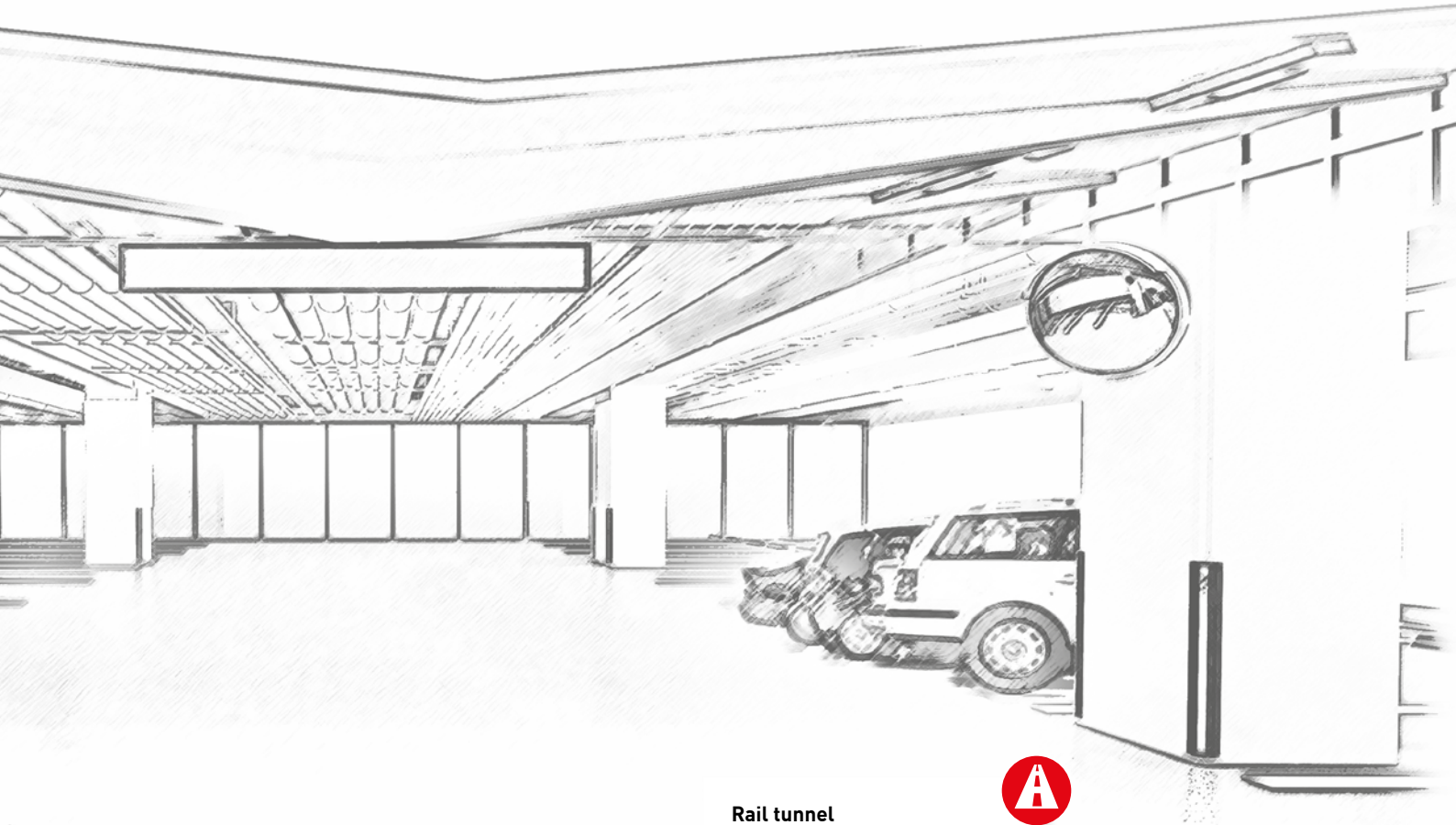
| | |
|----------------------|-----|
| ■ BELFAST | 64 |
| ■ BRÜNN LED | 86 |
| ■ DUBLIN LED | 96 |
| ■ LONDON LED | 128 |
| ■ MERKUR LED | 138 |
| ■ MÜNCHEN LED | 140 |
| ■ PHALANX 430 | 150 |
| ■ PHALANX 620 | 152 |
| ■ PHALANX LINEAR 75 | 154 |
| ■ PHALANX LINEAR 115 | 156 |
| ■ PHALANX LINEAR 200 | 158 |
| ■ PHALANX LINEAR 240 | 160 |
| ■ ZUG LED AL | 192 |






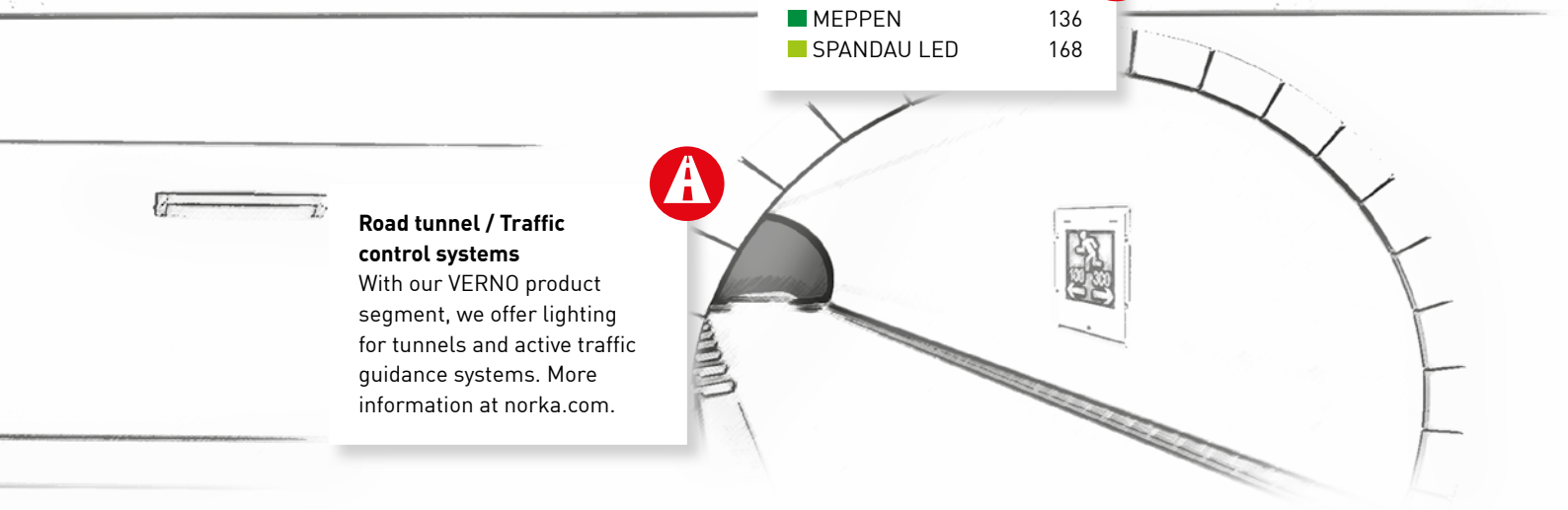
Multi-storey car park

| | |
|---|-----|
|  BERN LED | 68 |
|  GENF | 112 |
|  LUZERN 38 LED | 134 |
|  ZUG LED | 188 |
|  ZUG LED AL | 192 |
|   ZUG LED INDUSTRY | 198 |



Rail tunnel

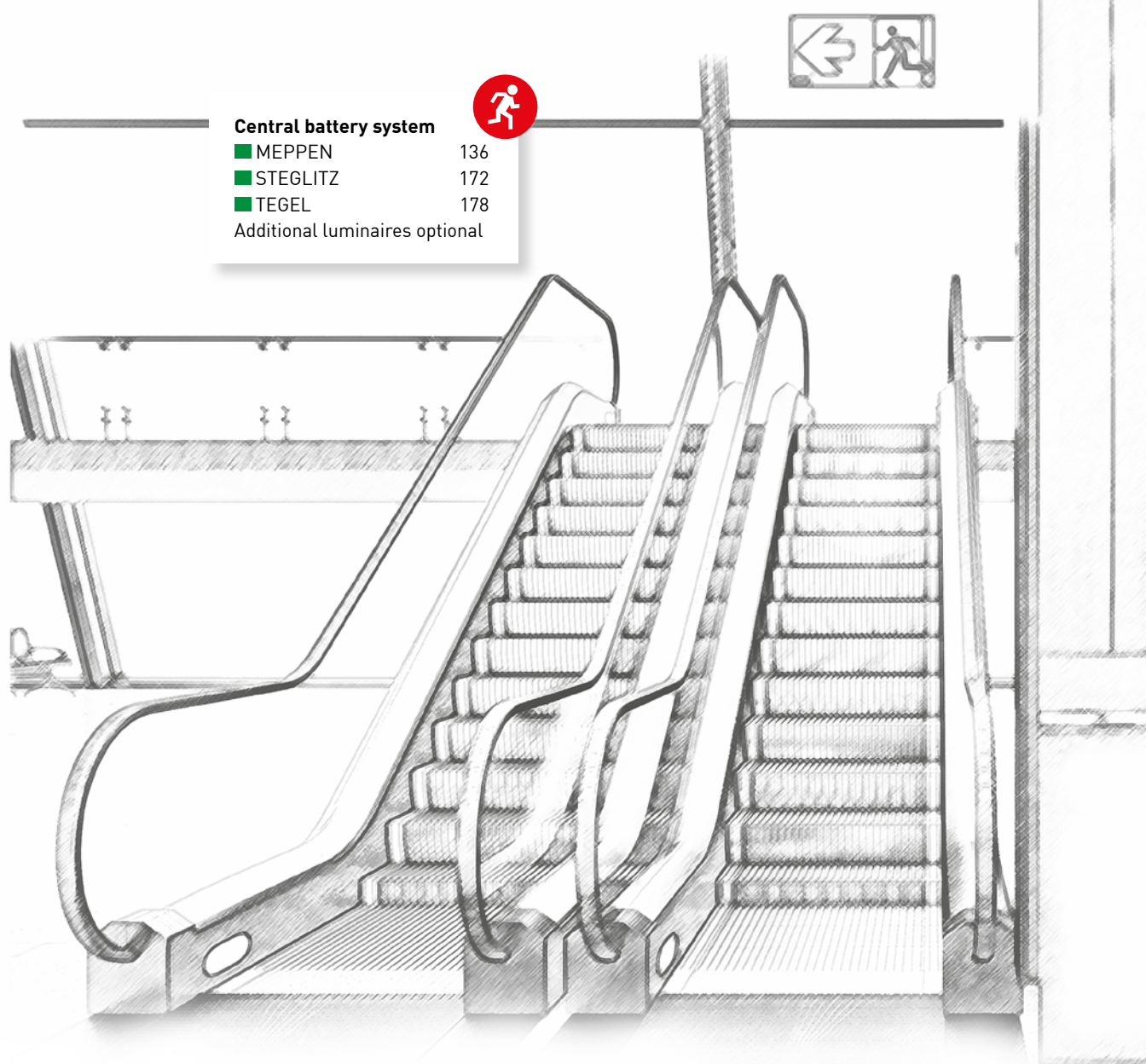
| | |
|---|-----|
|  MEPPEN | 136 |
|  SPANDAU LED | 168 |



Road tunnel / Traffic control systems

With our VERNO product segment, we offer lighting for tunnels and active traffic guidance systems. More information at norka.com.

LIGHT SOLUTIONS FOR STANDBY AND SAFETY LIGHTING





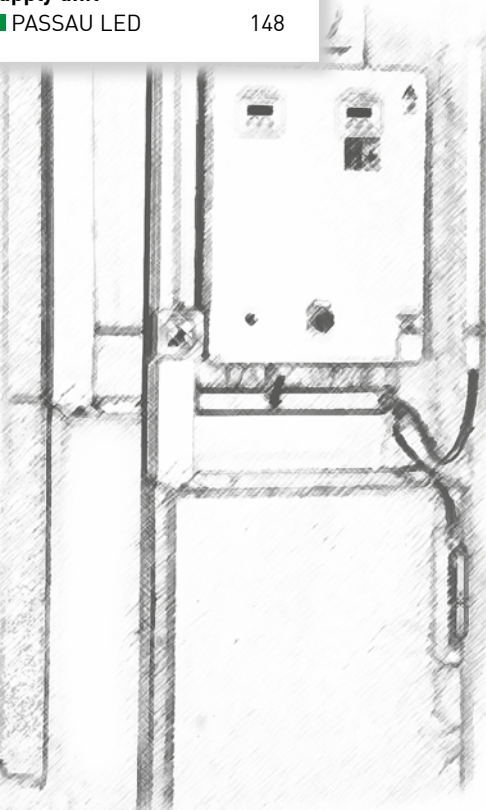
Individual battery system

- COBURG LED 90
 - SCHÖNEFELD 166
- Additional luminaires optional



Emergency lighting supply unit

- PASSAU LED 148



IF YOU'RE LOOKING FOR THAT SOMETHING

Production of customised luminaires

Customised lighting solutions for demanding environments are our speciality: harsh conditions, extreme environmental factors and high quality standards are what we are all about.

Our own laboratory and production facilities in Germany enable us to produce customised products for specific projects. These range from products in special colours and special lengths to the development of crossbars or other fastenings.

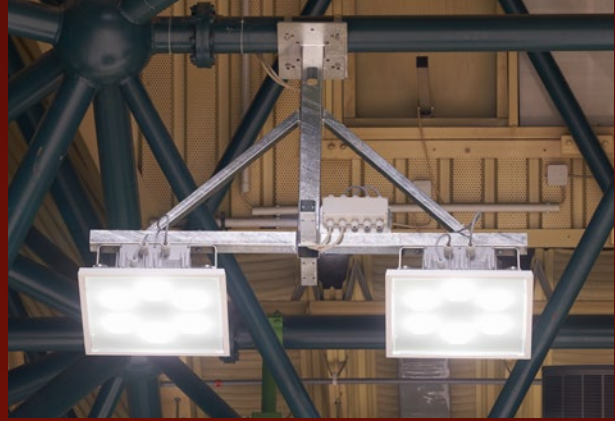
Specific technical features can also be developed to meet requirements. As a company specialising in lighting technology, we have our own VDE-compliant test laboratory and our own design and development department. Furthermore, NORKA is notable for its high level of vertical integration: we manufacture in Germany which gives us maximum control over processing.

Please contact our sales team if you require a customised product for your project!

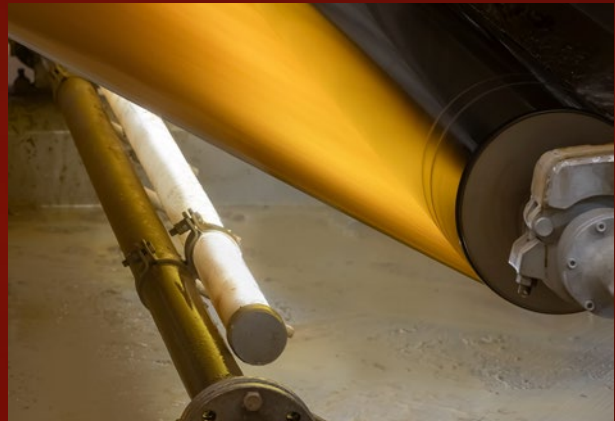




> Project version ZUG LED with lens technology and moulded connection cable



> Specially developed crossbeam for mounting CENTAURUS on steel ceiling structures



> LUGANO in special length for use inside of a paper machine







NORKA tests its materials for resistance to various chemical substances in order to supply reliable and durable products for demanding environments such as sewage treatment plants.

LIGHT WITH FORETHOUGHT AND COMFORT

Taking a look at the field of sports as an example for intelligent lighting: swimming pools, sports halls and multifunctional halls often require a high degree of flexibility when it comes to lighting. Various requirements have to be addressed in these areas. For regular operation, a daylight-linked lighting control system for maximum energy saving is a good choice.

For sports competitions, uniform, high-quality illumination is needed

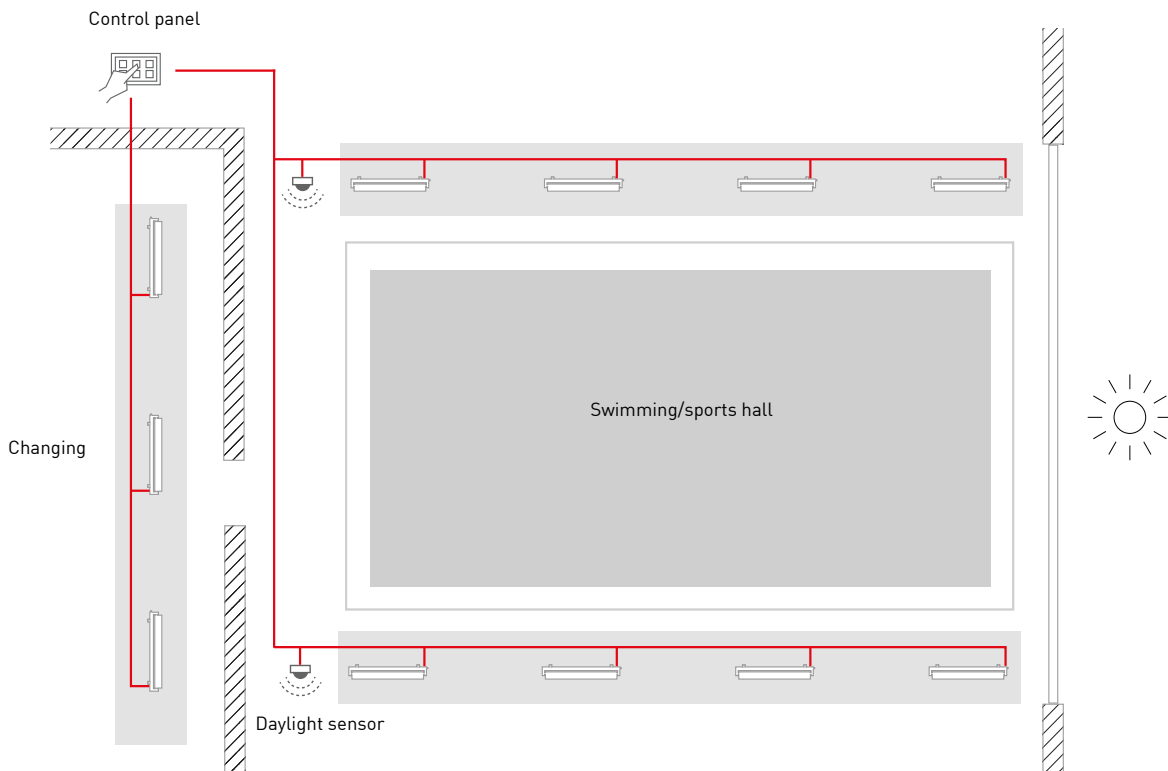
whereas mood lighting is more appropriate for special events. All these requirements can be fulfilled with a sophisticated lighting control system.

Various lighting scenes can be centrally operated from a control panel, for example. Additionally, other elements of the building control system, such as the sunshade, can be integrated to achieve optimal interaction of lighting and daylight, in turn maximising energy savings.

In areas such as changing rooms or showers, daylight-linked control and motion detection also help to save energy.

In industrial environments such simple principles also offer opportunities for energy savings.

- Example diagram: daylight-linked control and predefined lighting scenes for various applications ensure maximum convenience and potential savings. Staff can call up the required lighting scenes from a centrally placed control panel.



Our XARA[®] lighting control system

OVERVIEW OF THE BASIC FUNCTIONS

→ Corridor function

The detection of movement causes the illumination level to dim up from a defined basic level. After a defined follow-up time, the lighting is lowered to the basic level again. The principle can be combined with other control options such as time schedules or daylight-controlled system.

→ Lighting scenes

Different lighting scenes can be called up from a control panel. Lighting scenes include stored settings – for example, defined illumination levels for different luminaire groups – depending on the required application.

→ Motion-controlled control system

Movement can be detected by PIR or radar sensors. A detected movement triggers a predefined control sequence.

→ Daylight-linked control system

Through the detection of the natural ambient light, the power is needed to meet the required illumination level is determined. The luminaire power is then automatically adjusted.

In addition, numerous other options such as luminaire and energy monitoring or automated function tests are available.

XARA[®] sensor technology can be structurally incorporated into selected products. Due to the recessed mounting, the sensor technology is discreetly incorporated and protected from extreme ambient conditions.



A control panel allows different lighting scenes to be easily called up as needed.

ABOUT OUR LUMINAIRES


Technical data and symbols explained

NORKA has been developing and producing luminaires for decades, navigating between high demands on lighting technology and extreme ambient conditions. The development of our luminaires is based on focused long-term testing of lighting systems in industrial production areas. Findings about the effect of dirt and loads on the luminaires are taken into account when developing and producing new luminaires. Environmental influences and specific component properties are also considered.

The complexity of technical lighting that this entails is sometimes not obvious at first glance. More in-depth information on the technical features of NORKA luminaires will therefore be provided in the following.



FOCUSSED LIGHTING

A great deal of energy can be saved – in terms of the required illumination level – by providing spot lighting. Accordingly, NORKA has a range of luminaires offering a wide spectrum of luminous fluxes that enable the most suitable and energy-saving lighting design possible. NORKA refers to this characteristic as “**focused lighting**” . The best way to determine the luminous flux that is right for your project is to use the **luminous flux table** in the appendix.

Focused lighting enables spot-on lighting design.



LIGHT CHARACTERISTIC ICONS

For initial guidance on light distribution, **stylised icons** can be found on the product line pages of the luminaires. For the most part, these icons represent a highly simplified version of the respective light distribution curve.

The specific light distribution curve for each individual product can be called up on **norka.com** and is shown on the respective product data sheet.



NARROW BEAM

- > Luminaire with half-peak angle between 11° and 20°
- > Accentuated illumination of the surface in use



CONCENTRATED BEAM

- > Luminaire with half-peak angle between 21° and 40°
- > Narrow focus, uniform illumination of the surface in use



CONCENTRATED WIDE BEAM

- > Luminaire with half-peak angle between 21° and 40°
- > Wide, uniform illumination of the surface in use



ASYMMETRIC BEAM

- > Asymmetric beam luminaire
- > With half-peak angle between 21° and 40°



MEDIUM BEAM

- > Medium beam luminaire with half-peak angle between 21° and 40°
- > Uniform illumination of the room



WIDE BEAM

- > Wide beam luminaire with half-peak angle between 41° and 80°
- > Wide, uniform illumination of the surface in use



EXTREME WIDE BEAM

- > Extreme wide beam luminaire with half-peak angle $>80^\circ$
- > Extremely wide, uniform illumination of the surface in use



BARE LAMP

- > Bare or diffuse luminaire



WITH INDIRECT UPLIGHTING

- > Indicated light distribution also has an indirect uplighting component

easy eXchange – FOR SUSTAINABLE LIGHT

easy eXchange

LED MODULES AND DRIVER COMPLETELY REPLACED

Luminaires featuring easy eXchange can simply be completely replaced. The electronic components (LED modules and driver) are really easy to replace with new ones once they have come to the end of their service lives. The housing and reflector tube can still be used.

easy eXchange LED

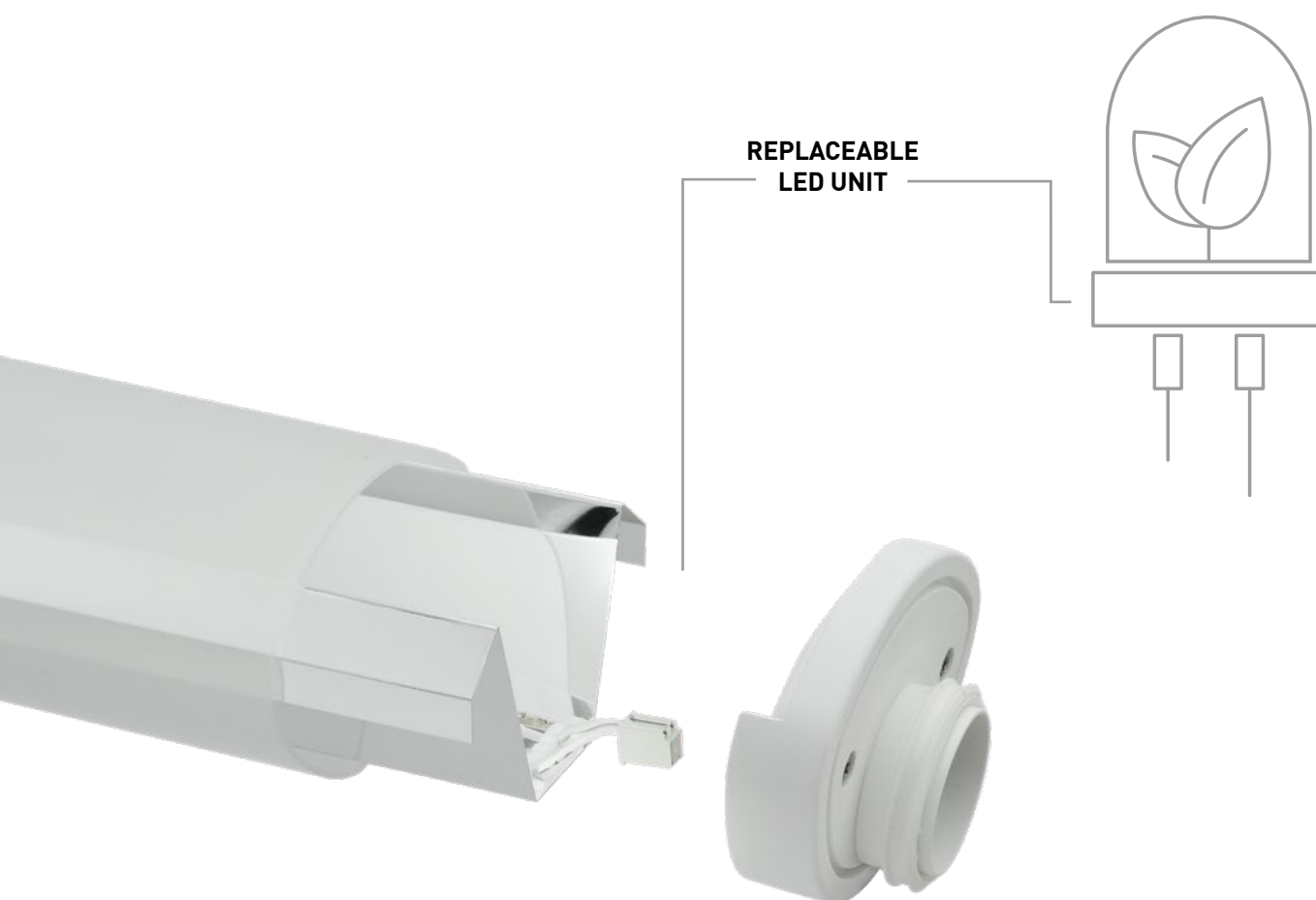
EASY TO CHANGE LEDS

The LED modules in the reflector tube are easy to change by means of a plug connection. The protective tube can still be used.


easy eXchange DRIVER

EASY TO CHANGE DRIVER


Easy eXchange DRIVER (RAPDEX) enables the easy and quick exchange of drivers, while the luminaire can remain in its installation position.

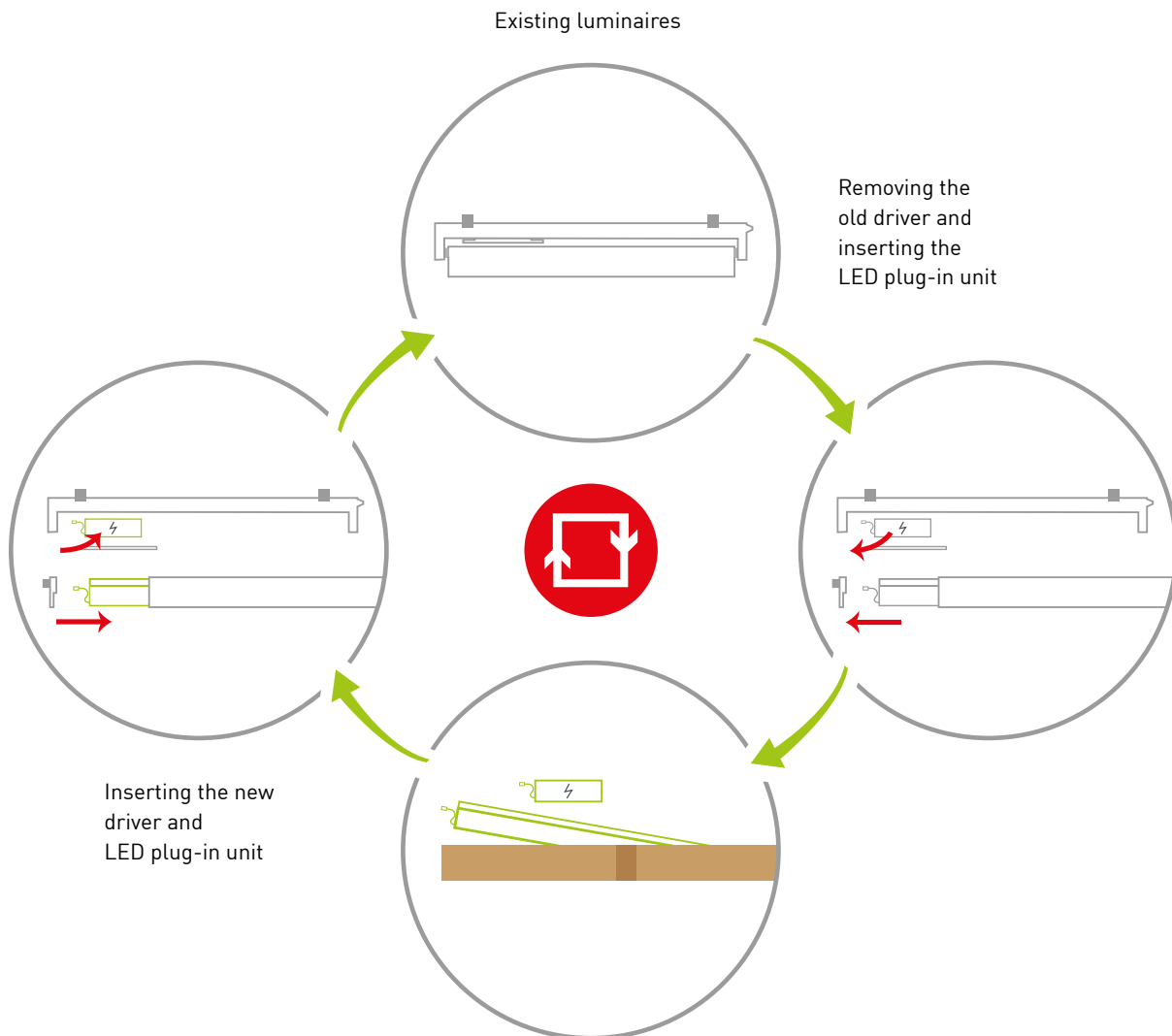


NORKA luminaires are designed for use in the most demanding environmental conditions. Above all, they stand out for their long service life and high resistance to a wide range of chemicals and other environmental influences. They are luminaires built to last.

Due to their excellent durability, NORKA luminaire housings often outlive the life cycles of the built-in electronic components. It therefore makes sense to think about the future as well: by choosing the right  easy eXchange product, the driver and LEDs can be replaced quickly and easily at the end

of the product's service life. The installed luminaires can be made "fit for purpose" again, thus avoiding unnecessary new purchases, saving installation time and conserving resources.

The design of NORKA luminaires generally allows components to be exchanged. Replacement is really convenient, however, with luminaires fitted with our  easy eXchange components.



LUMINOUS FLUX AS REQUIRED

Luminaire parametrisation using NFC



The option "Variably adjustable luminous flux via NFC programming" allows the lamp luminous flux to be set or changed using a parametrisation device. For example, this means that luminaires in stock can be used to respond spontaneously to operational requirements and luminaires can be stocked for different locations. If necessary, these can be parametrised for their intended use using NFC. This eliminates the need to specifically procure the luminaires required for the respective area.

QR codes can be used to re-parametrise the operating current of the driver without having to dismantle or open the luminaire. The luminaire adopts the newly set parameters after a restart.



> The required parametrisation device is available separately as an accessory.

OPTIONAL ELECTRONIC COMPONENTS FOR LED LUMINAIRES

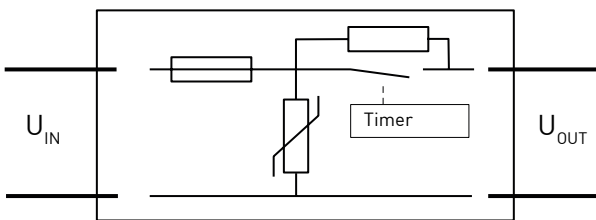
INRUSH CURRENT LIMITER

Optionally, an inrush current limiter can be integrated into many NORKA luminaires. The inrush current of the LED driver amounts to a multiple of the current taken up in running operation, the so-called nominal current (I_{NOM}). If the sum of the inrush currents exceed the tripping characteristic curve, the circuit breaker trips.

Especially when converting existing installations with conventional technology to LED technology, this often leads to an overload of the circuit breakers at the moment of switch-on, although the new system has a lower power and thus lower rated current consumption than before.

This problem can be prevented with an inrush current limiter. For the moment of switch-on, this inrush current limiter switches a series resistor upstream of the luminaire for a few milliseconds, thereby limiting the current consumption. For planning, a table is available with the permissible number of NORKA luminaires with and without an inrush current limiter per circuit breaker.

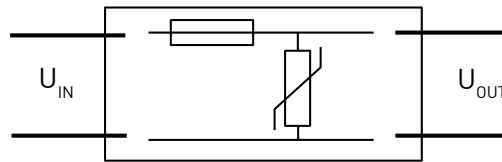
A 4 kV transient filter is integrated into the ENEC-certified inrush current limiter.



TRANSIENT FILTER

Voltage peaks (transients) can be modulated to the 230 V mains voltage through external and electrical influences. These voltage peaks can be high-energy or high-frequency, depending on their origin; high-energy interference is called a **surge** and high-frequency interference is called a **burst**.

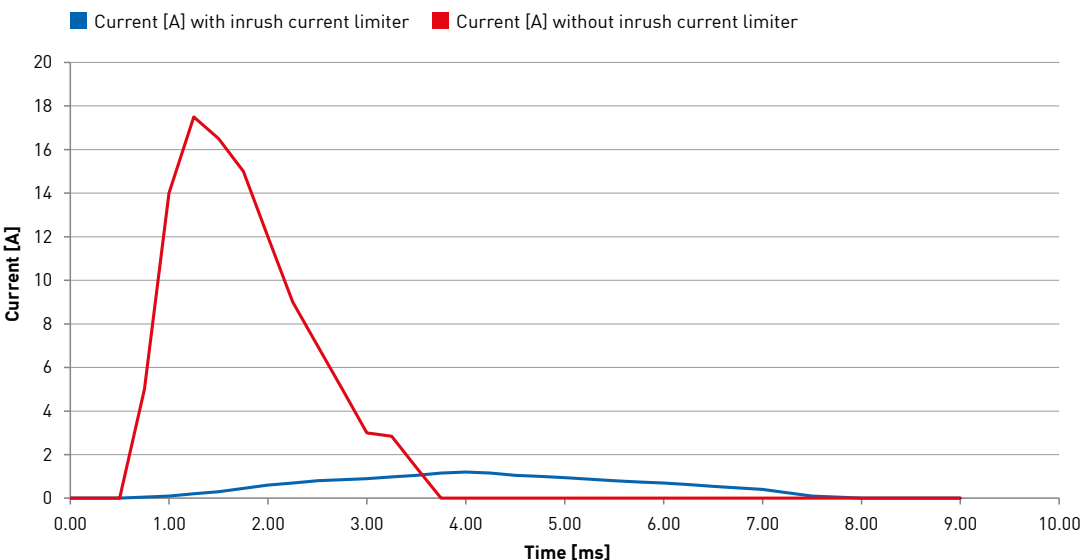
Most NORKA luminaires are fused for voltage peaks up to 2 kV by default; for higher voltage peaks, NORKA offers an optional transient filter up to 4 kV for many luminaires.



A transient filter or inrush current limiter must be exchanged after the following faults:

- > Overvoltage >300 V
- > Short circuit at output
- > Surge >4 kV
- > Burst >4 kV

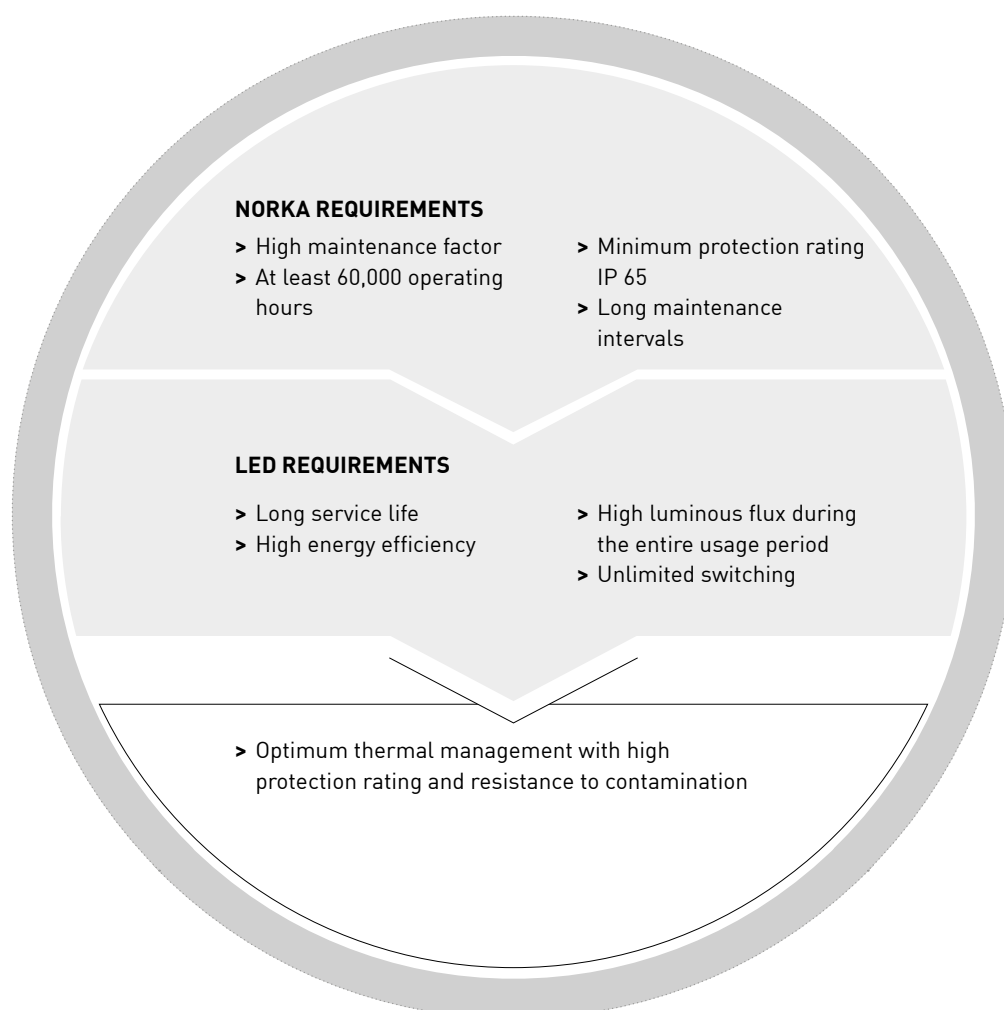
INRUSH CURRENT OF A SAMPLE LUMINAIRE (LED) WITH AND WITHOUT THE INRUSH CURRENT LIMITER





In many industrial areas, such as pickling plants, special luminaires for high temperatures are indispensable.

THERMAL MANAGEMENT



NORKA DEVELOPS LUMINAIRES FOR USE IN HARSH CONDITIONS

NORKA lighting technology is protected by an enclosed system. Individual housing parts are enclosed in order to reach the necessary protection rating and prevent dirt from penetrating the luminaire. In addition, the entire housing design is optimised for the temperature characteristics of the LEDs.

HIGH-PERFORMANCE LEDs REQUIRE SPECIALLY TAILORED THERMAL MANAGEMENT

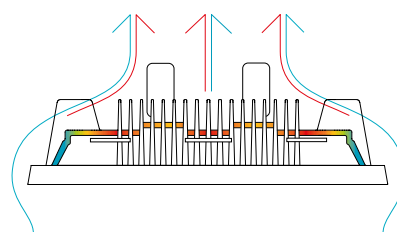
NORKA relies on passive cooling elements. These are robust and – unlike active systems – do not consume any additional energy. Apart from the actual cooling effects of these elements, their susceptibility to contamination also has to be taken

into account. A dirty surface or dusty housing recesses prevent the generated heat from being dissipated by the housing. This could then cause a build-up of heat and increased temperatures inside the luminaire.

In order to achieve a long service life with a high luminous flux, LEDs require a specially developed thermal management.

In a virtual testing room, NORKA simulates the typical heat conduction and convection properties of the luminaires. Realistic parameters normally seen in a typical application are used in the simulation. Critical design aspects for thermal management can already be analysed and optimised here on the 3D model. A prototype is then built according to the simulation. All lighting properties are checked in depth

once again on the actual product in the testing laboratory and the luminaire is subjected to additional endurance tests.



> Heat transport on the CENTAURUS luminaire

TEMPERATURE AND SERVICE LIFE

SERVICE LIFE SPECIFICATION

NORKA LED products largely have a service life of L80 B10 > 60,000 hours. Divergent service lives must be specified separately.

The L value describes what percentage of the initial luminous flux is still guaranteed at the end of the LED service life. L80 means that 80% of the initial luminous flux is still achieved at the end of the service life. In other words: L80 describes a maximum 20% decrease in luminous flux from the initial value of the LED module.

The B value describes the static number of LEDs or modules affected by the luminous flux decrease at the end of the LED service life in percent. B10 means that 10% of the modules can lie below the defined L80 value at the end of the specified service life.

TEMPERATURE AND SERVICE LIFE

LEDs work better in cold environments – they emit more light in cold conditions and their service life increases. However, this does not mean that LED luminaires may not be used in warm environments or that they sustain damage immediately in such cases. The service life specified for all electronic components is always linked to an ideal ambient temperature – in other words, the service life is based on the theoretical possibility that the component is permanently exposed to this temperature. This equally applies to drivers.

The temperatures specified for NORKA LED products are primarily based on a minimum service life of 60,000 hours. This means that a service life of at least 60,000 hours is achieved if the luminaire is constantly operated at the specified minimum or maximum ambient temperature (“service life temperature”).

TEMPERATURE-RELATED SERVICE LIFE

A good approximation for a temperature-related service life can be achieved using the Arrhenius equation. The following applies as a rule of thumb: a 10°C increase in temperature results in the service life being halved. Conversely, a reduction in temperature has a positive effect on the service life. The underlying TM21 method for specifying the service life allows a maximum specification of the service life of 6 times the measuring time span and only within the measured limit temperatures.

This can be exemplified using the POLARIS 248 floodlight with a specified ambient temperature of -35°C to +55°C.

If the luminaire is constantly operated at +55°C, it will achieve a minimum service life of 60,000 hours; the same applies to operation at -35°C.

TEMPERATURE AND LUMINOUS FLUX

The ambient and operating temperature of the LEDs not only influence their service life, but also the available luminous flux. Higher temperatures mean lower light efficiency. To be able to provide the most accurate information possible about luminous flux during the actual operation of the luminaire, NORKA measures the luminous fluxes after a stable operating state is reached during constant, non-pulsed operation of the LEDs.

The luminous flux specifications of NORKA LED products refer to the lamp luminous flux (gross luminous flux). They refer to a temperature of +55°C at the T_c point of the LEDs.

“SAFE OPERATION”

Aside from service life and the corresponding ambient temperature, the manufacturer also provides further information on the operating parameters of the components – minimum and maximum operating parameters are specified, which must not be exceeded or fallen below. These may relate to temperature range, voltage range or

maximum current. These specifications form the boundaries for “safe operation”. Safe operation means that the component works safely and without any problems when these limits are adhered to. Despite this, constant operation close to these limits results in a significantly lower service life.

If this statement is applied to luminaires, a safe operating range can be specified for the entire luminaire. In order to do this, the most important components have to be identified and assessed.

SERVICE LIFE AND SAFE OPERATION

As with the specification of the service life, the sole focus on safe operation is a simplified view and does not reflect the actual conditions in which the luminaire is operated.

If the temperature inside an industrial workshop with no air conditioning or heating is considered over an entire year, it becomes clear that the period when the service life temperature is exceeded is much shorter than the period when the temperature is within the temperature range. This means that the luminaire is primarily operated at temperatures below the “service life temperature”. In turn, this then indicates that the service life is not reduced – even when the service life temperature is briefly exceeded while remaining under the permissible maximum temperature for safe operation.



KM KL

KK KH

KI KH

KG KF

KE KD

USE IN MOISTURE AND DUST

IP protection ratings

The IP (ingress protection) rating provides information about the degree to which a luminaire is protected against dust and water.

The first digit stands for the protection of the luminaire against contact and foreign bodies, such as brake dust, whilst the second digit designates the extent of protection against water. NORKA luminaires generally offer protection against the penetration of water jets (IP65) at least;

luminaires with protection rating IP69K are suitable for cleaning with high-pressure or steam jets. Important to know: protection rating IP69K does not automatically include lower protection ratings such as IP68; these protection ratings are specified separately.

EXAMPLE OF IP69K REQUIREMENT – ACCORDING TO DIN EN 60529

Ingress protection for protection against accidental contact and foreign bodies

| 1st index | Protection type Designation | Explanation |
|-----------|-----------------------------|--|
| 6 | Dust-proof | Total protection against contact with live or internal, moving parts. Protection against dust ingress. |

Ingress protection for water protection

| 2nd index | Protection type Designation | Explanation |
|-----------|--|--|
| 9K | Protection against water ingress during high-pressure/steam jet cleaning | Hot water (80 °C) impacting from any direction under high pressure (80–100 bar) on the luminaire must not enter. |

Description of all protection ratings p. 216

AT A GLANCE: IK CLASSES

Areas such as access routes, underpasses, intermediate levels and stairwells are used by a large number of people every day. However, these areas are exposed to vandalism, especially at night.

But it's not only deliberate destruction that can cause luminaires to fail – heavy or large components are sometimes handled in workshops or work pits. This is where the lighting can be unintentionally damaged and lose its function.

The specified IK class provides information about the impact resistance of luminaires. A high IK class such as IK 10 and higher protects the inner workings of the luminaires from damage. The impact resistance test is carried out on the basis of DIN EN 62262. Various test weights are used to test the resistance of the lights and determine the IK class. These range from class IK 01 with an impact energy of 0.14 joules to class IK 11 for a test with up to 50 joules. NORKA also offers products tested up to 150 joules, these are marked as IK 11+.



For watertightness 9K in accordance with DIN EN 60529, our luminaires are tested with a water pressure of 100 bar and a water temperature of 80 °C.



CHEMICAL RESISTANCE: RELIABLE, EVEN WHEN IT GETS DIRTY

Overview of chemical resistance p. 217

CHEMICAL RESISTANCE

Resistance of the materials used to petrol, or lubricants is indispensable, especially in workshop areas. Only in this way can resistance to ageing be guaranteed and the safe functioning of the luminaires over a long period of time safeguarded.

CONSIDERATION OF CLEANING AGENTS

In areas where cleaning agents are used, a lot of thought should go into choosing the appropriate material. Cleaning agents chemically attack the housing materials of the luminaires, among other things. Over time, the stability of the housing therefore deteriorates, the polymers wear out faster and age resistance is reduced.

Depending on which chemical substances are used in the area of application, attention must be paid to the luminaire material. Thanks to our know-how about difficult environmental conditions and our decades-long experience in luminaire construction, we are familiar with the resistance of our materials to various chemicals and cleaning agents and are therefore able to give you the best advice.

WELL PROTECTED AGAINST VANDALISM

As there will never be 100% protection against vandalism even if elaborate preventative measures are taken, the use of technology that stands up to violent impacts is recommended.

HIGH IK PROTECTION CLASSES ENSURE SAFETY

In environments where possible violence to the lighting is to be expected, it's worth taking a look at the IK class. This provides information about the impact resistance of a luminaire.

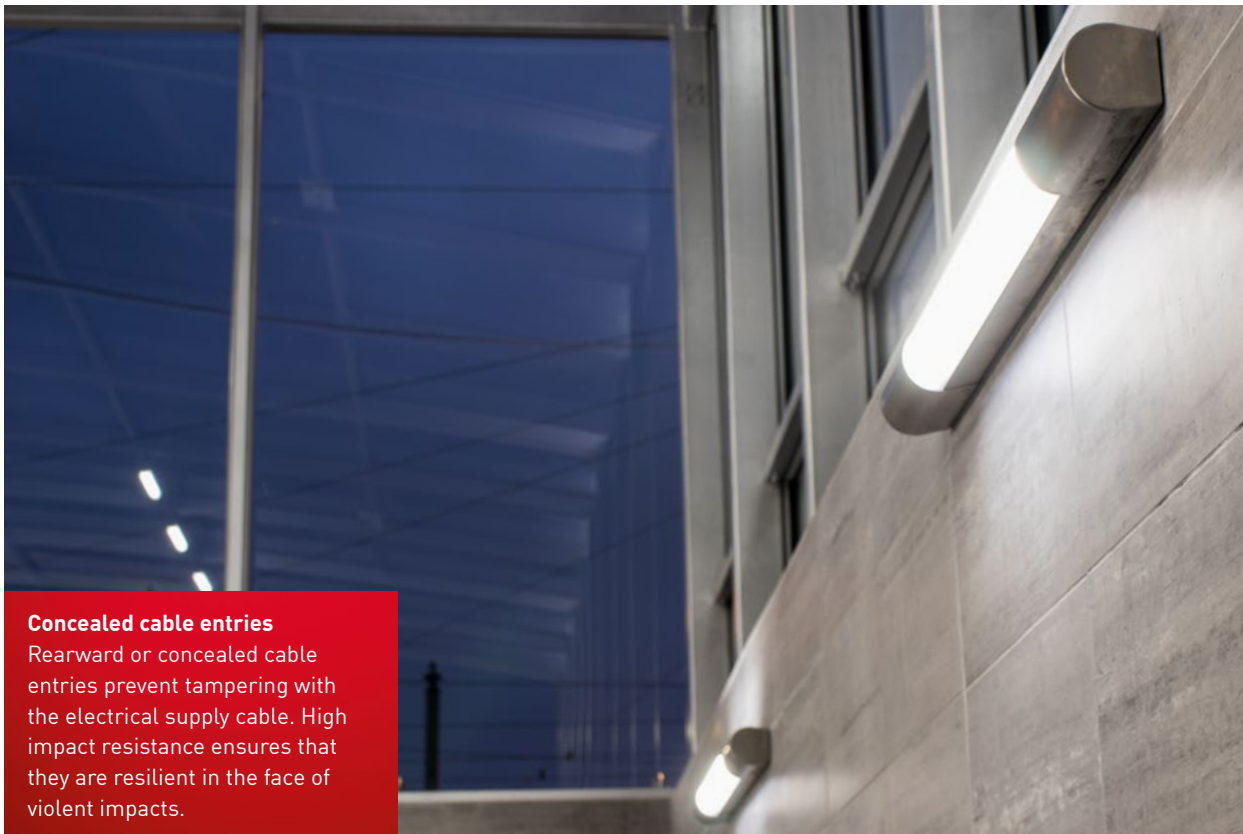
EASIER GRAFFITI REMOVAL

What is art for one person is sometimes just a nuisance for another. Due to the safety-relevant importance of lighting, the removal of tags and graffiti on luminaires is absolutely necessary. An additional coating makes it easier to remove soiling.

PREVENTING TAMPERING ATTEMPTS

In addition to brute force, luminaires in freely accessible spaces can also be subject to attempts at tampering. The use of special screws such as crescent, three-hole or ellipse screws ensures that housings cannot be opened with standard tools. Concealed or rearward cable entries hide supply lines. Manipulating lighting is thus made considerably more difficult.

The use of special screws ensures that housings cannot be opened with standard tools.



Concealed cable entries

Rearward or concealed cable entries prevent tampering with the electrical supply cable. High impact resistance ensures that they are resilient in the face of violent impacts.

EMERGENCY LIGHTING INFORMATION AND OPTIONS

Depending on use, NORKA offers emergency and safety luminaires as well as the option to configure luminaires from its standard portfolio as single-battery or central-battery safety luminaires. Please include the "emergency luminaire version" option and the exact specification with your enquiry to ensure that you receive a standard-compliant emergency luminaire.

SINGLE-BATTERY EMERGENCY LUMINAIRE

Single-battery safety luminaires incorporate everything necessary for emergency operation as a self-sufficient version: the battery, mains monitoring, battery charging device and as standard with NORKA, the fully automatic self-test with status LED.

In mains operation, these luminaires can also be switched on and off with the room lighting, together providing the required lighting level. With regard to emergency lighting duration, a choice can be made between one and three hours.

REGULAR INSPECTION

Emergency lighting systems need to be regularly tested and maintained to ensure that they are always ready for use. After all, the mere failure of an emergency luminaire, e.g. in a stairwell without daylight, can pose a considerable risk of accident in the event of a power failure.

These tests are specified in VDE 0108 or DIN EN 50172 and must be documented in an inspection log book.



> The luminaire indicates its status by means of an integrated two-colour LED indicator (red/green).

Standard: automatic self-test

NORKA single-battery emergency luminaires and emergency lighting supply units feature the automatic self-test according to DIN EN 62034 integrated as standard. The luminaire indicates its status by means of a two-colour LED indicator built into the housing.

Optional: inspection via DALI

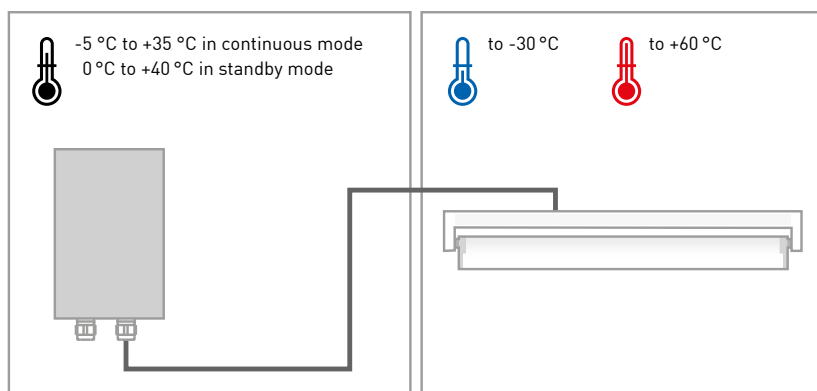
In addition to the self-test offered as standard, an optional check and inspection log book in accordance with DIN EN 50172 is available via a DALI-interface.

**EXTREME TEMPERATURES,
DIFFICULT TO ACCESS**

NORKA single-battery emergency lighting supply units such as the PASSAU LED allow what is not otherwise possible with a standard single-battery emergency luminaire: use in extreme thermal conditions or in difficult-to-access installation locations. By separating the LEDs from the

battery supply, the emergency lighting supply unit can be placed up to 50 m away from the room to be illuminated. In this way, the safety or escape route luminaire can be installed in a cold store at -30 °C, for example, with the emergency lighting supply unit mounted in an area with moderate temperatures. It is also possible to use this type of emergency luminaire at

temperatures above 50 °C without any loss of battery service life. In addition, the unit can also be mounted at an easily accessible height. This not only greatly alleviates maintenance work but also the need to change batteries.



> The external use of a single-battery power supply unit enables an extended useful temperature range.

**CENTRAL-BATTERY EMERGENCY
LUMINAIRE**

Many NORKA luminaires can also be optionally ordered as central-battery safety luminaires. These are designed accordingly for operation on central-battery emergency lighting systems and operated via this system.

To enable the necessary inspection and monitoring, various monitoring modules can be installed in the luminaire during production. It is imperative to check the compatibility of the module and the driver according to the manufacturer's requirements sheet, ideally during or before planning the system. This has already been implemented with various monitoring modules. As these modules are usually equipped with an addressing switch, NORKA places the modules under a housing cover, if possible, so that the switch can be reached for setting purposes during commissioning.





U2

-4



NOTAUS
750 V

NOTAUS
750 V

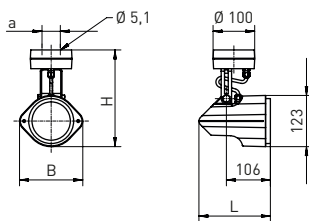
Bitte nicht einsteigen

192-4

Chemical resistance, high IK classes and IP protection ratings are required in this underground maintenance workshop. Coloured ZUG LEDs are used to indicate whether the traction current is switched on or not.

ANTARES LED

LED



K Further colour temperatures (optional)



narrow beam



concentrated wide beam
CDP prism screen

| Lamp | Version | L | B | H | a | Max. weight |
|------|------------|--------|--------|--------|-------|-------------|
| LED | Floodlight | 172 mm | 152 mm | 232 mm | 44 mm | 0.9 kg |

AREAS OF APPLICATION

Polymer floodlight for ceiling and wall-surface mounting with LED. Useable in industrial facilities, stations for public transport, under canopies and for facade illumination.

HOUSING

Luminaire housing made from weather-proof thermoplastic PPO, similar to RAL 9005. Aluminium swivel bracket, coated. Useable for indoor and outdoor areas according to protection rating IP54. Additional cover frame and cover screen for preventing water accumulation during uplighting optionally available (see accessories). Short sealing system comprised of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Cover screen made from single-pane safety glass with internal aluminium reflector.

ELECTRICAL CONSTRUCTION

Luminaire ready for installation and connection via connection box with protection rating IP54 and plug-in terminal. Built-in driver, supply voltage 220-240 V AC/DC. 2 kV transient filter. One cable entry M16.

MOUNTING

Ceiling or wall fixation via two sealed drill holes on the bottom of the connection box.

ANTARES LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|-------------------------|------------------|----------------|---------------------|----------------------|
| Floodlight □ 840/4000 K | 1800 | 12 | -25 °C to +40 °C | 972 100 A4 61 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

2 = narrow beam
 9 = concentrated wide beam
 CDP prism screen

ANTARES LED OPTIONS

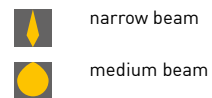
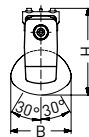
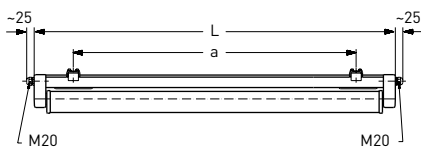
| Version | Article no. |
|--|----------------------|
| DALI | 100 502 |
| Further colour temperatures 3000 K or 5000 K | Available on request |
| RAL finish | 972 960 |
| Swimming pool version | 972 970 |

ANTARES LED ACCESSORIES

| Version | Article no. |
|--------------------------------------|-------------|
| Cover frame for ceiling illumination | 970 929 |

BASEL LED

LED



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|--------|--------------|-------------|
| LED | m600 | 685 mm | 107 mm | 154 mm | 465 ± 30 mm | 1.7 kg |
| LED | m1200 | 1251 mm | 107 mm | 154 mm | 980 ± 80 mm | 2.0 kg |
| LED | m1500 | 1551 mm | 107 mm | 154 mm | 1280 ± 80 mm | 3.6 kg |

AREAS OF APPLICATION

Explosion-proof surface mounted ceiling luminaire made of polymer with LED lamps. Useable in industrial applications with explosive atmospheres according to zone 2, 22. Designed according to the applicable European Directives.

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 and IP 67. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube that can be swivelled, made of PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in steps of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC. Two access covers, two cable glands on face side M20 and 5 x 1.5 mm² through wiring.

MOUNTING

Single or row mounting. Ceiling installation using two special polymer mounting clamps, variable mounting distance.

BASEL LED

ATEX

- ⊕ II 3G Ex nR IIC T4 Gc
- ⊕ II 3D Ex tc IIIC T120°C Dc

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|------------------|----------------|---------------------|--------------------------|
| m600 | 1710 | 11 | -20 °C to +40 °C | 525 280 AB 84 - F |
| m1200 | 3420 | 19 | -20 °C to +40 °C | 525 480 AB 84 - F |
| m1500 | 5280 | 28 | -20 °C to +40 °C | 525 680 AB 84 - F |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

- 2 = narrow beam
- 3 = medium beam

Colour temperature / B

- 3 = 830/3000 K
- 4 = 840/4000 K
- 5 = 850/5000 K

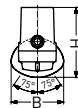
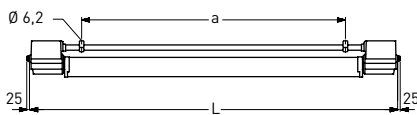
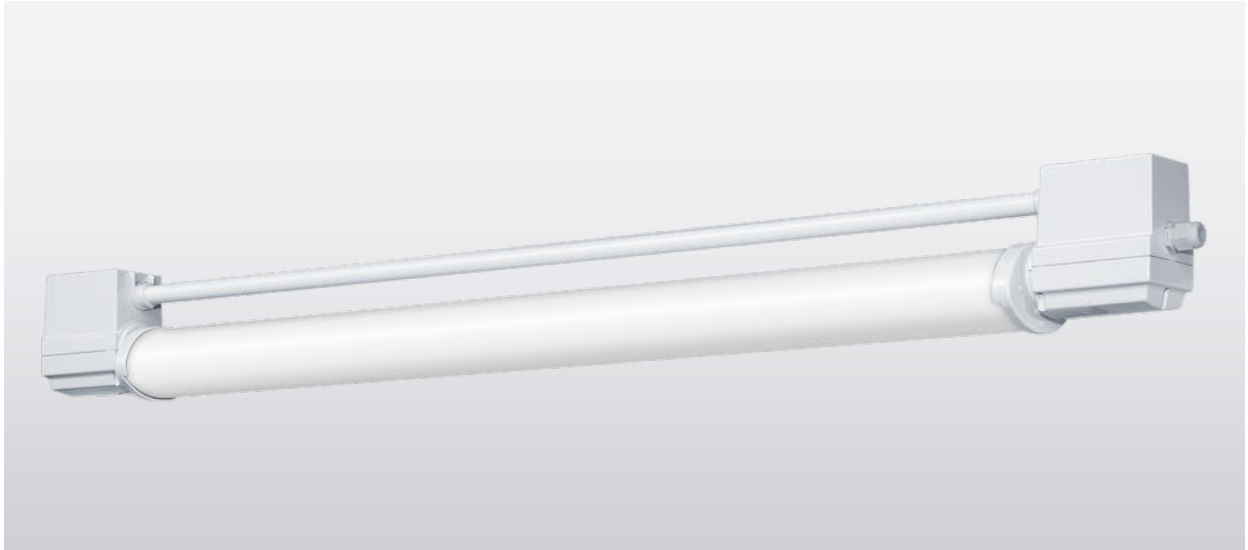


> Mounting clamps, included in scope of delivery



BEBRA LED

LED



K Further colour temperatures (optional)



medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|--------|--------------|-------------|
| LED | m1200 | 1432 mm | 107 mm | 142 mm | 1005 ± 80 mm | 3.4 kg |
| LED | m1500 | 1732 mm | 107 mm | 142 mm | 1305 ± 80 mm | 3.8 kg |

AREAS OF APPLICATION

Work pit luminaires with LED. Useable in work pits for maintenance and repair workshops.

HOUSING

Acid, alkaline and fuel-resistant luminaire housing made of thermosetting polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water to 1 m due to protection rating IP 68, 1 m. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube that can be swivelled, made of PC Tropol® (fracture proof) or PMMA Transopal® (impact strengthened) with internal aluminium reflector (MIRO-SILVER®). Pivoting and lockable reflector tube.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC. Two M20 cable glands on face side and 4 x 1.5 mm² through wiring. L80 B10 > 50,000 h at +45 °C.

MOUNTING

Single or row mounting. Ceiling installation using reinforced polymer stirrup clamps, adjustable mounting distance.

BEBRA LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|--------------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 3540 | 21 | -25 °C to +45 °C | 535 480 34 A1 -Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5490 | 33 | -25 °C to +45 °C | 535 680 34 A1 -Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Reflector tube / A

2 = PMMA Transopal®

(impact strengthened)

8 = PC Tropol® (fracture proof)



> Polymer stirrup clamps, included in scope of delivery

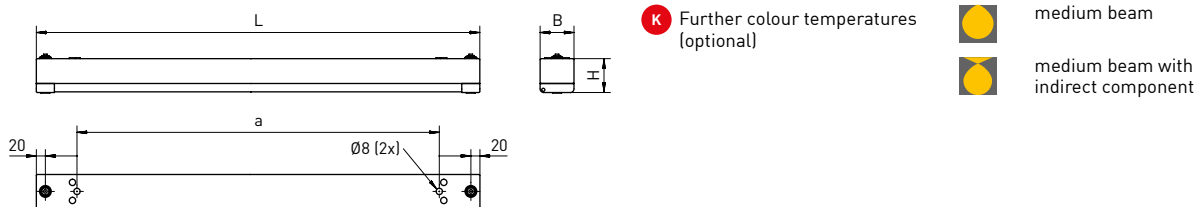
BEBRA LED OPTIONS

| Version | Article no. |
|---|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 535 010 |
| Further colour temperatures | Available on request |



BELFAST

LED



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|-------|-------|---------|-------------|
| LED | m600 | 700 mm | 75 mm | 75 mm | 520 mm | 3.4 kg |
| LED | m1200 | 1260 mm | 75 mm | 75 mm | 1080 mm | 5.8 kg |
| LED | m1500 | 1540 mm | 75 mm | 75 mm | 1360 mm | 7.6 kg |

AREAS OF APPLICATION

Extremely impact-resistant surface mounted ceiling luminaire with LED lamps. Vandalism-proof up to 150 joules. Useable in prisons, detention cells and all areas at risk of deliberate or negligent vandalism, as well as pedestrian underpasses and tunnels.

HOUSING

Luminaire housing made of stainless steel, polished (protection rating IP 44) with integrated polymer luminaire. Useable for indoor and outdoor areas according to protection rating IP 65. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. Anti-graffiti coating for lamp diffuser protects against dirt and paint residue, optionally available (see options).

LIGHTING TECHNOLOGY

Rectangular, 4 mm thick lamp diffuser made of PC (fracture proof), opal white or PC (fracture proof), clear structured.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two rearward, concealed cable entries M20 and 4 x 1.5 mm² through wiring (only m1200 and m1500). 4 kV transient filter. **L80 B10 > 100,000 h at +35 °C.**

Retains operation in case of vandalism. 8 years warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing with two concealed rear mounting apertures. Luminaire cover fixing with two stainless steel sealing screws with hexagon sockets. Special screws optionally available (see options).

BELFAST

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m600 <input type="checkbox"/> 840/4000 K | 2660 | 21 | -25 °C to +35 °C | 656 280 A4 B1 |
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -25 °C to +35 °C | 656 480 A4 B1 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -25 °C to +35 °C | 656 680 A4 B1 |

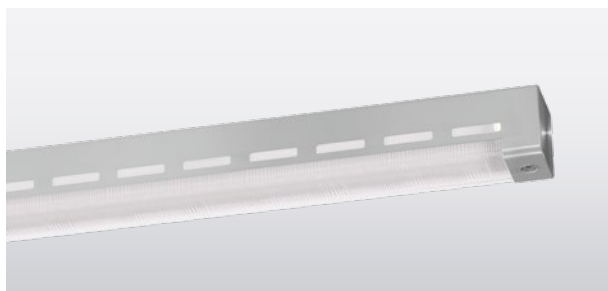
When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

0 = medium beam with indirect component
3 = medium beam

Luminaire cover / B

0 = PC (fracture proof) opal white
9 = PC (fracture proof) clear structured



> BELFAST medium beam with indirect component, PC (fracture proof) clear structured

BELFAST OPTIONS

| Version | Article no. |
|--|----------------------|
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 656 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Halogen-free version | 656 007 |
| Special screw, oval (requires special tool) | 700 003 |
| Special screw, semi-circle (requires special tool) | 700 001 |
| Special screw, three hole (requires special tool) | 700 002 |
| Through wiring 4 × 2.5 mm ² (only m1200/m1500) | 656 822 |
| Through wiring 5 × 1.5 mm ² (only m1200/m1500) | 656 832 |
| Through wiring 5 × 2.5 mm ² (only m1200/m1500) | 656 392 |
| Version for NORKA trunking system BELFAST with two cable entries on the face side (continuous row version) | 656 103 |
| Version for operating with PASSAU LED | Available on request |

BELFAST ACCESSORIES

| Version | Article no. |
|--|-------------|
| Screwdriver bit for oval screw | 717 008 |
| Screwdriver bit for semi-circle screw | 734 007 |
| Screwdriver bit for three hole screw/nut | 734 008 |

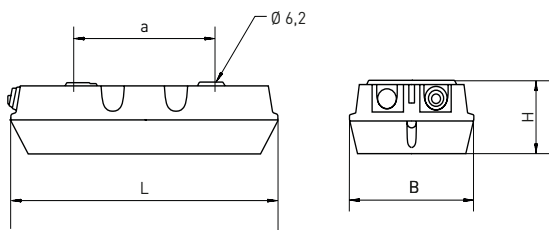
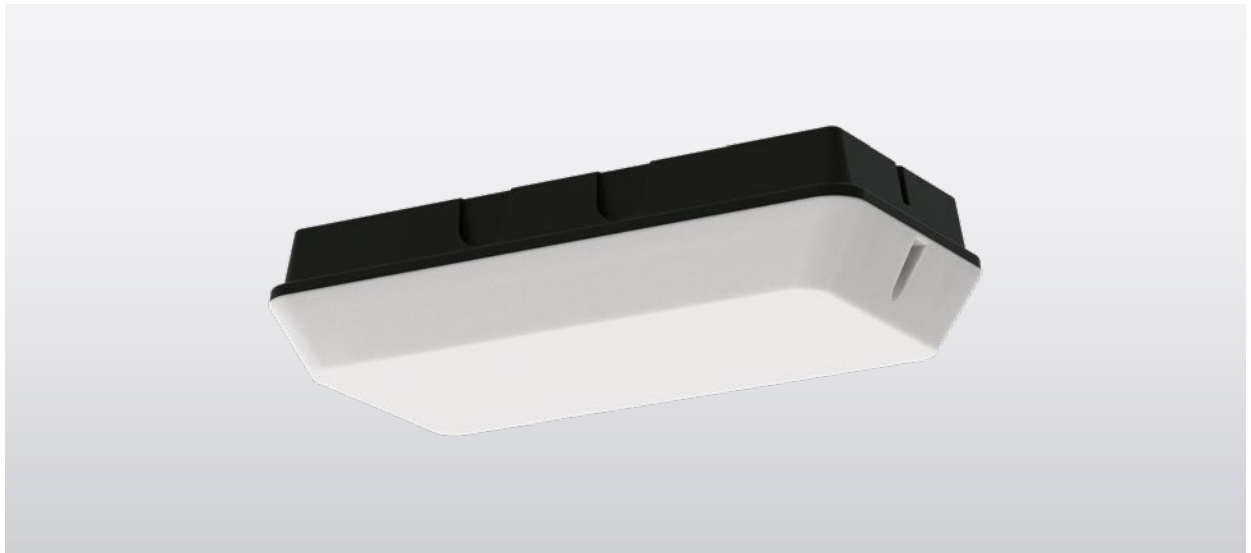
SUITABLE SUPPLEMENT



TRUNKING SYSTEM BELFAST

BERLIN LED

LED



easy eXchange

medium beam

Further colour temperatures (optional)

| Lamp | Version | L | B | H | a | Max. weight |
|------|--------------|--------|--------|-------|--------|-------------|
| LED | 50, 100, 150 | 340 mm | 155 mm | 85 mm | 180 mm | 1.5 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps. Useable in e.g. railway loop lines, section doors, storage rooms, cellars, technical side rooms and cranes. **Suitable for cold areas down to -25 °C.**

HOUSING

Weather-proof and UV-resistant luminaire housing made of polymer, anthracite. Useable for indoor and outdoor areas according to protection rating IP 65. Sealing system made of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Detachable lamp diffuser made of PC Tropat® (fracture proof) with easy eXchange for LED and driver replacement.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. One cable membrane M20. 2 kV transient filter.

MOUNTING

Single mounting. Ceiling or wall fixing with two concealed rear mounting apertures. Easy mounting due to modular construction.

INFORMATION

- > BERLIN LED 50 replaces 11 W C-SEL
- > BERLIN LED 100 replaces 18 W TC-L / TC-D

BERLIN LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|-----------------|
| 50 <input type="checkbox"/> 840/4000 K | 550 | 6 | -25 °C to +30 °C | 421 050 34 03-F |
| 100 <input type="checkbox"/> 840/4000 K | 1100 | 8 | -25 °C to +30 °C | 421 100 34 03-F |
| 150 <input type="checkbox"/> 840/4000 K | 1500 | 10 | -25 °C to +30 °C | 421 150 34 03-F |

BERLIN LED OPTIONS

| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 421 010 |
| Emergency lighting version EL (according to 60598-2-22) | Available on request |
| Further colour temperatures | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Version for operating with PASSAU LED | Available on request |

BERLIN LED ACCESSORIES

| Version | Article no. |
|---|----------------------|
| easy eXchange replacement kit | Available on request |
| Wall fixing, stainless steel | 200 207 |
| Anti-vibration damper, standard for special application areas | 421 005 |

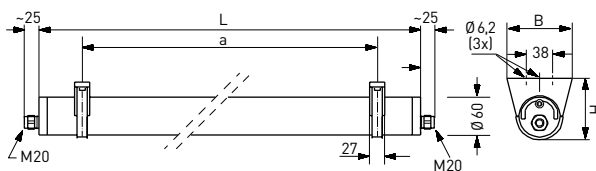
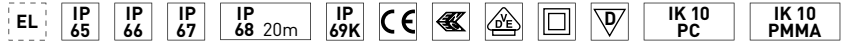


> BERLIN LED wall fixing,
stainless steel,
article no. 200 207

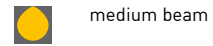


BERN LED

LED



FOCUSSED LIGHTING
[see appendix C]



medium beam

easy eXchange

K Further colour temperatures
[optional]

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|-------|-------|--------------|-------------|
| LED | m600 | 750 mm | 95 mm | 89 mm | 650 ± 50 mm | 2.5 kg |
| LED | m1200 | 1310 mm | 95 mm | 89 mm | 1210 ± 50 mm | 3.6 kg |
| LED | m1500 | 1590 mm | 95 mm | 89 mm | 1490 ± 50 mm | 4.7 kg |

AREAS OF APPLICATION

Tubular luminaire with LED lamps. Useable in industrial applications, in work pits used for maintenance and repair work and for decorative indoor and outdoor lighting. Version with high protection rating IP 69K suitable for production facilities and suppliers in the food and beverage industry.

HOUSING

Polymer luminaire tube (Ø 60 mm) with two quick-mounting pressure caps and protection against unauthorised opening. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water to 20 m due to protection rating IP 68, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K.

LIGHTING TECHNOLOGY

Luminaire tube made of PMMA Transopal® [impact strengthened] or PC Tropol® [fracture proof] with easy eXchange for LED and driver replacement.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. One cable gland M20 per face side. 4 x 1.5 mm² through wiring. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. 2 kV transient filter.

MOUNTING

Individual or row mounting. Ceiling or wall fixing using two mounting clamps made of stainless steel/black/translucent polymer. Suspension system possible [see options].

BERN LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-----------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +40 °C | 536 280 34 A4 -F-... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 536 480 34 A4 -F-... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 536 680 34 A4 -F-... |

Standard luminous flux T8, for other lumen packages, see appendix C

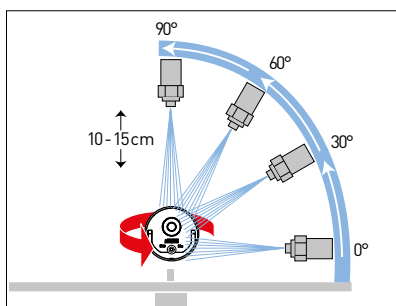
When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

Luminaire tube / A

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)

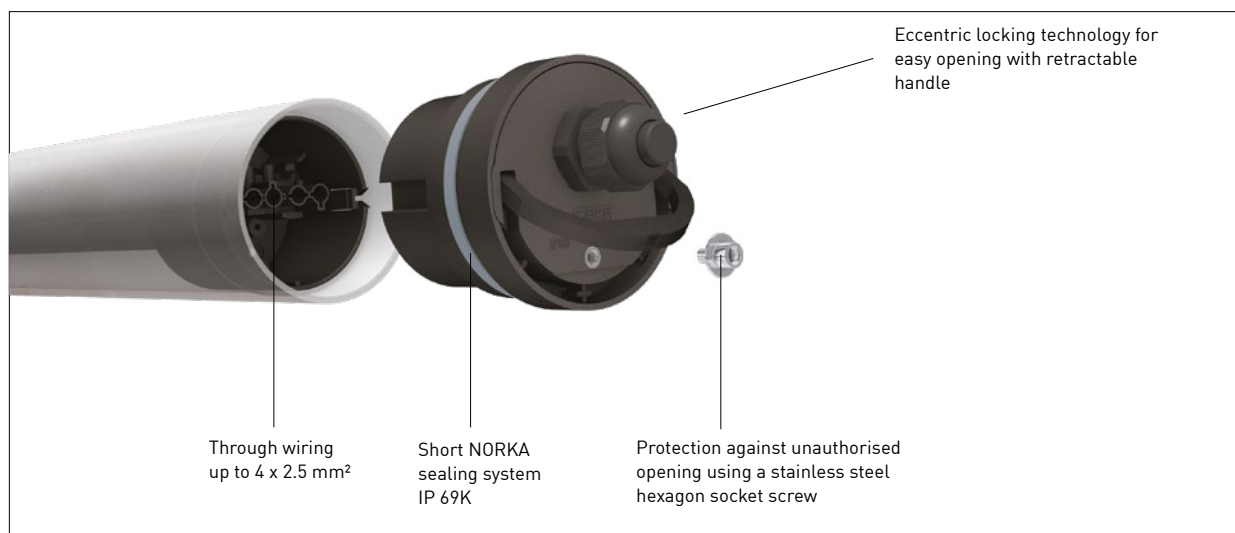
BERN LED OPTIONS

| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| DALI (through wiring includes 2 x 1.5 mm ² control line) | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 536 032 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Luminaire tube coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 536 010 |
| Swimming pool version without polymer mounting clamps | 536 036 |
| Through wiring 4 x 2.5 mm ² | 536 945 |
| Transparent pressure cap with M20 cable gland | 534 001 |
| Version for operating with PASSAU LED | See PASSAU LED |



> Test IP 69K:

The IP 69K test verifies the protection against hot water during high-pressure or steam-jet cleaning according to EN 60529. The test conditions require a pressure of 100 bar at a temperature of 80 °C.



> BERN LED quick-mounting pressure cap

BERN LED ACCESSORIES

| Version | Article no. |
|--|----------------------|
| easy eXchange replacement kit | Available on request |
| Mounting clamps, stainless steel V4A, angled (pair), (not suitable for chlorine atmosphere) | 534 118 |
| Mounting clamps, stainless steel/black polymer (pair), (not suitable for chlorine atmosphere) | 534 218 |
| Mounting clamps, stainless steel/transparent polymer (pair), (not suitable for chlorine atmosphere) | 534 208 |
| Mounting clamps, stainless steel/transparent polymer, for suspension system (pair), (not suitable for chlorine atmosphere) | 534 319 |
| Polymer mounting clamps, chlorine resistant, white, Ø 60 mm, for ceiling mounting (pair) | 534 209 |
| Suspension system for 1 m suspension with stainless steel brackets (pair), (not suitable for chlorine atmosphere) | 534 166 |



> Mounting clamps for BERN LED
Stainless steel / black/transparent polymer (pair), (not suitable for chlorine atmosphere), included in scope of delivery



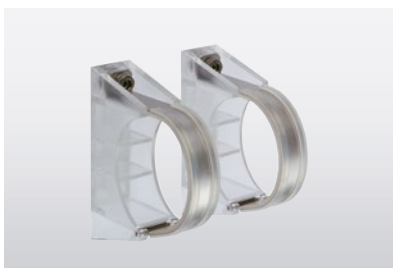
> Polymer mounting clamps for BERN LED, chlorine resistant, white, Ø 60 mm, for ceiling mounting (pair), Article no. 534 209



> Mounting clamps for BERN LED, stainless steel/black polymer (pair), (not suitable for chlorine atmosphere), Article no. 534 118



> Mounting clamps for BERN LED, stainless steel/black polymer (pair), (not suitable for chlorine atmosphere), Article no. 534 218



> Mounting clamps for BERN LED, stainless steel/transparent polymer (pair), (not suitable for chlorine atmosphere), Article no. 534 208



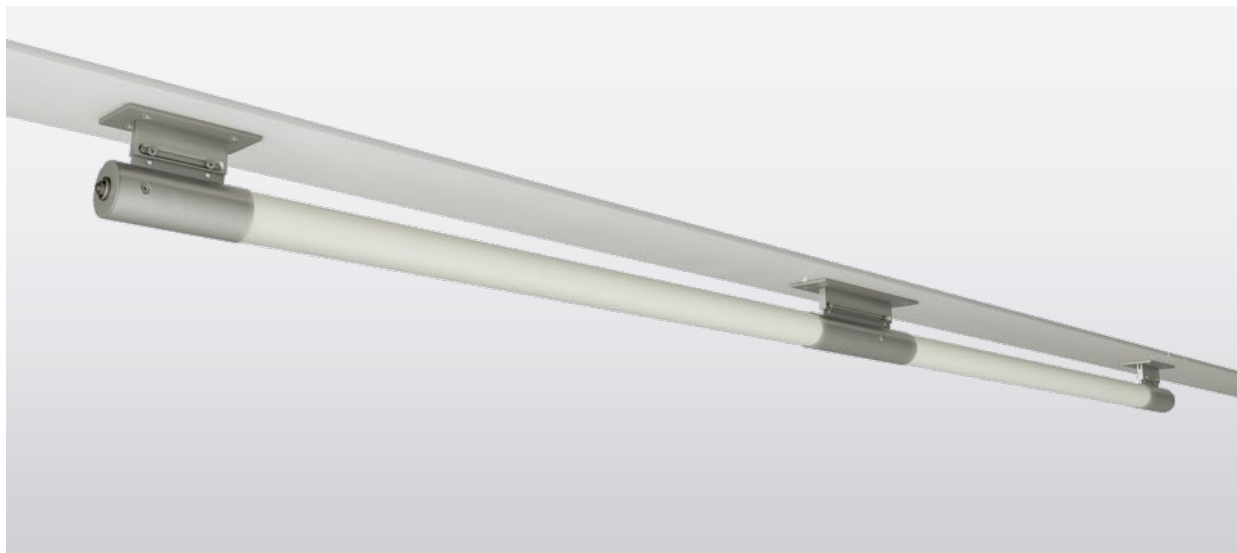
> Mounting clamps, stainless steel/transparent polymer, for suspension system (pair), (not suitable for chlorine atmosphere), Article no. 534 319



> Mounting clamps for BERN LED, stainless steel/transparent polymer, for suspension system (pair), (not suitable for chlorine atmosphere), Article no. 534 166

BERN LED ACCESSORIES

| Version | Article no. |
|--|-------------|
| Centre piece, stainless steel, (not suitable for chlorine atmosphere) | 536 002 |
| End cap, stainless steel, with internal luminaire fastening clamp (Fixes the luminaire in 5 x 45° steps for a uniform appearance in the continuous row system), (not suitable for chlorine atmosphere) | 536 001 |
| End cap, stainless steel, without luminaire fastening clamp (not suitable for chlorine atmosphere) | 536 003 |



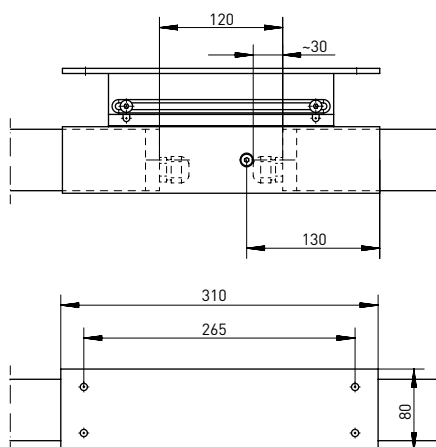
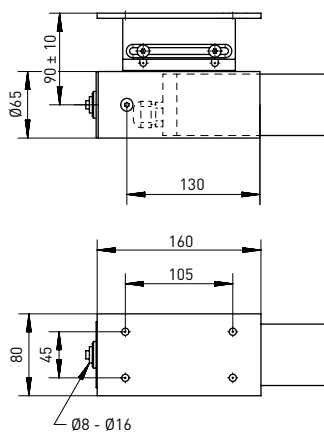
> Stainless steel suspension system for BERN LED with end cap and centre piece (not suitable for chlorine atmosphere)



> End cap (not suitable for chlorine atmosphere)
Article no. 536 001 with internal luminaire fastening clamp
Article no. 536 003 without luminaire fastening clamp

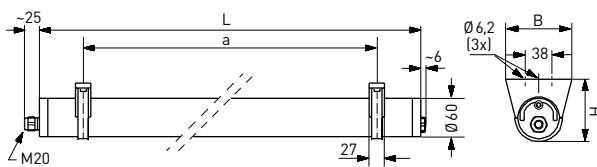


> Centre piece (not suitable for chlorine atmosphere)
Article no. 536 002



BERN LED EX

LED



medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|-------|-------|--------------|-------------|
| LED | m600 | 750 mm | 95 mm | 89 mm | 650 ± 50 mm | 2.5 kg |
| LED | m1200 | 1310 mm | 95 mm | 89 mm | 1210 ± 50 mm | 3.6 kg |
| LED | m1500 | 1590 mm | 95 mm | 89 mm | 1490 ± 50 mm | 4.7 kg |

AREAS OF APPLICATION

Explosion-proof tubular luminaire with LED, resistant to pressurised water. Useable in explosive atmospheres in zone 2, 22. Designed according to the applicable European standards and directives.

HOUSING

Luminaire tube (Ø 60 mm) made of polymer with two quick-release fasteners and protection against unauthorised opening. End caps black. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water according to protection rating IP 68, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K.

LIGHTING TECHNOLOGY

Luminaire tube made of PC Tropol® (fracture proof), medium beam.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in DALI driver 230 V AC/DC. Two cable glands M20 and 4 x 1.5 mm² through wiring.

MOUNTING

Single mounting. Ceiling or wall fixing with two polymer mounting clamps.

BERN LED EX**ATEX**

⊕ II 3G Ex nR IIC T6 Gc

⊕ II 3D Ex tc IIIIC T80°C Dc

| Version | | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|-------------------------------------|------------------|----------------|---------------------|------------------|
| m600 | <input type="checkbox"/> 840/4000 K | 1300 | 9 | -25 °C to +40 °C | 531 280 34 84 -F |
| m1200 | <input type="checkbox"/> 840/4000 K | 2600 | 15 | -25 °C to +40 °C | 531 480 34 84 -F |
| m1500 | <input type="checkbox"/> 840/4000 K | 4270 | 23 | -25 °C to +40 °C | 531 680 34 84 -F |



- > Mounting clamps stainless steel / black / transparent polymer (pair), (not suitable for chlorine atmosphere), included in scope of delivery

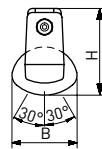
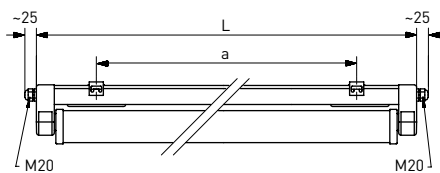
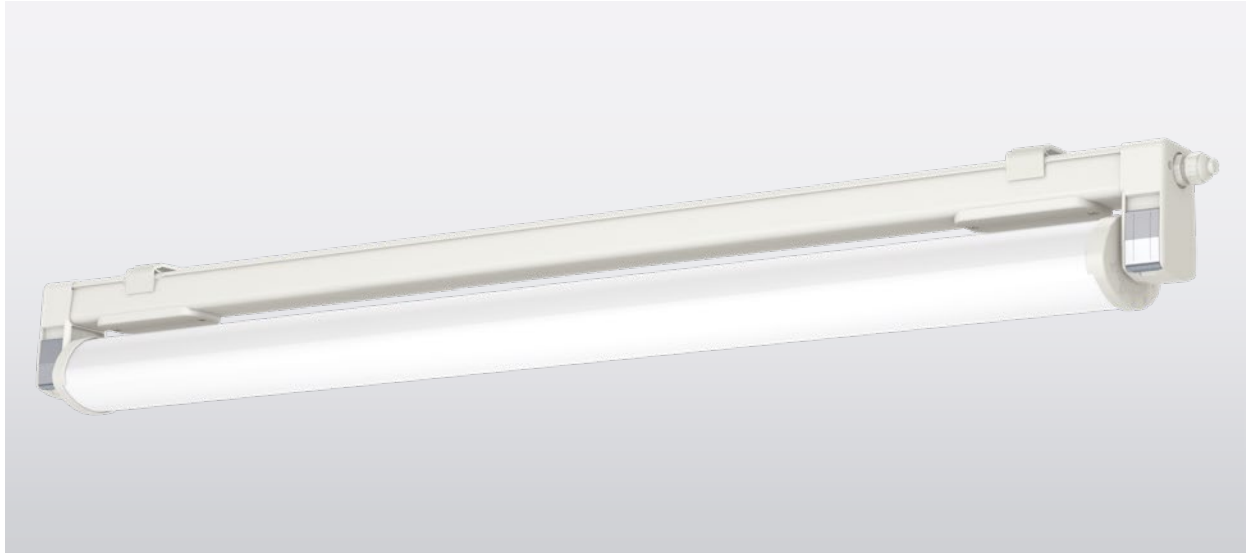




Luminaires for food production such as the BITBURG LED must comply with the International Food Standard (IFS) in order to be used in the meat processing industry, for example.

BITBURG LED

LED



FOCUSSED LIGHTING
(see appendix C)

K Further colour temperatures (optional)



narrow beam



medium beam



wide beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|--------|--------------|-------------|
| LED | m1200 | 1251 mm | 107 mm | 140 mm | 980 ± 80 mm | 3.3 kg |
| LED | m1500 | 1551 mm | 107 mm | 140 mm | 1280 ± 80 mm | 4.2 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling and wall surface-mounting for HACCP/IFS applications with LED lamps. Useable in production facilities and suppliers in the food and beverage industry, in work pits for maintenance and repair workshops and wash bays.

HOUSING

Acid, alkaline and fuel-resistant luminaire housing made of fibreglass reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube that can be swivelled made of PMMA Transopal® (impact strengthened) or PC Tropolal® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, two cable glands on face side M20 and 4 x 1.5 mm² through wiring. 2 kV transient filter. Adjustable luminous flux via NFC programming (optionally available).

MOUNTING

Single or row mounting. Ceiling installation using two stainless steel mounting clamps, variable mounting distance. Captive end caps.

BITBURG LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|--------------------|--------------------|----------------|---------------------|--------------------------------|
| m1200 □ 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 645 480 A4 B4 - F - ... |
| m1500 □ 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 645 680 A4 B4 - F - ... |

□ Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

- 2 = narrow beam
- 3 = medium beam
- 4 = wide beam

Reflector tube / B

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)

BITBURG LED OPTIONS

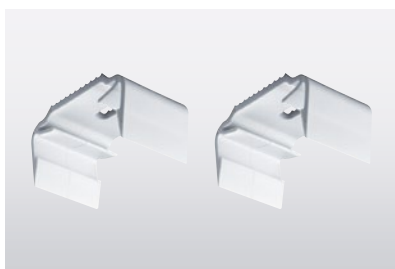
| Version | Article no. |
|---|----------------|
| Adjustable luminous flux via NFC programming (barcode and RFID detection device required) | 100 037 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 645 010 |
| DALI | 100 502 |
| Further colour temperatures | See appendix B |
| Halogen-free version | 645 032 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish | 645 960 |
| Through wiring 4 × 2.5 mm ² | 645 824 |
| Through wiring 5 × 1.5 mm ² | 645 834 |
| Through wiring 5 × 2.5 mm ² | 645 394 |
| Version for operating with PASSAU LED | See PASSAU LED |

BITBURG LED ACCESSORIES

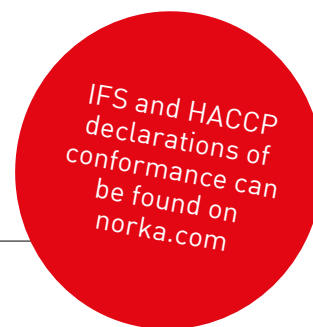
| Version | Article no. |
|---|-------------|
| Mobile barcode and RFID detection device for NFC programming | 106 598 |
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |
| Safety clip/theft protection (only in connection with standard mounting) | 200 224 |



- > Stainless steel mounting clamps, included in scope of delivery



- > Polymer mounting clamps, for chlorine / acidic atmospheres (pair), Article no. 200 226



The requirements in terms of technology and equipment in production facilities for the food processing and beverage industry and their suppliers are particularly high and are increasing constantly. Measures to avert risks to health complying with the principles of the **HACCP** concept (Hazard Analysis Critical Control Point) for production hygiene, cleaning and disinfection are prerequisites. HACCP is a key criterion of the **IFS** (International Food Standard) in terms of quality system requirements.

NORKA has catered for the requirements of the food processing and beverage industry and work pit sectors for many years, offering a variety of luminaires for that use case.

REQUIREMENTS:

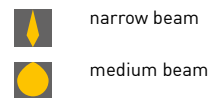
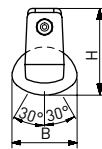
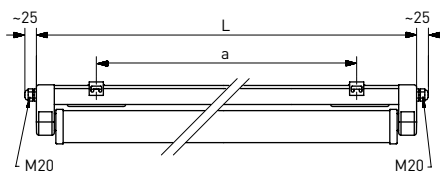
- > Protection against glass fragments
- > Protection against falling metal pieces
- > Chemical resistance
- > Mechanical resistance
- > Protection rating up to IP 69K
- > Temperature resistance (heat/cold)
- > Easy maintenance and cleaning

APPLICATIONS:

- > Production facilities and suppliers in the food and beverage industry
- > Production facilities with raised ambient temperatures
- > Cold stores

BITBURG LED EXTREME

LED



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|--------|--------------|-------------|
| LED | m1200 | 1251 mm | 107 mm | 140 mm | 980 ± 80 mm | 3.3 kg |
| LED | m1500 | 1551 mm | 107 mm | 140 mm | 1280 ± 80 mm | 4.2 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling and wall-surface mounting for HACCP/IFS applications with LED lamps. Useable in production facilities and suppliers in the food and beverage industry with a long service life at up to +65 °C.

HOUSING

Acid, alkaline and fuel-resistant luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube that can be swivelled made of PMMA Transopal® (impact strengthened) or PC Tropolal® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, two cable glands on face side M20 and 4 x 1.5 mm² through wiring.

L80 B10 >100,000 h at +65 °C.

4 kV transient filter. 8 years warranty.

MOUNTING

Single or row mounting. Ceiling installation using two stainless steel mounting clamps, variable mounting distance. Captive end caps.

BITBURG LED EXTREME

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 4030 | 28 | -40 °C to +65 °C | 647 480 A4 B1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5050 | 35 | -40 °C to +65 °C | 647 680 A4 B1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / **A**

2 = narrow beam
3 = medium beam

Reflector tube / **B**

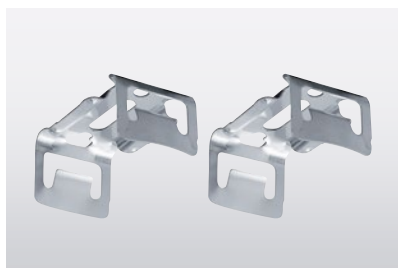
2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropolal® (fracture proof)

BITBURG LED EXTREME OPTIONS

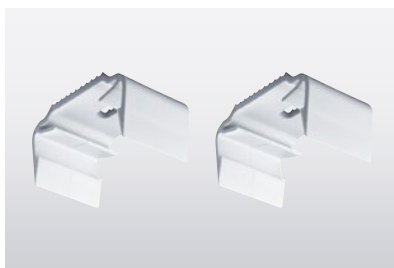
| Version | Article no. |
|---|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 645 010 |
| DALI | 100 502 |
| Halogen-free version | 645 032 |
| HCL (Human Centric Lighting) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish | 645 960 |
| Through wiring 4 × 2.5 mm ² | 645 824 |
| Through wiring 5 × 1.5 mm ² | 645 834 |
| Through wiring 5 × 2.5 mm ² | 645 394 |
| Version for operating with PASSAU LED | Available on request |

BITBURG LED EXTREME ACCESSORIES

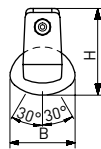
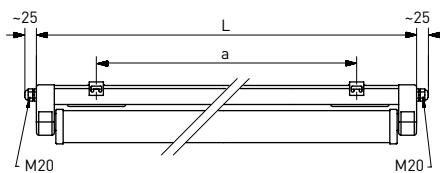
| Version | Article no. |
|---|-------------|
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |
| Safety clip/theft protection (only in connection with standard mounting) | 200 224 |



> Stainless steel mounting clamps, included in scope of delivery



> Polymer mounting clamps, for chlorine / acidic atmospheres (pair), Article no. 200 226



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|--------|--------------|-------------|
| LED | m1200 | 1251 mm | 107 mm | 140 mm | 980 ± 80 mm | 3.3 kg |
| LED | m1500 | 1551 mm | 107 mm | 140 mm | 1280 ± 80 mm | 4.2 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling and wall-surface mounting for HACCP/IFS applications with LED lamps. Useable in production facilities and suppliers in the food and beverage industry. **Long expected service life, useable up to +55 °C.**

HOUSING

Acid, alkaline and fuel-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube that can be swivelled made of PMMA Transopal® (impact strengthened) or PC Tropolal® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, two cable glands on face side M20 and 4 x 1.5 mm² through wiring. **L80 B10 > 75,000 h at +55 °C. 4 kV transient filter. 8 years manufacturer warranty.**

MOUNTING

Single or row mounting. Ceiling installation using two stainless steel mounting clamps, variable mounting distance. Captive end caps.

BITBURG LED INDUSTRY

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|--------------------|------------------|----------------|---------------------|------------------------------------|
| m1200 □ 840/4000 K | 4640 | 25 | -40 °C to +55 °C | 646 480 A4 B4 - F - 4640lm |
| m1200 □ 840/4000 K | 8300 | 44 | -40 °C to +55 °C | 646 480 A4 B4 - F - 8300lm |
| m1500 □ 840/4000 K | 6300 | 33 | -40 °C to +55 °C | 646 680 A4 B4 - F - 6300lm |
| m1500 □ 840/4000 K | 10380 | 54 | -40 °C to +55 °C | 646 680 A4 B4 - F - 10380lm |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / **A**

2 = narrow beam
3 = medium beam
4 = wide beam

Reflector tube / **B**

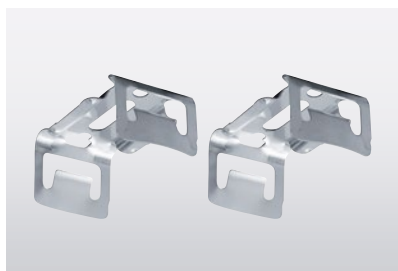
2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropol® (fracture proof)

BITBURG LED INDUSTRY OPTIONS

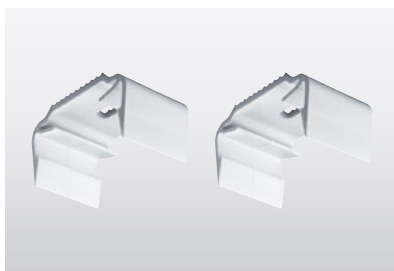
| Version | Article no. |
|---|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 645 010 |
| DALI | 100 502 |
| Halogen-free version | 645 032 |
| HCL (Human Centric Lighting) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish | 645 960 |
| Through wiring 4 × 2.5 mm ² | 645 824 |
| Through wiring 5 × 1.5 mm ² | 645 834 |
| Through wiring 5 × 2.5 mm ² | 645 394 |
| Version for operating with PASSAU LED | Available on request |

BITBURG LED INDUSTRY ACCESSORIES

| Version | Article no. |
|---|-------------|
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |
| Safety clip/theft protection (only in connection with standard mounting) | 200 224 |



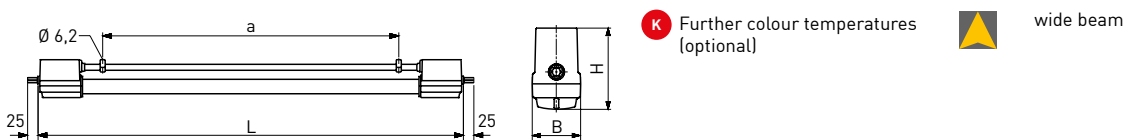
> Stainless steel mounting clamps, included in scope of delivery



> Polymer mounting clamps, for chlorine / acidic atmospheres (pair), Article no. 200 226

BREMERHAVEN LED

LED



| Lamp | Version | L | B | H | a | Max. weight |
|------|------------|---------|-------|--------|--------------|-------------|
| LED | HT, m600 | 822 mm | 77 mm | 129 mm | 395 ± 80 mm | 2.4 kg |
| LED | HT, m1200 | 1432 mm | 77 mm | 129 mm | 1005 ± 80 mm | 2.9 kg |
| LED | HT, m1500 | 1732 mm | 77 mm | 129 mm | 1305 ± 80 mm | 3.4 kg |
| LED | VHT, m600 | 822 mm | 77 mm | 129 mm | 395 ± 80 mm | 2.4 kg |
| LED | VHT, m1200 | 1432 mm | 77 mm | 129 mm | 1005 ± 80 mm | 2.7 kg |
| LED | VHT, m1500 | 1732 mm | 77 mm | 129 mm | 1305 ± 80 mm | 3.2 kg |

AREAS OF APPLICATION

Polymer luminaire with LED lamps. Useable in industrial applications with demanding ambient conditions. Suitable for production facilities and suppliers in the food and beverages industry. **Heat-resistant (high temperature (HT)) version suitable for temperatures up to +60 °C, highly heat-resistant (very high-temperature (VHT)) version suitable for temperatures up to +90 °C.**

HOUSING

Weatherproof luminaire housing made of thermosetting polymer. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66, IP 67 and IP 68, 1 m. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Protection tube 38 mm made of PC Tropol® (fracture proof).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Two M20 cable glands on face side. Two types are available.

Version HT

With built-in driver 230 V AC/DC and 4 x 1.5 mm² through wiring. L80 B50 >100,000 h at +60 °C.

Version VHT

With 230 V AC/DC driver in separate polymer housing (driver to be ordered separately). Connecting cable 2 x 1.5 mm² on site, maximum length 100 m. L80 B50 >50,000 h at +90 °C.

MOUNTING

Single or row mounting (HT version only). Ceiling installation using two polymer stirrup clamps, variable mounting distance.

BREMERHAVEN LED – VERSION HT

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------|
| m600 <input type="checkbox"/> 840/4000 K | 1900 | 16 | -25 °C to +60 °C | 596 280 44 84 |
| m1200 <input type="checkbox"/> 840/4000 K | 3800 | 30 | -25 °C to +60 °C | 596 480 44 84 |
| m1500 <input type="checkbox"/> 840/4000 K | 4750 | 37 | -25 °C to +60 °C | 596 680 44 84 |

BREMERHAVEN LED – VERSION VHT

Driver has to be ordered separately (see accessories).

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------|
| m600 <input type="checkbox"/> 840/4000 K | 1820 | 15 | -25 °C to +90 °C | 597 280 44 84 |
| m1200 <input type="checkbox"/> 840/4000 K | 3640 | 26 | -25 °C to +90 °C | 597 480 44 84 |
| m1500 <input type="checkbox"/> 840/4000 K | 4550 | 31 | -25 °C to +90 °C | 597 680 44 84 |

BREMERHAVEN LED OPTIONS

| Version | Article no. |
|-----------------------------|----------------------|
| Further colour temperatures | Available on request |

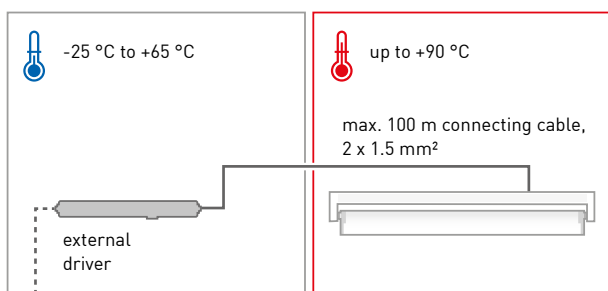
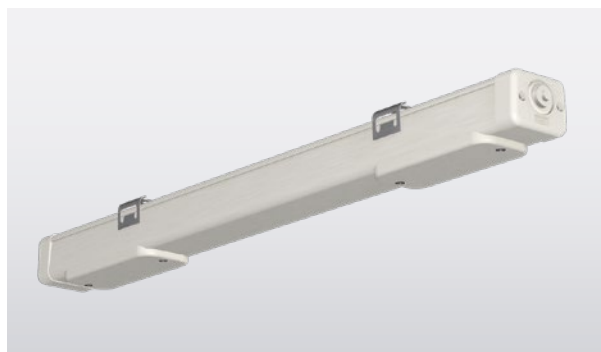
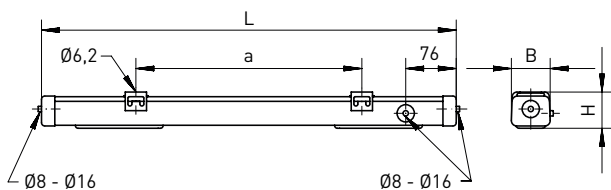
BREMERHAVEN LED ACCESSORIES

| Version | Article no. |
|--|-------------|
| Electronic driver in polymer housing for BREMERHAVEN LED VHT, IP 65, protection class II | 597 186 |

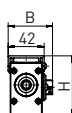
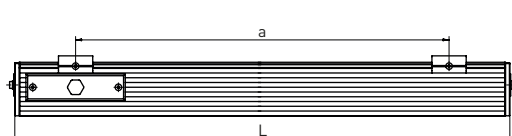
ELECTRONIC DRIVER FOR BREMERHAVEN LED VHT

Article no. 597 186




| L | B | H | a |
|--------|-------|-------|-------------|
| 624 mm | 58 mm | 54 mm | 340 ± 20 mm |



- > Through the use of an external driver, version VHT can be used in areas up to +90 °C.



- **FOCUSSED LIGHTING**
(see appendix C)
- Further colour temperatures (optional)

-  medium beam
-  asymmetric beam
-  concentrated beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|-------------|-------|---------|--------------|-------------|
| LED | m600 | 600 ± 2 mm | 52 mm | 70.5 mm | 458 ± 50 mm | 1.2 kg |
| LED | m1200 | 1160 ± 2 mm | 52 mm | 70.5 mm | 1018 ± 50 mm | 2.2 kg |
| LED | m1500 | 1440 ± 2 mm | 52 mm | 70.5 mm | 1298 ± 50 mm | 2.7 kg |

AREAS OF APPLICATION

Aluminium luminaire for ceiling and surface wall mounting with LED stripes. Useable for facade or advertisement illumination and under canopies.

HOUSING

Silver anodised aluminium profile housing. Useable for indoor areas and covered outdoor areas according to protection rating IP 65.

LIGHTING TECHNOLOGY

Cover screen made of PMMA Transopal® (impact strengthened) or PMMA clear.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. One cable entry M20 per face side. Built-in driver 230 V AC/DC. 2 kV transient filter with 3 x 1.5 mm² through wiring. Protection class I.

MOUNTING

Single or row mounting. Ceiling mounting with aluminium clamps.

BRIG – MEDIUM BEAM, PMMA TRANSOPAL®

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +40 °C | 539 280 34 24 - F - ... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 539 480 34 24 - F - ... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 539 680 34 24 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please add the desired lumen package (see appendix C).

BRIG – CONCENTRATED BEAM, PMMA TRANSOPAL®, 12° FRESNEL LENS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +40 °C | 539 280 84 24 - F - ... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 539 480 84 24 - F - ... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 539 680 84 24 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please add the desired lumen package (see appendix C).

BRIG – ASYMMETRIC BEAM, PMMA CLEAR, 6° FRESNEL LENS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +40 °C | 539 280 64 14 - F - ... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 539 480 64 14 - F - ... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 539 680 64 14 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

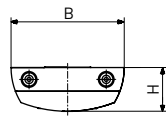
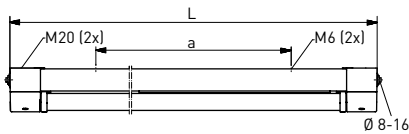
When ordering, please add the desired lumen package (see appendix C).

BRIG OPTIONS

| Version | Article no. |
|--|----------------------|
| DALI | 100 502 |
| Further colour temperatures | See appendix B |
| Rearward cable entry, M16, sides closed (pair) | 539 438 |
| Version for operating with PASSAU LED | Available on request |

BRIG ACCESSORIES

| Version | Article no. |
|---|-------------|
| Continuous row mounting clamp (1 piece) | 539 010 |



- **FOCUSSED LIGHTING**
[see appendix C]
- ⚡ **XARA® lighting control**
(optional)
- K Further colour temperatures
(optional)

- medium beam
- asymmetric beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|-------|-------------|-------------|
| LED | m1200 | 1285 mm | 220 mm | 85 mm | 951 ± 5 mm | 4.6 kg |
| LED | m1500 | 1585 mm | 220 mm | 85 mm | 1251 ± 5 mm | 5.0 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps. Useable in underground stations, pedestrian underpasses and tunnels or swimming pools (see options).

HOUSING

Flat, weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 9010, with low installed height. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Lamp diffuser made of PMMA Transopal® (impact strengthened) or PC Tropal® (fracture proof) with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, four cable entries M20 and 4 x 1.5 mm² through wiring. 2 kV transient filter.

MOUNTING

Single or row mounting. Ceiling installation using split washers for easy mounting. Captive end caps.

BRÜNN LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|--------------------|--------------------|----------------|---------------------|-------------------------|
| m1200 □ 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 485 480 A4 B4 - F - ... |
| m1500 □ 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 485 680 A4 B4 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam

Lamp diffuser / B

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropolal® (fracture proof)

BRÜNN LED OPTIONS

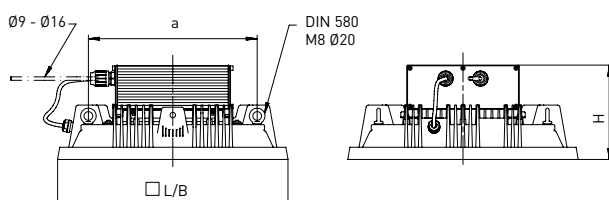
| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 485 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 480 003 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 485 960 |
| Rear-mounted cable entry M20 (4 pieces), sides closed | 201 310 |
| Swimming pool version | 480 036 |
| Through wiring 4 × 2.5 mm ² | 485 821 |
| Through wiring 5 × 1.5 mm ² | 485 831 |
| Through wiring 5 × 2.5 mm ² | 485 391 |
| Version for operating with PASSAU LED | See PASSAU LED |

CENTAURUS

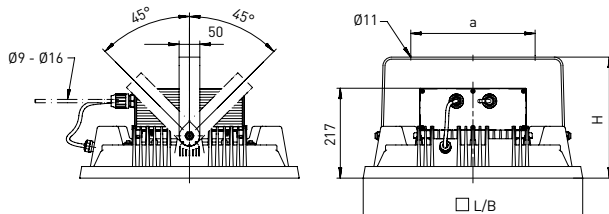
LED







CENTAURUS with eyebolt screws



CENTAURUS with swivel bracket



-  narrow beam
individual reflectors
-  medium beam
-  wide beam
DDP prism screen
-  concentrated beam
DDP prism screen +
individual reflectors

Further dimensioned drawings available on our website

| Lamp | Version | L | B | H | a | Max. weight |
|-----------|-------------------------|--------|--------|--------|------------|-------------|
| LED Array | with eyebolt screws | 530 mm | 530 mm | 217 mm | 388 mm | 18.5 kg |
| LED Array | with swivel bracket | 530 mm | 530 mm | 292 mm | 300 ± 1 mm | 20.5 kg |
| LED Array | VHT with eyebolt screws | 530 mm | 530 mm | 125 mm | 388 mm | 18.0 kg |
| LED Array | VHT with swivel bracket | 530 mm | 530 mm | 292 mm | 300 ± 1 mm | 20.0 kg |

AREAS OF APPLICATION

Floodlight with LED array. Useable in extremely high industrial halls, manufacturing areas, sports halls, swimming pools (see options), as well as mounting on industrial cranes or large pieces of equipment. Useable in production facilities and suppliers in the food and beverage industry. Optional outdoor version. **Version CENTAURUS VHT up to +80 °C.**

HOUSING

Robust luminaire housing made of corrosion-resistant, colour finish similar to RAL 9006. Useable according to protection rating IP 65. With age-resistant, form-retaining gasket made of silicone/synthetic rubber. Pressure balancing system with climate membrane against

the formation of condensate in the housing.

LIGHTING TECHNOLOGY

Cover screen made of PC clear (fracture proof), clear or safety glass cover screen. Internal aluminium reflector with adapter for a prism screen for circular de glare (DDP). Narrow beam version with individual reflectors (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. LED-driver, thermally separated. Supply voltage 230-240 V AC/DC.

There are two types of luminaire:

Standard version

Ready for connection via LUCON® luminaire connection system.

Version VHT

Luminaire for maximum ambient temperatures up to +80 °C. Driver in separate housing IP 65. Luminaire and external driver connectable over max. 50 m with heat-resistant 3 x 1.5 mm² connecting cable. The connecting cable must be provided on site.

MOUNTING

Single mounting. Ceiling installation using swivel bracket (for ball impact resistant version see options) or preparation for suspension system including four eyebolts. Cord and ceiling installation are to be provided on site. Optional anti-vibration damper (not chlorine-resistant, only suspended installation) for cranes.

Subject to technical changes. Please refer to our homepage for current data. Product illustrations similar, project illustrations may contain special equipment.

CENTAURUS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|------------------|----------------|---------------------|---------------------------|
| 270 | 27020 | 159 | -35 °C to +50 °C | 915 270 AB CD - H1 |
| 400 | 39900 | 235 | -35 °C to +40 °C | 915 400 AB CD - H1 |
| 520 | 52250 | 305 | -35 °C to +40 °C | 915 520 AB CD - H1 |
| 650 | 65360 | 385 | -35 °C to +35 °C | 915 650 AB CD - H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

- 2 = narrow beam (individual reflectors)
- 3 = medium beam
- 4 = wide beam (DDP prism screen)
- 8 = concentrated beam (DDP prism screen + individual reflectors)

Colour temperature / B

- 3 = 830/3000 K
- 4 = 840/4000 K
- 5 = 850/5000 K

Cover screen / C

- 4 = PC (fracture proof) clear
- 6 = single pane safety glass, clear

Installation type / D

- 2 = swivel bracket
- 6 = prepared for suspension system

CENTAURUS – VERSION VHT

| Version | Luminous flux/lm | System power/W | Ambient temperature luminaire | Ambient temperature driver | Article no. |
|---------|------------------|----------------|-------------------------------|----------------------------|---------------------------|
| 270 VHT | 25130 | 159 | -35 °C to +80 °C | -35 °C to +55 °C | 915 271 AB 6C - H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

- 2 = narrow beam (individual reflectors)
- 3 = medium beam

Colour temperature / B

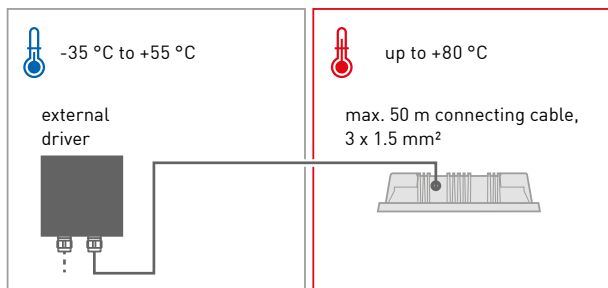
- 3 = 830/3000 K
- 4 = 840/4000 K
- 5 = 850/5000 K

Installation type / C

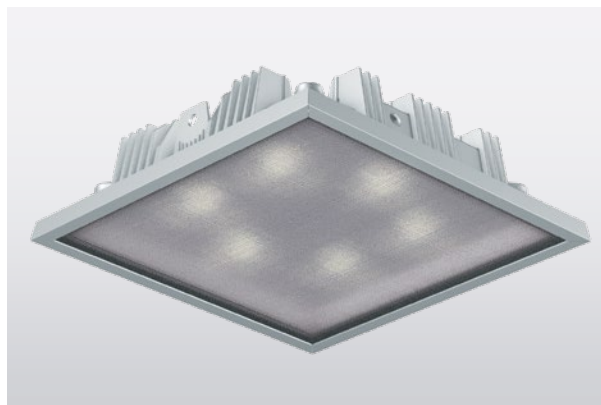
- 2 = swivel bracket
- 6 = prepared for suspension system

CENTAURUS OPTIONS

| Version | Article no. |
|--|----------------------|
| Ball impact resistant version for installation type with lockable fastening bracket (ceiling mounting) | 915 007 |
| Ball impact resistant version for suspension system (ceiling mounting) | 915 222 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 915 010 |
| Outdoor version with polymer connection box | 915 016 |
| Swimming pool version for suspension system with polymer connection box | 915 036 |
| Swimming pool version with extended swivel bracket and polymer connection box (changed height: 382 mm) | 915 191 |
| Version for harsh operating conditions (only in combination with vibration-proof version with anti-vibration damper) | 915 962 |
| Version for operating with PASSAU LED | Available on request |
| Vibration-proof version with anti-vibration damper for swivel bracket version (for crane fixing) | 915 190 |



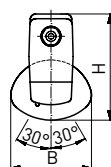
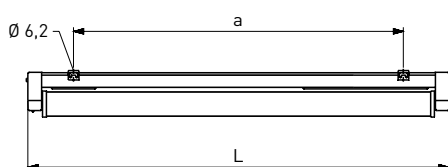
> Through the use of an external driver, version VHT can be used in areas up to +80 °C. Precise ambient temperatures can be found in the item table.



> CENTAURUS with DDP prism screen

COBURG LED

LED



FOCUSSED LIGHTING
(see appendix C)

easy eXchange LED

K Further colour temperatures
(optional)



narrow beam



medium beam

| Lamp | Version | Emergency lighting duration | L | B | H | a | Max. weight |
|------|---------|-----------------------------|---------|--------|--------|--------------|-------------|
| LED | m1200 | 1 h | 1251 mm | 107 mm | 140 mm | 980 ± 80 mm | 3.0 kg |
| LED | m1200 | 3 h | 1251 mm | 107 mm | 140 mm | 980 ± 80 mm | 3.1 kg |
| LED | m1500 | 1 h | 1551 mm | 107 mm | 140 mm | 1280 ± 80 mm | 3.6 kg |
| LED | m1500 | 3 h | 1551 mm | 107 mm | 140 mm | 1280 ± 80 mm | 3.7 kg |

AREAS OF APPLICATION

Single-battery safety luminaire with LED lamps. Useable in industrial applications. Permissible ambient temperature in continuous mode -5 °C to +30 °C; in standby mode 0 °C to +35 °C.

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube with sealing system for easy LED replacement (easy eXchange LED). With reflector tube that can be swivelled made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Mains operation using LED driver 230 V AC. One access cover, two M20 cable entries on face side. Emergency operation through fully electronic integrated emergency lighting unit, including automatic selftest, charging, check display, mains monitoring and protection against total discharge. Emergency lighting duration 1 h or 3 h. 2 kV transient filter.

MOUNTING

Single mounting. Ceiling installation using two stainless steel mounting clamps, variable mounting distance.

COBURG LED

| Version | | Emergency lighting duration/h | Luminous flux/lm Mains operation | Luminous flux/% Emergency mode | System power/W | Article no.+ MC |
|---------|--------------|-------------------------------|-------------------------------------|-----------------------------------|----------------|--------------------------------|
| m1200 | ☐ 840/4000 K | 1 | 2600 - 3420 - 6270 | 40 - 30 - 15 | 17 - 21 - 36 | 835 491 A4 B4 - F - ... |
| m1200 | ☐ 840/4000 K | 3 | 2600 - 3420 - 6270 | 40 - 30 - 15 | 17 - 21 - 36 | 835 493 A4 B4 - F - ... |
| m1500 | ☐ 840/4000 K | 1 | 4270 - 5280 - 7830 | 25 - 20 - 10 | 25 - 30 - 43 | 835 691 A4 B4 - F - ... |
| m1500 | ☐ 840/4000 K | 3 | 4270 - 5280 - 7830 | 25 - 20 - 10 | 25 - 30 - 43 | 835 693 A4 B4 - F - ... |

■ Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

2 = narrow beam
3 = medium beam

Reflector tube / B

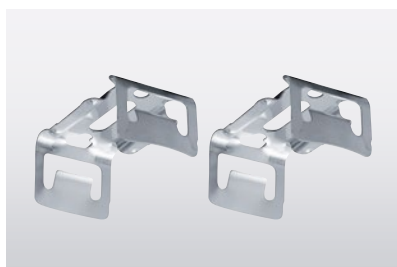
2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropolal® (fracture proof)

COBURG LED OPTIONS

| Version | Article no. |
|---|----------------------|
| DALI central monitoring | Available on request |
| DALI | 100 502 |
| Further colour temperatures | See appendix B |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Lateral cable entries M20 (pair) on level with the access cover | 201 438 |

COBURG LED ACCESSORIES

| Version | Article no. |
|-----------------------------------|----------------|
| easy eXchange LED replacement kit | see appendix B |



> Stainless steel mounting clamps, included in scope of delivery



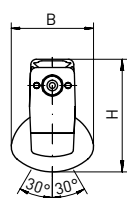
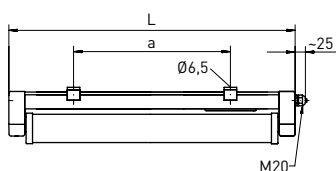
> With easy eXchange LED, for more information see introduction pages

ACCORDING TO

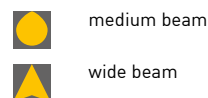
- > EN 50 172 (VDE 0108)
- > EN 1838
- > EN 60598-2-22



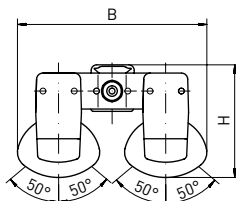
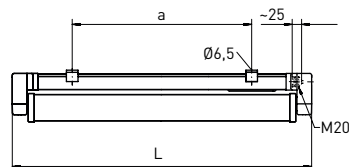
single lamp



K Further colour temperatures (optional)



twin lamp



Further dimensioned drawings available on our website

| Lamp | Version | L | B | H | a | Max. weight |
|------|--------------------|---------|--------|--------|--------------|-------------|
| LED | single lamp, m1500 | 1551 mm | 107 mm | 144 mm | 1280 ± 40 mm | 3.4 kg |
| LED | twin lamp, m1500 | 1551 mm | 242 mm | 144 mm | 1220 ± 80 mm | 4.6 kg |

AREAS OF APPLICATION

Ammonia resistant polymer luminaire with LED lamp, single or twin lamp. Useable in stables, research facilities or aviaries with high ammonia levels and special safety requirements.

HOUSING

Weather-proof luminaire housing made of fibreglass reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 (single or twin lamp) resp. IP 67 (single lamp). Thermally separated lamp chamber and driver chamber. **Fume-proof**, short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

With reflector tubes that can be swivelled independently, made of PMMA Transopal® [impact strengthened] with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in steps of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in, ammonia resistant driver 230 V AC/DC, optionally suitable for emergency lighting. One access cover, one M20 cable gland on face side. Ready for connection via ammonia resistant connecting cable (2 m). Optional through wiring. 2 kV transient filter.

MOUNTING

Single mounting. Ceiling or wall fixing using two polymer mounting clamps with variable mounting distance.

COESFELD – SINGLE LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|--|------------------|----------------|---------------------|------------------------|
| m1500 <input type="checkbox"/> 840/4000 K | 5280 | 28 | -25 °C to +40 °C | 445 680 A4 25-F |
| m1500 <input checked="" type="checkbox"/> 850/5000 K | 5280 | 28 | -25 °C to +40 °C | 445 680 A5 25-F |

COESFELD – TWIN LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|--|------------------|----------------|---------------------|------------------------|
| m1500 <input type="checkbox"/> 840/4000 K | 10560 | 56 | -25 °C to +40 °C | 446 680 A4 25-F |
| m1500 <input checked="" type="checkbox"/> 850/5000 K | 10560 | 56 | -25 °C to +40 °C | 446 680 A5 25-F |

When ordering, please replace the highlighted letters with the corresponding numbers.

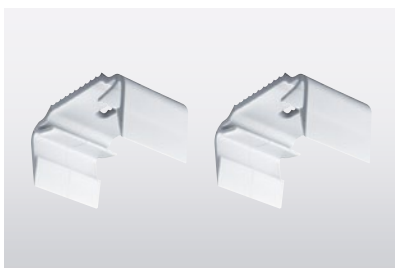
LIDC characteristic / A

3 = medium beam

4 = wide beam

COESFELD OPTIONS

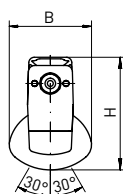
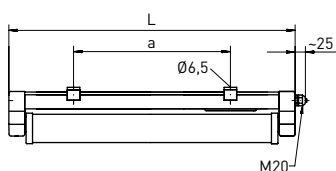
| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 445 010 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish | 445 960 |
| Through wiring 2 x 2.5 mm ² with second connecting cable | 445 933 |
| Version for operating with PASSAU LED | Available on request |



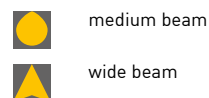
- > Polymer mounting clamps, included in scope of delivery

COESFELD PLUS

LED



K Further colour temperatures (optional)



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|--------|--------------|-------------|
| LED | m1200 | 1251 mm | 107 mm | 144 mm | 980 ± 80 mm | 2.0 kg |
| LED | m1500 | 1551 mm | 107 mm | 144 mm | 1280 ± 80 mm | 3.6 kg |

AREAS OF APPLICATION

Ammonia resistant polymer luminaire with LED lamps, single lamp. Useable in stables, research facilities or aviaries or milking stations with particularly high requirements for colour rendering as well as for high ammonia exposure and intensive cleaning processes.

HOUSING

Weather-proof luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 and IP 67. Suitable for intensive cleaning processes using pressure washers due to **high protection rating IP 69K**. Thermally separated lamp chamber and driver chamber. **Profile including coating for increased resistance against acids and cleaning agents. Fume-proof**, short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube that can be swivelled, made of PMMA Transopal® (impact strengthened) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in steps of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in, ammonia-resistant DALI driver 230 V AC/DC, optionally suitable for emergency lighting. One access cover, one M20 cable gland on face side. Ready for connection via 2 m ammonia resistant connecting cable 4 x 2.5 mm² (mains 2 x 2.5 mm², DALI 2 x 2.5 mm²). Optional through wiring. 2 kV transient filter.

MOUNTING

Single mounting. Ceiling or wall fixing using two polymer mounting clamps with variable mounting distance. Suspension system possible (see accessories).

COESFELD PLUS

| Version | | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|--|------------------|----------------|---------------------|------------------------|
| m1200 | <input type="checkbox"/> 840/4000 K | 3420 | 19 | -25 °C to +40 °C | 445 480 A4 26-F |
| m1500 | <input type="checkbox"/> 840/4000 K | 5280 | 28 | -25 °C to +40 °C | 445 680 A4 26-F |
| m1200 | <input checked="" type="checkbox"/> 850/5000 K | 3420 | 19 | -25 °C to +40 °C | 445 480 A5 26-F |
| m1500 | <input checked="" type="checkbox"/> 850/5000 K | 5280 | 28 | -25 °C to +40 °C | 445 680 A5 26-F |

When ordering, please replace the highlighted letters with the corresponding numbers.

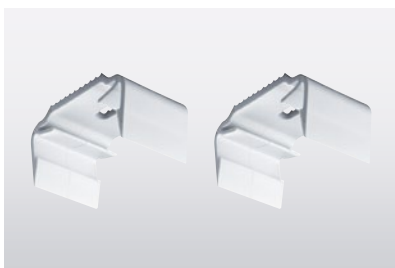
LIDC characteristic / A

3 = medium beam

4 = wide beam

COESFELD PLUS OPTIONS

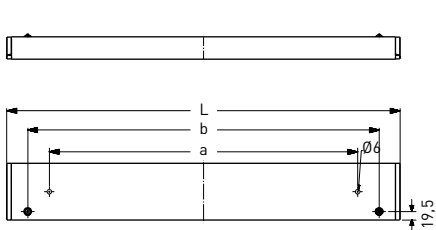
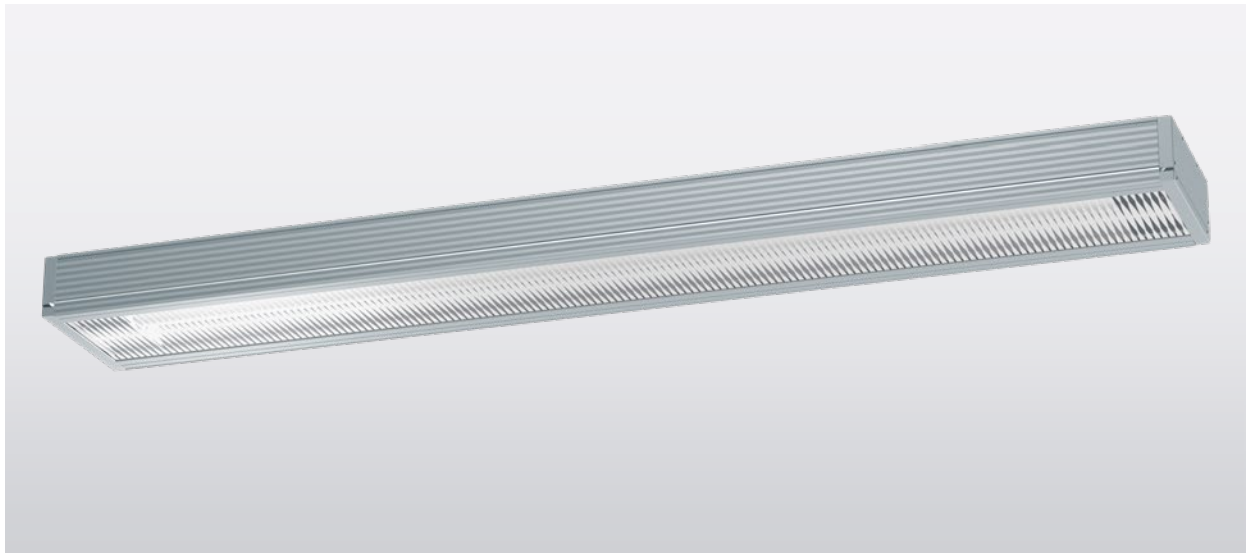
| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish | 445 960 |
| Through wiring 4 × 2.5 mm ² with second connecting cable | 445 822 |
| Version for operating with PASSAU LED | Available on request |



- > Polymer mounting clamps, included in scope of delivery

DUBLIN LED

LED



easy eXchange

Further colour temperatures (optional)

medium beam

asymmetric beam

concentrated beam

| Lamp | Version | L | B | H | a | b | Max. weight |
|------|---------|---------|--------|-------|---------|---------|-------------|
| LED | m600 | 666 mm | 185 mm | 73 mm | 390 mm | 530 mm | 4.4 kg |
| LED | m1200 | 1276 mm | 185 mm | 73 mm | 1000 mm | 1140 mm | 8.9 kg |
| LED | m1500 | 1576 mm | 185 mm | 73 mm | 1300 mm | 1440 mm | 10.8 kg |

AREAS OF APPLICATION

Aluminium luminaire for recessed and surface ceiling mounting with LED. Useable in underground stations, pedestrian underpasses and tunnels, passages, multi-storey car parks, swimming pools (see options), sports halls, transport areas and under canopies.

HOUSING

Silver anodised aluminium profile housing, similar to RAL 9006. 185 mm profile width with low installed height. Cover screen with tool-free opening. Useable for indoor and outdoor areas according to protection rating IP 65. Sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber. Protection class II.

LIGHTING TECHNOLOGY

LED unit for LED and driver replacement (easy eXchange). Cover screen made of PMMA (impact strengthened) or PC (fracture proof) clear with decorative screen print pattern. Internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

LED unit with reverse polarity protected connecting plug. Built-in **DALI driver**, 230 V AC/DC, optionally suitable for emergency lighting. **Through wiring 5 x 1.5 mm² and additional 2 x 1.5 mm² control wiring.** Ready for connection via two rear-mounted cable entries. 2 kV transient filter.

MOUNTING

Single mounting. Optional continuous row version or on NORKA trunking system 185 (the luminaire must be ordered in this specification). Mounting on two concealed mounting apertures at the rear. Ceiling mounting frame optionally available (see accessories).



DUBLIN LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1950 | 14 | -25 °C to +40 °C | 586 280 A4 B4 - Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 4900 | 30 | -25 °C to +40 °C | 586 480 A4 B4 - Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 6740 | 41 | -25 °C to +40 °C | 586 680 A4 B4 - Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam
8 = concentrated beam

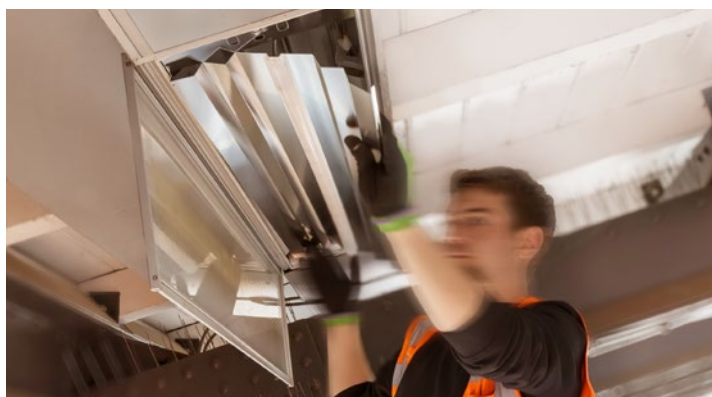
Cover screen / B

3 = PMMA (impact strengthened) clear with decorative screen print pattern
5 = PC (fracture proof) clear with decorative screen print pattern

DUBLIN LED OPTIONS

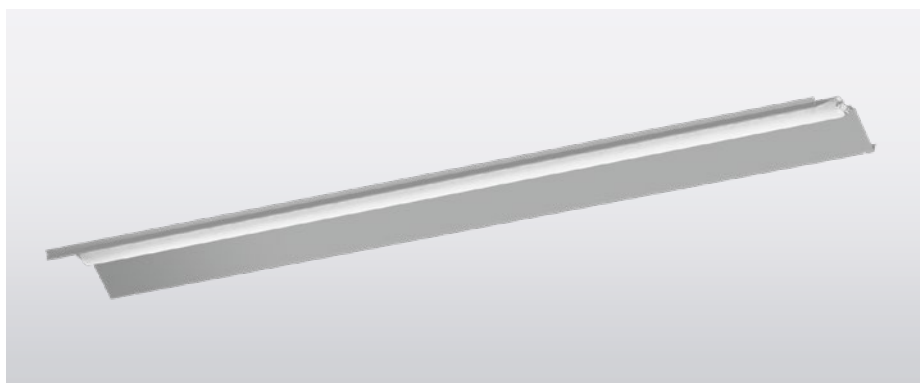
| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Ball impact resistant version | 100 901 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 580 010 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures 3000 K or 5000 K | Available on request |
| Halogen-free version | 580 023 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Protection against unauthorised opening | 610 003 |
| Swimming pool version | 580 824 |
| Through wiring 5 x 2.5 mm ² | 580 392 |
| Version for NORKA trunking system 185 | 100 904 |
| Version for operating with PASSAU LED | Available on request |
| Version with two pairs of cable entries on the face side (continuous row version) | 201 442 |

IMPROVED LED UNIT: NEW DESIGN



Thanks to the new, improved design of the LED unit, the DUBLIN LED now offers a wider range of light distributions. The LED unit is exchangeable thanks to easy eXchange and can be replaced without demounting the housing.

- > Better light guidance and luminaire light output
- > Various light distributions
- > Higher luminous flux

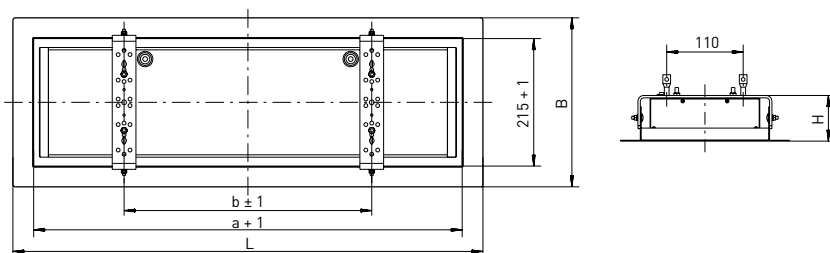


- > Exchangeable LED unit for DUBLIN LED

For additional articles, please turn the page! ▶

DUBLIN LED ACCESSORIES

| Version | Article no. |
|--|----------------|
| Ceiling installation frame m600, powder coated RAL 9010, for continuous row mounting intermediate | 203 206 |
| Ceiling installation frame m600, powder coated RAL 9010, for continuous row mounting initial/end | 203 203 |
| Ceiling installation frame m600, powder coated RAL 9010, for single mounting | 203 200 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting intermediate | 203 207 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting initial/end | 203 204 |
| Ceiling installation frame m1200, powder coated RAL 9010, for single mounting | 203 201 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting intermediate | 203 208 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting initial/end | 203 205 |
| Ceiling installation frame m1500, powder coated RAL 9010, for single mounting | 203 202 |
| easy eXchange replacement kit | See appendix B |

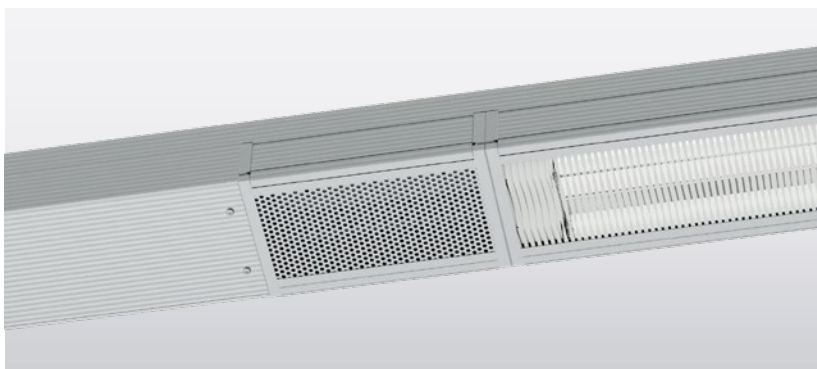


- Dimensional drawing of ceiling installation frame for single mounting, more dimensional drawings and dimensions on request

CEILING INSTALLATION FRAME FOR SINGLE MOUNTING

| Version | Required ceiling cut-out | L | B | H | a | b | Max. weight |
|---------|--------------------------|---------|--------|-------|---------|---------|-------------|
| m600 | 700 x 256 mm | 754 mm | 285 mm | 77 mm | 684 mm | 390 mm | 2.5 kg |
| m1200 | 1310 x 256 mm | 1364 mm | 285 mm | 77 mm | 1294 mm | 1000 mm | 3.6 kg |
| m1500 | 1610 x 256 mm | 1664 mm | 285 mm | 77 mm | 1594 mm | 1300 mm | 4.2 kg |

SUITABLE SUPPLEMENT



TRUNKING SYSTEM 185

- TRUNKING SYSTEM 185 with DUBLIN LED, blind cover and speaker housing

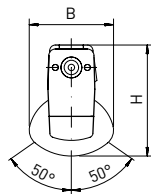
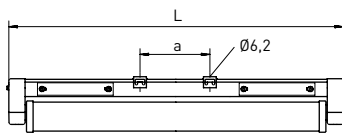


ERFURT LED

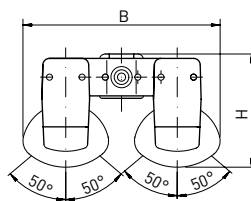
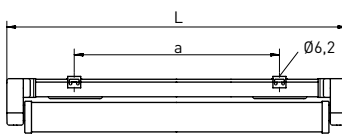
LED



single lamp m1200/1500



twin lamp m600/1200/1500



- FOCUSSED LIGHTING**
(see appendix C)
- easy eXchange LED**
- easy eXchange DRIVER**
(optional)
- XARA® lighting control**
(optional)
- K** Further colour temperatures
(optional)



Further dimensioned drawings available on our website

| Lamp | Version | L | B | H | a | Max. weight |
|------|--------------------|---------|--------|--------|--------------|-------------|
| LED | single lamp, m600 | 685 mm | 107 mm | 140 mm | 465 ± 30 mm | 1.6 kg |
| LED | single lamp, m1200 | 1251 mm | 107 mm | 140 mm | 590 ± 40 mm | 2.6 kg |
| LED | single lamp, m1500 | 1551 mm | 107 mm | 140 mm | 890 ± 40 mm | 3.1 kg |
| LED | twin lamp, m600 | 685 mm | 242 mm | 140 mm | 420 ± 30 mm | 2.7 kg |
| LED | twin lamp, m1200 | 1251 mm | 242 mm | 140 mm | 920 ± 80 mm | 4.7 kg |
| LED | twin lamp, m1500 | 1551 mm | 242 mm | 140 mm | 1220 ± 80 mm | 5.3 kg |

AREAS OF APPLICATION

Polymer luminaire for ceiling and wall mounting with LED lamps, single or twin lamps. Useable in industrial and public applications, such as swimming pools (see options), and areas with special safety requirements. Useable in production facilities and suppliers in the food and beverage industry.

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 (single or twin lamp) resp. optional IP 67 (single lamp). Thermally separated lamp chamber and driver

chamber. Short sealing system consisting of age-resistant, form-retaining silicone/ synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube with sealing system for easy LED replacement (easy eXchange LED). With reflector tubes that can be swivelled independently made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency

lighting. Two access covers, two cable entries M20 on the face side and 4 x 1.5 mm² through wiring. 2 kV transient filter. Adjustable luminous flux via NFC programming (optionally available).

MOUNTING

Single or row mounting. Ceiling or wall fixing using two stainless steel mounting clamps with variable mounting distance. Quick-mounting pressure cap with LUCON® luminaire connection system optionally available (see options). Suspension system possible (see accessories).

Subject to technical changes. Please refer to our homepage for current data. Product illustrations similar, project illustrations may contain special equipment.

ERFURT LED – SINGLE LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|--------------------|--------------------|----------------|---------------------|------------------------------|
| m600 □ 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +40 °C | 445 280 A4 B4 -F- ... |
| m1200 □ 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 445 480 A4 B4 -F- ... |
| m1500 □ 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 445 680 A4 B4 -F- ... |

ERFURT LED – TWIN LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|--------------------|----------------------|----------------|---------------------|------------------------------|
| m600 □ 840/4000 K | 2600 - 3420 - 5860 | 15 - 19 - 31 | -25 °C to +40 °C | 446 280 A4 B4 -F- ... |
| m1200 □ 840/4000 K | 5200 - 6840 - 12540 | 30 - 38 - 68 | -25 °C to +40 °C | 446 480 A4 B4 -F- ... |
| m1500 □ 840/4000 K | 8540 - 10560 - 15660 | 46 - 56 - 82 | -25 °C to +40 °C | 446 680 A4 B4 -F- ... |

■ Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

2 = narrow beam
3 = medium beam
4 = wide beam

Reflector tube / B

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropolal® (fracture proof)

ERFURT LED OPTIONS

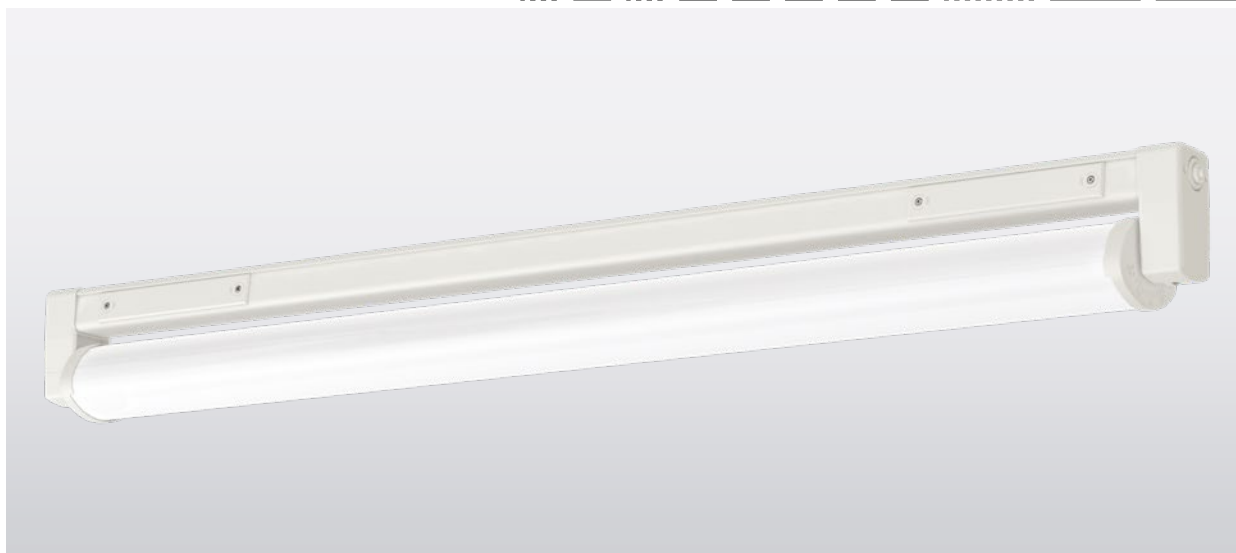
| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| Adjustable luminous flux via NFC programming (barcode and RFID detection device required) | 100 037 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 445 010 |
| DALI | 100 502 |
| easy eXchange DRIVER m1200 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 950 |
| easy eXchange DRIVER m1500 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 951 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 445 032 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| IP 67 version only m1200/m1500 single lamp with access cover 130 mm | 445 400 |
| LUCON® - luminaire connection system (1 unit) | 100 111 |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 445 960 |
| Swimming pool version | 445 036 |
| Through wiring 4 × 2.5 mm ² | 445 821 |
| Through wiring 5 × 1.5 mm ² | 445 831 |
| Through wiring 5 × 2.5 mm ² | 445 383 |
| Version for operating with PASSAU LED | See PASSAU LED |

ERFURT LED ACCESSORIES

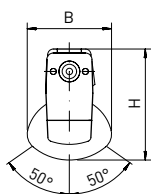
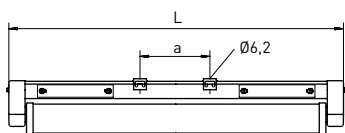
| Version | Article no. |
|--|----------------------|
| easy eXchange DRIVER replacement kit | Available on request |
| easy eXchange LED replacement kit | Available on request |
| Mobile barcode and RFID detection device for NFC programming | 106 598 |
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |
| Safety clip/theft protection (only in connection with standard mounting) | 200 224 |
| Two mounting clamps for cable suspension, (not suitable for chlorine atmosphere) | 200 277 |
| Quick mounting clamps (pair) | 202 220 |

ERFURT LED EXTREME

LED



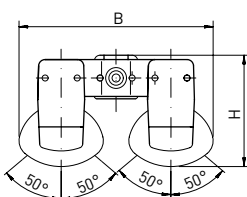
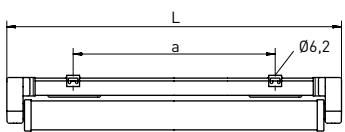
single lamp m1200/1500



easy eXchange LED



twin lamp m1200/1500



Further dimensioned drawings available on our website

| Lamp | Version | L | B | H | a | Max. weight |
|------|--------------------|---------|--------|--------|--------------|-------------|
| LED | single lamp, m1200 | 1251 mm | 107 mm | 140 mm | 590 ± 40 mm | 2.8 kg |
| LED | single lamp, m1500 | 1551 mm | 107 mm | 140 mm | 890 ± 40 mm | 3.4 kg |
| LED | twin lamp, m1200 | 1251 mm | 242 mm | 140 mm | 920 ± 80 mm | 5.2 kg |
| LED | twin lamp, m1500 | 1551 mm | 242 mm | 140 mm | 1220 ± 80 mm | 5.8 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps, single or twin lamps. Useable in industrial applications and areas with special safety requirements. **Long expected service life, useable up to +65 °C.**

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 (single or twin lamp) resp. optionally IP 67 (single lamp). Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube with sealing system for easy LED replacement (easy eXchange LED). With reflector tubes that can be swivelled independently made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two cable entries M20 on face side and 4 x 1.5 mm² through wiring. Two access covers.

L80 B10 > 100,000 h at +65 °C.
4 kV transient filter. 8 years manufacturer warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing using two stainless steel mounting clamps with variable mounting distance. Quick-mounting pressure cap with LUCON® luminaire connection system optionally available (see options). Suspension system possible (see accessories).

ERFURT LED EXTREME – SINGLE LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 4030 | 28 | -40 °C to +65 °C | 433 480 A4 B1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5050 | 35 | -40 °C to +65 °C | 433 680 A4 B1 |

ERFURT LED EXTREME – TWIN LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 8060 | 56 | -40 °C to +65 °C | 434 480 A4 B1 |
| m1500 <input type="checkbox"/> 840/4000 K | 10100 | 70 | -40 °C to +65 °C | 434 680 A4 B1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

2 = narrow beam
3 = medium beam
4 = wide beam

Reflector tube / B

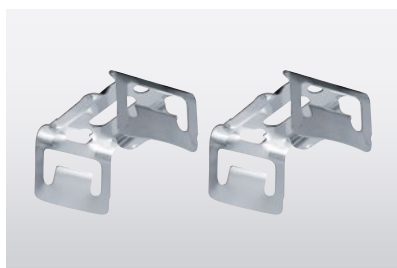
2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropol® (fracture proof)

ERFURT LED EXTREME OPTIONS

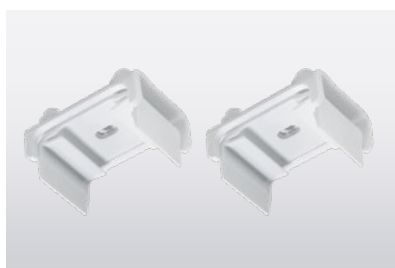
| Version | Article no. |
|---|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 445 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Halogen-free version | 445 032 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| IP 67 version only m1200/m1500 single lamp with access cover 130 mm | 445 400 |
| LUCON® - luminaire connection system (1 unit) | 100 111 |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 445 960 |
| Swimming pool version | 445 036 |
| Through wiring 4 × 2.5 mm ² | 445 821 |
| Through wiring 5 × 1.5 mm ² | 445 831 |
| Through wiring 5 × 2.5 mm ² | 445 383 |
| Version for operating with PASSAU LED | Available on request |

ERFURT LED EXTREME ACCESSORIES

| Version | Article no. |
|---|----------------------|
| easy eXchange LED replacement kit | Available on request |
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |
| Safety clip/theft protection (only in connection with standard mounting) | 200 224 |



> Stainless steel mounting clamps, included in scope of delivery



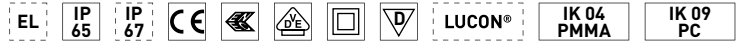
> Polymer mounting clamps, white (pair), Article no.200 226



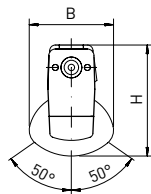
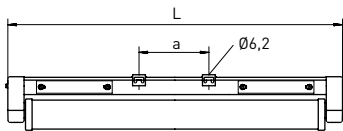
> With easy eXchange LED, for more information see introduction pages

ERFURT LED HIGH OUTPUT

LED



single lamp m1200/1500

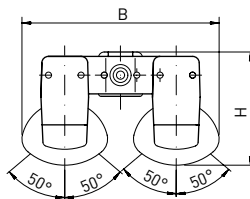
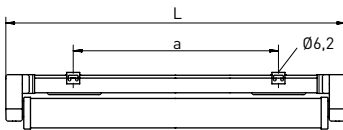


easy eXchange LED

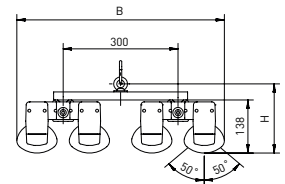
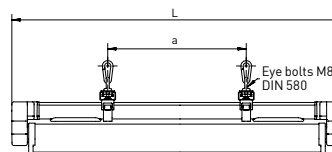
XARA® lighting control
(optional)



twin lamp m1200/1500



four lamps m1200/1500



Further dimensioned drawings available on our website

| Lamp | Version | L | B | H | a | Max. weight |
|------|--------------------|---------|--------|--------|--------------|-------------|
| LED | single lamp, m1200 | 1251 mm | 107 mm | 140 mm | 590 ± 40 mm | 2.8 kg |
| LED | single lamp, m1500 | 1551 mm | 107 mm | 140 mm | 890 ± 40 mm | 3.4 kg |
| LED | twin lamp, m1200 | 1251 mm | 242 mm | 140 mm | 920 ± 80 mm | 5.2 kg |
| LED | twin lamp, m1500 | 1551 mm | 242 mm | 140 mm | 1220 ± 80 mm | 5.8 kg |
| LED | four lamps, m1200 | 1251 mm | 542 mm | 180 mm | 750 ± 10 mm | 11.0 kg |
| LED | four lamps, m1500 | 1551 mm | 542 mm | 180 mm | 1050 ± 10 mm | 12.7 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps, single, twin or four lamps. Useable in industrial applications and in areas with special safety requirements and special demands on the illumination level from great mounting heights.

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 (single, twin or four lamp) resp. optional IP 67 (single lamp). Thermally separated lamp chamber and driver chamber. Short sealing system

consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube with sealing system for easy LED replacement (easy eXchange LED). With reflector tubes that can be swivelled independently made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in steps of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency

lighting. Two cable entries M20 on face side and 4 x 1.5 mm² through wiring.

Two access covers.

L80 B10 > 100,000 h at +40 °C.
4 kV transient filter. 8 years manufacturer warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing using two stainless steel mounting clamps with variable mounting distance. Quick-mounting pressure cap with LUCON® luminaire connection system optionally available (see options). Suspension system possible (see accessories).

Subject to technical changes. Please refer to our homepage for current data. Product illustrations similar, project illustrations may contain special equipment.

ERFURT LED HIGH OUTPUT 1, HIGH OUTPUT 2, HIGH OUTPUT 3 – SINGLE LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|------------------------|------------------|----------------|---------------------|--------------------------------|
| m1200 H01 □ 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 438 480 A4 B1 – 5300lm |
| m1200 H02 □ 840/4000 K | 6610 | 48 | -40 °C to +40 °C | 438 480 A4 B1 – 6600lm |
| m1200 H03 □ 840/4000 K | 7900 | 58 | -40 °C to +40 °C | 438 480 A4 B1 – 8000lm |
| m1500 H01 □ 840/4000 K | 6600 | 47 | -40 °C to +40 °C | 438 680 A4 B1 – 6600lm |
| m1500 H02 □ 840/4000 K | 11490 | 85 | -40 °C to +40 °C | 438 680 A4 B1 – 11500lm |
| m1500 H03 □ 840/4000 K | 13100 | 97 | -40 °C to +40 °C | 438 680 A4 B1 – 13000lm |

ERFURT LED HIGH OUTPUT 1, HIGH OUTPUT 2, HIGH OUTPUT 3 – TWIN LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|------------------------|------------------|----------------|---------------------|--------------------------------|
| m1200 H01 □ 840/4000 K | 10660 | 76 | -40 °C to +40 °C | 439 480 A4 B1 – 10600lm |
| m1200 H02 □ 840/4000 K | 13220 | 96 | -40 °C to +40 °C | 439 480 A4 B1 – 13200lm |
| m1200 H03 □ 840/4000 K | 15800 | 116 | -40 °C to +40 °C | 439 480 A4 B1 – 16000lm |
| m1500 H01 □ 840/4000 K | 13200 | 94 | -40 °C to +40 °C | 439 680 A4 B1 – 13200lm |
| m1500 H02 □ 840/4000 K | 22980 | 170 | -40 °C to +40 °C | 439 680 A4 B1 – 23000lm |
| m1500 H03 □ 840/4000 K | 26200 | 194 | -40 °C to +40 °C | 439 680 A4 B1 – 26000lm |

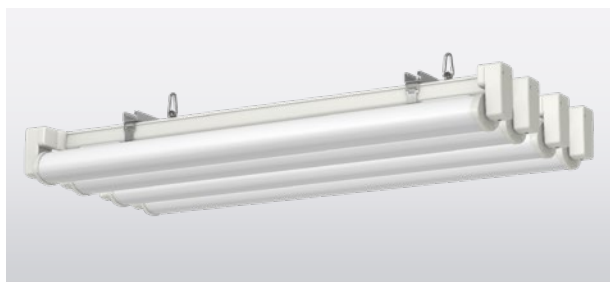
When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

- 2 = narrow beam
- 3 = medium beam
- 4 = wide beam

Reflector tube / B

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)



> ERFURT HIGH OUTPUT four lamp

ERFURT LED HIGH OUTPUT 3 – FOUR LAMPS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|------------------------|------------------|----------------|---------------------|--------------------------------|
| m1200 H03 □ 840/4000 K | 31600 | 232 | -40 °C to +40 °C | 439 480 A4 B1 – 31600lm |
| m1500 H03 □ 840/4000 K | 52400 | 388 | -40 °C to +40 °C | 439 680 A4 B1 – 52000lm |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

- 2 = narrow beam
- 3 = medium beam
- 4 = wide beam

Reflector tube / B

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)

For additional articles, please turn the page! ▶

ERFURT LED HIGH OUTPUT OPTIONS FOR ALL VERSIONS

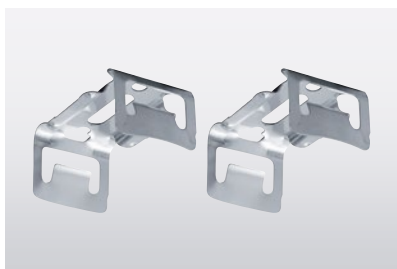
| Version | Article no. |
|---|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 445 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Halogen-free version | 445 032 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| LUCON® - luminaire connection system (1 unit) | 100 111 |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 445 960 |
| Swimming pool version | 445 036 |
| Version for operating with PASSAU LED | Available on request |

ERFURT LED HIGH OUTPUT ADDITIONAL OPTIONS FOR SINGLE AND TWIN LAMP VERSION

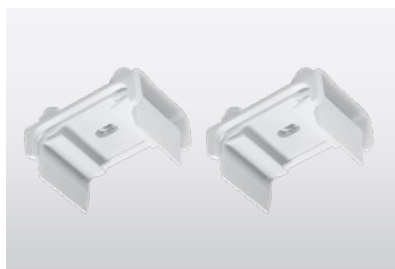
| Version | Article no. |
|---|----------------------|
| Integrated light- and motion sensor XARA® | Available on request |
| IP 67 version only m1200/m1500 single lamp with access cover 130 mm | 445 400 |
| Through wiring 4 × 2.5 mm ² | 445 821 |
| Through wiring 5 × 1.5 mm ² | 445 831 |
| Through wiring 5 × 2.5 mm ² | 445 383 |

ERFURT LED HIGH OUTPUT ACCESSORIES

| Version | Article no. |
|---|----------------------|
| easy eXchange LED replacement kit | Available on request |
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |
| Safety clip/theft protection (only in connection with standard mounting) | 200 224 |



- > Stainless steel mounting clamps, included in scope of delivery



- > Polymer mounting clamps, white (pair), Article no.200 226

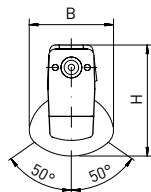
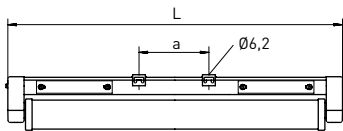


- > With easy eXchange LED, for more information see introduction pages





single lamp m1200/1500



easy eXchange LED

easy eXchange DRIVER
(optional)



narrow beam

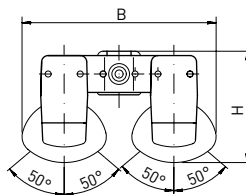
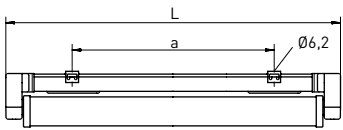


medium beam



wide beam

twin lamp m1200/1500



Further dimensioned drawings available on our website

| Lamp | Version | L | B | H | a | Max. weight |
|------|--------------------|---------|--------|--------|--------------|-------------|
| LED | single lamp, m1200 | 1251 mm | 107 mm | 140 mm | 590 ± 40 mm | 2.8 kg |
| LED | single lamp, m1500 | 1551 mm | 107 mm | 140 mm | 890 ± 40 mm | 3.4 kg |
| LED | twin lamp, m1200 | 1251 mm | 242 mm | 140 mm | 920 ± 80 mm | 5.2 kg |
| LED | twin lamp, m1500 | 1551 mm | 242 mm | 140 mm | 1220 ± 80 mm | 5.8 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps, single or twin lamps. Useable in industrial applications and areas with special safety requirements. **Long expected service life, useable up to +55 °C.**

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 (single or twin lamp) resp. optionally IP 67 (single lamp). Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/ synthetic rubber.

LIGHTING TECHNOLOGY

Reflector tube with sealing system for easy LED replacement (easy eXchange LED). With reflector tubes that can be swivelled independently made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). Reflector tube can be locked in increments of 10°.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/ DC, optionally suitable for emergency lighting. Two cable entries M20 on face side and 4 x 1.5 mm² through wiring. Two access covers.

L80 B10 > 75,000 h at +55 °C. 4 kV transient filter. 8 years manufacturer warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing using two stainless steel mounting clamps with variable mounting distance. Quick-mounting pressure cap with LUCON® luminaire connection system optionally available (see options). Suspension system possible (see accessories).

ERFURT LED INDUSTRY – SINGLE LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 4640 | 25 | -40 °C to +55 °C | 436 480 A4 B4 -F-4640lm |
| m1200 <input type="checkbox"/> 840/4000 K | 8300 | 44 | -40 °C to +55 °C | 436 480 A4 B4 -F-8300lm |
| m1500 <input type="checkbox"/> 840/4000 K | 6300 | 33 | -40 °C to +55 °C | 436 680 A4 B4 -F-6300lm |
| m1500 <input type="checkbox"/> 840/4000 K | 10380 | 54 | -40 °C to +55 °C | 436 680 A4 B4 -F-10380lm |

ERFURT LED INDUSTRY – TWIN LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 9280 | 50 | -40 °C to +55 °C | 437 480 A4 B4 -F-9280lm |
| m1200 <input type="checkbox"/> 840/4000 K | 16600 | 88 | -40 °C to +55 °C | 437 480 A4 B4 -F-16600lm |
| m1500 <input type="checkbox"/> 840/4000 K | 12600 | 66 | -40 °C to +55 °C | 437 680 A4 B4 -F-12600lm |
| m1500 <input type="checkbox"/> 840/4000 K | 20760 | 108 | -40 °C to +55 °C | 437 680 A4 B4 -F-20760lm |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / **A**

2 = narrow beam
3 = medium beam
4 = wide beam

Reflector tube / **B**

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropol® (fracture proof)

ERFURT LED INDUSTRY OPTIONS

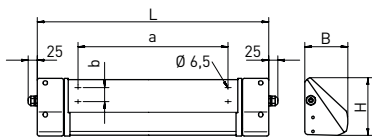
| Version | Article no. |
|--|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 445 010 |
| DALI | 100 502 |
| easy eXchange DRIVER m1200 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 950 |
| easy eXchange DRIVER m1500 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 951 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Halogen-free version | 445 032 |
| IP 67 version only m1200/m1500 single lamp with access cover 130 mm | 445 400 |
| LUCON® - luminaire connection system (1 unit) | 100 111 |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 445 960 |
| Swimming pool version | 445 036 |
| Through wiring 4 × 2.5 mm ² | 445 821 |
| Through wiring 5 × 1.5 mm ² | 445 831 |
| Through wiring 5 × 2.5 mm ² | 445 383 |
| Version for operating with PASSAU LED | Available on request |

ERFURT LED INDUSTRY ACCESSORIES


| Version | Article no. |
|---|----------------------|
| easy eXchange DRIVER replacement kit | Available on request |
| easy eXchange LED replacement kit | Available on request |
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |
| Safety clip/theft protection (only in connection with standard mounting) | 200 224 |


FULDA LED

LED



- FOCUSSED LIGHTING**
(see appendix C)
- easy eXchange DRIVER**
(optional)
- K** Further colour temperatures
(optional)

 asymmetric beam

 asymmetric beam with indirect downlighting

| Lamp | Version | L | B | H | a | b | Max. weight |
|------|---------|---------|--------|--------|-------------|-------|-------------|
| LED | m1200 | 1317 mm | 123 mm | 165 mm | 1085 ± 4 mm | 40 mm | 4.0 kg |
| LED | m1500 | 1617 mm | 123 mm | 165 mm | 1385 ± 4 mm | 40 mm | 5.3 kg |

AREAS OF APPLICATION

Polymer luminaire for ceiling and wall mounting with LED lamps. Useable in work pits for maintenance and repair workshops, in underpasses, underground and suburban railway stations and passages as well as in production facilities and suppliers for the food and beverage industry.

HOUSING

Acid, alkaline and fuel-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65 and IP 66. High protection rating IP 69K optionally available. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber. Anti-graffiti coating for lamp diffuser optionally available (protects against dirt and paint residue, see options).

LIGHTING TECHNOLOGY

Lamp diffuser made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with inner aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Two cable glands on face side M20 and 4 x 1.5 mm² through wiring. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. 2 kV transient filter.

MOUNTING

Single or row mounting. Ceiling, wall or corner fixing using two stainless steel mounting plates.

FULDA LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-----------------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 545 480 A4 B4 -F-... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 545 680 A4 B4 -F-... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

0 = asymmetric beam with indirect
downlighting
6 = asymmetric beam

Lamp diffuser / B

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropolal® (fracture proof)

FULDA LED OPTIONS

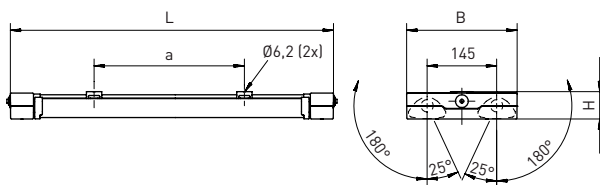
| Version | Article no. |
|--|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 545 015 |
| DALI | 100 502 |
| easy eXchange DRIVER m1200 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 950 |
| easy eXchange DRIVER m1500 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 951 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 545 032 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| IP 69K version | 545 400 |
| Lateral cable entries M20 (pair) on level with the access cover | 201 438 |
| RAL finish | 545 960 |
| Through wiring 4 × 2.5 mm ² | 545 821 |
| Through wiring 5 × 1.5 mm ² | 545 831 |
| Through wiring 5 × 2.5 mm ² | 545 391 |
| Version for operating with PASSAU LED | See PASSAU LED |
| Version for row mounting with 2 membrane seals instead of cable glands (only IP 65) | 545 003 |

FULDA LED ACCESSORIES

| Version | Article no. |
|--------------------------------------|----------------------|
| easy eXchange DRIVER replacement kit | Available on request |



> Optional with easy eXchange DRIVER, for more information see introduction pages



- FOCUSSED LIGHTING**
(see appendix C)
 - XARA® lighting control**
(optional)
 - Further colour temperatures
(optional)
- medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|-------|--------------|-------------|
| LED | m1200 | 1260 mm | 230 mm | 61 mm | 800 ± 80 mm | 3.1 kg |
| LED | m1500 | 1560 mm | 230 mm | 61 mm | 1100 ± 80 mm | 3.5 kg |

AREAS OF APPLICATION

Very flat polymer luminaire for surface ceiling mounting with LED lamps. Useable in industrial and public applications, multi-storey car parks, swimming pools (see options), and areas near offices with special safety requirements.

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9010, with low installed height. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of silicone-free elastomer.

LIGHTING TECHNOLOGY

Two reflector tubes that can be swivelled independently made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®). 25° internal rotation on each reflector tube for focussed light emission and up to 180° external rotation for indirect lighting. For ceiling mounting, the reflector tubes can be swivelled up to 60° outwards.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two face-side cable membranes M20 and 4 x 1.5 mm² through wiring. 2 kV transient filter. Adjustable luminous flux via NFC programming (optionally available).

MOUNTING

Single or row mounting. Ceiling installation with two polymer mounting clamps, variable mounting distance. Suspension system for up to 180° external rotation on site.

GENF

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|--------------------|----------------------|----------------|---------------------|--------------------------------|
| m1200 □ 840/4000 K | 5200 - 6840 - 12540 | 30 - 38 - 68 | -25 °C to +35 °C | 335 480 34 A4 - F - ... |
| m1500 □ 840/4000 K | 8540 - 10560 - 15660 | 46 - 56 - 82 | -25 °C to +35 °C | 335 680 34 A4 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

Reflector tube / A

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)

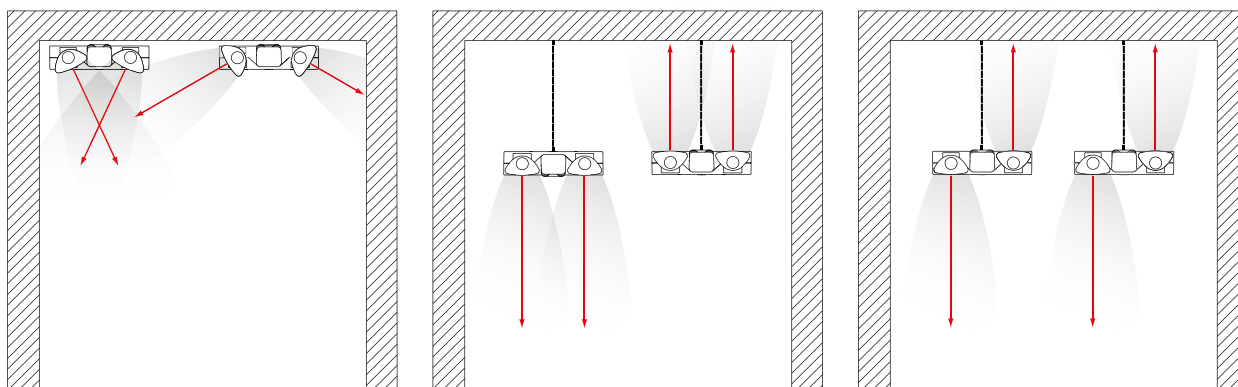
GENF OPTIONS

| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| Adjustable luminous flux via NFC programming (barcode and RFID detection device required), twin lamp | 100 037 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 335 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 335 032 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 335 960 |
| Rear cable entry M20, sides closed (pair) | 201 300 |
| Swimming pool version | Available on request |
| Through wiring 4 × 2.5 mm ² | 335 821 |
| Through wiring 5 × 1.5 mm ² | 335 831 |
| Through wiring 5 × 2.5 mm ² | 335 383 |
| Version for operating with PASSAU LED | See PASSAU LED |

GENF ACCESSORIES

| Version | Article no. |
|--|-------------|
| Mobile barcode and RFID detection device for NFC programming | 106 598 |

GENF, SAMPLE APPLICATIONS



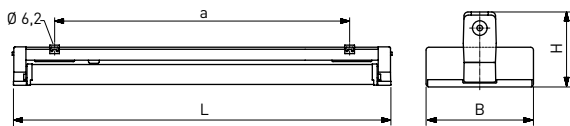
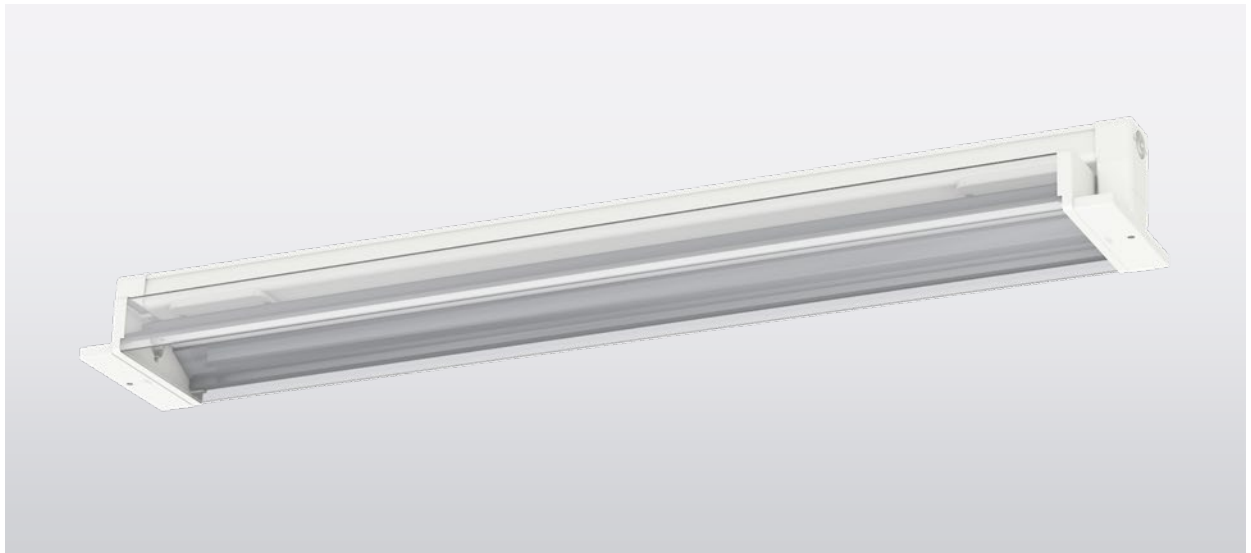
> Ceiling mounting:
direct light distribution, inner rotation up to 25°, outer rotation up to 60°

> Suspension system:
direct/indirect light distribution

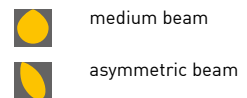
> Suspension system:
direct/indirect light distribution in one luminaire, outer rotation up to 180°

GERA LED

LED



- **FOCUSSED LIGHTING**
(see appendix C)
- **easy eXchange DRIVER**
(optional)
- **Further colour temperatures**
(optional)



| Lamp | Version | L lengthwise (standard) | L crosswise (optional) | B | H | a | Max. weight |
|------|---------|----------------------------|---------------------------|--------|--------|--------------|-------------|
| LED | m1200 | 1251 ± 2 mm | 1285 mm | 191 mm | 132 mm | 980 ± 80 mm | 3.2 kg |
| LED | m1500 | 1551 ± 2 mm | 1585 mm | 191 mm | 132 mm | 1280 ± 80 mm | 4.1 kg |

AREAS OF APPLICATION

Polymer luminaire for recessed ceiling mounting with LED lamps. Useable in panel ceilings with two panel widths, module 100. Suitable, for example, in underground stations, passages and swimming pools (see options).

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Lamp diffuser made of PMMA clear or PC clear (fracture proof) with internal Transopal® additional diffusor and internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, two cable entries M20 on the face side and 4 x 1.5 mm² through wiring. 2 kV transient filter.

MOUNTING

Single or row mounting. Panel fixing for panel width module 100, lengthwise to the panel with stainless steel mounting clamps. Captive end caps. Ceiling mounting frame and universal panel suspensions available as accessories. Recessed mounting crosswise to the panel optional.

GERA LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|--------------------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 784 480 A4 B4 - F - ... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 784 680 A4 B4 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam

Lamp diffuser / B

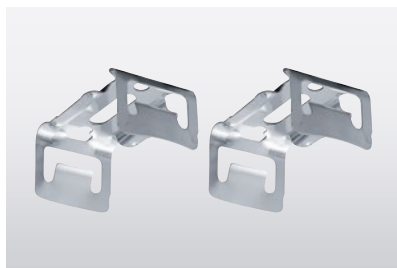
1 = PMMA clear
4 = PC (fracture proof) clear

GERA LED OPTIONS

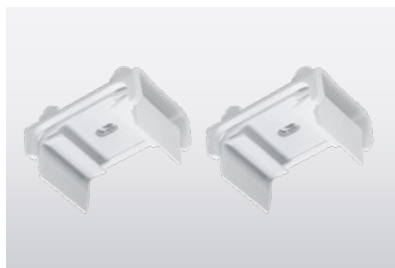
| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 784 010 |
| DALI | 100 502 |
| easy eXchange DRIVER m1200 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 950 |
| easy eXchange DRIVER m1500 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 951 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 784 007 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Lateral cable entries M20 (pair) on level with the access cover | 201 438 |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 784 960 |
| Swimming pool version | 784 036 |
| Through wiring 4 × 2.5 mm ² | 784 821 |
| Through wiring 5 × 1.5 mm ² | 784 834 |
| Through wiring 5 × 2.5 mm ² | 784 391 |
| Version for operating with PASSAU LED | See PASSAU LED |

GERA LED ACCESSORIES

| Version | Article no. |
|---|----------------------|
| easy eXchange DRIVER replacement kit | Available on request |
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |



> Stainless steel mounting clamps, included in scope of delivery

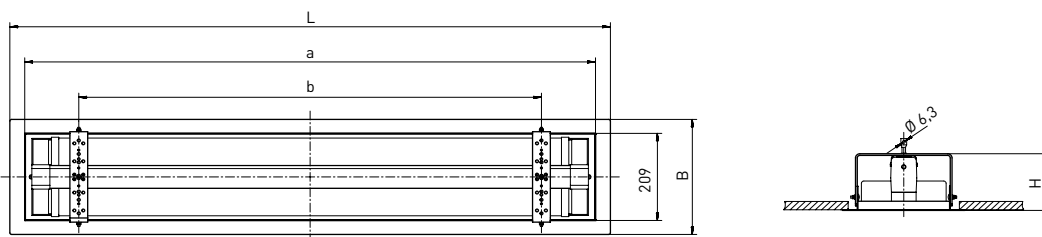


> Polymer mounting clamps, white (pair), Article no.200 226



> Optional with easy eXchange DRIVER, for more information see introduction pages

INSTALLATION IN CLOSED CEILINGS



> Dimensional drawing of ceiling installation frame for single mounting, more dimensional drawings and dimensions on request

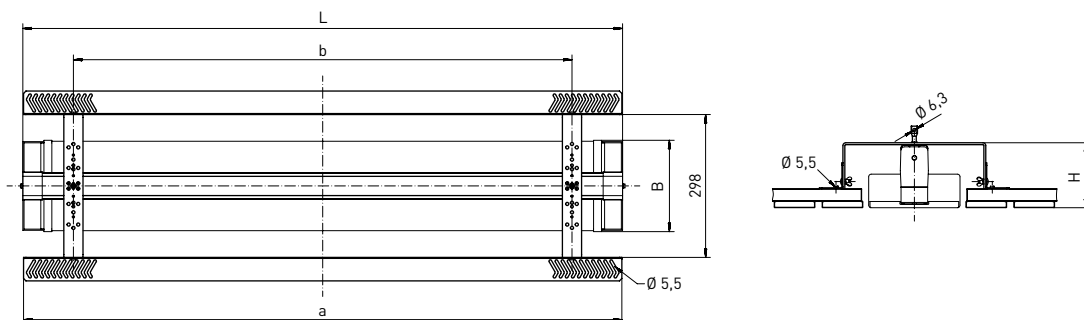
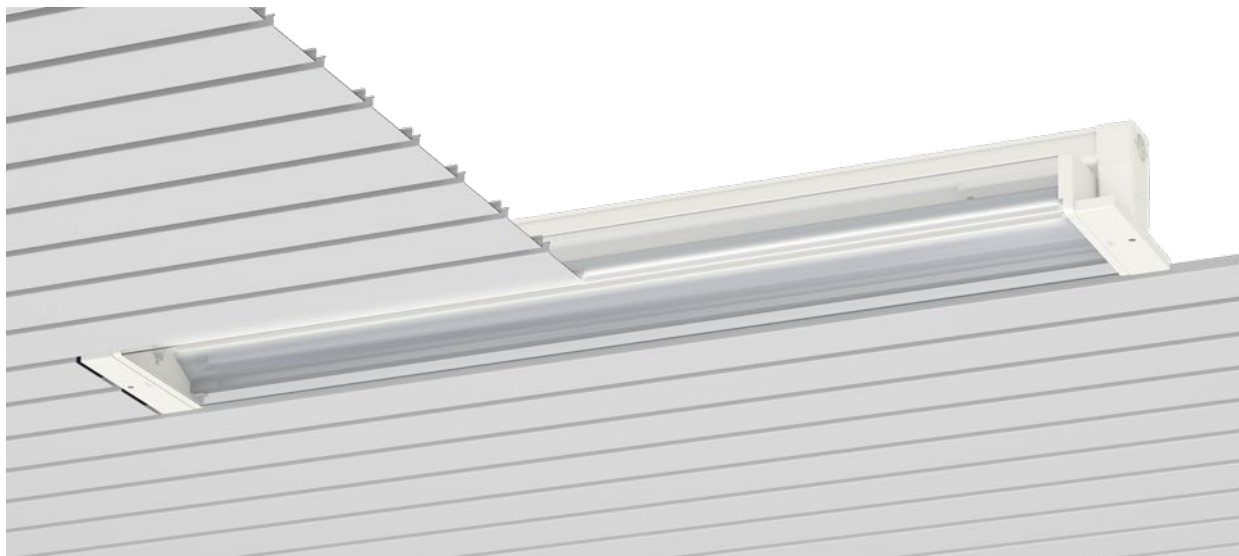
CEILING INSTALLATION FRAME FOR SINGLE MOUNTING

| Version | Required ceiling cut-out | L | B | H | a | b | Max. weight |
|---------|--------------------------|---------|--------|--------|---------|---------|-------------|
| m1200 | 1295 x 242 mm | 1350 mm | 276 mm | 136 mm | 1283 mm | 1040 mm | 3.6 kg |
| m1500 | 1595 x 242 mm | 1650 mm | 276 mm | 136 mm | 1583 mm | 1340 mm | 4.2 kg |

GERA LED ACCESSORIES

| Version | Article no. |
|--|-------------|
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting in closed ceiling initial/end | 203 282 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting in closed ceiling intermediate | 203 283 |
| Ceiling installation frame m1200, powder coated RAL 9010, for single mounting in closed ceiling | 203 230 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting in closed ceiling initial/end | 203 284 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting in closed ceiling intermediate | 203 285 |
| Ceiling installation frame m1500, powder coated RAL 9010, for single mounting in closed ceiling | 203 231 |

INSTALLATION IN PANEL CEILINGS



> Dimensions drawing for panel ceiling fixings (direction lengthwise)

PANEL DIRECTION LENGTHWISE (STANDARD)

| Version | Required panel recess | L lengthwise (standard) | B | H | a | b | Max. weight |
|---------|-----------------------|-------------------------|--------|--------|---------|---------|-------------|
| m1200 | 1265 x 215 mm | 1251 mm | 191 mm | 134 mm | 1248 mm | 1040 mm | 3.6 kg |
| m1500 | 1565 x 215 mm | 1551 mm | 191 mm | 134 mm | 1548 mm | 1340 mm | 4.2 kg |

PANEL DIRECTION CROSSWISE

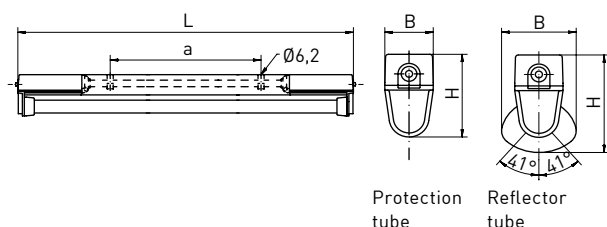
| Version | Required panel recess | L crosswise | B | H | a | b | Max. weight |
|---------|-----------------------|-------------|--------|--------|---------|---------|-------------|
| m1200 | 13 units | 1285 mm | 191 mm | 134 mm | 1248 mm | 1040 mm | 3.6 kg |
| m1500 | 16 units | 1585 mm | 191 mm | 134 mm | 1548 mm | 1340 mm | 4.2 kg |

GERA LED ACCESSORIES

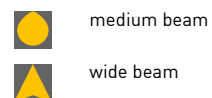
| Version | Article no. |
|--|-------------|
| Panel ceiling fixings, universal (m1200) | 200 230 |
| Panel ceiling fixings, universal (m1500) | 200 231 |

HAMBURG LED

LED



K Further colour temperatures (optional)



| Lamp | Version | L | B | H | a | Max. weight |
|------|-----------------------------|-------------|--------|--------|--------------|-------------|
| LED | With protection tube, m600 | 649 ± 2 mm | 68 mm | 123 mm | 180 ± 30 mm | 3.0 kg |
| LED | With protection tube, m1200 | 1259 ± 2 mm | 68 mm | 123 mm | 740 ± 80 mm | 3.9 kg |
| LED | With protection tube, m1500 | 1559 ± 2 mm | 68 mm | 123 mm | 1040 ± 80 mm | 4.6 kg |
| LED | With reflector tube, m600 | 649 ± 2 mm | 107 mm | 145 mm | 180 ± 30 mm | 3.0 kg |
| LED | With reflector tube, m1200 | 1259 ± 2 mm | 107 mm | 145 mm | 740 ± 80 mm | 3.9 kg |
| LED | With reflector tube, m1500 | 1559 ± 2 mm | 107 mm | 145 mm | 1040 ± 80 mm | 4.6 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps. Useable in industrial applications.

HOUSING

Weather-proof luminaire housing made of thermoplastic polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

With protection tube 38 mm or a reflector tube that can be swivelled made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver, 230 V AC/DC. Two M20 cable glands on face side and 5 x 1.5 mm² through wiring. L80 B10 > 50,000 h at +40 °C.

MOUNTING

Single or row mounting. Ceiling installation using two polymer stirrup clamps, variable mounting distance.

HAMBURG LED – MEDIUM BEAM, WITH REFLECTOR TUBE

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1960 | 13 | -25 °C to +40 °C | 305 280 34 A1 – Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 3540 | 21 | -25 °C to +40 °C | 305 480 34 A1 – Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5490 | 33 | -25 °C to +40 °C | 305 680 34 A1 – Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Reflector tube / A

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropol® (fracture proof)

HAMBURG LED – WIDE BEAM, WITH PROTECTION TUBE

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1960 | 13 | -25 °C to +40 °C | 305 280 44 A2 – Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 3940 | 25 | -25 °C to +40 °C | 305 480 44 A2 – Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5120 | 31 | -25 °C to +40 °C | 305 680 44 A2 – Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Protection tube / A

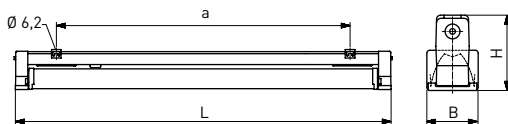
2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropol® (fracture proof)

HAMBURG LED OPTIONS

| Version | Article no. |
|--|----------------------|
| Further colour temperatures | Available on request |
| Halogen-free version | 303 003 |
| RAL finish | 303 960 |
| Through wiring 4 x 2.5 mm ² | 303 822 |
| Through wiring 5 x 2.5 mm ² | 303 392 |

JENA LED

LED



- **FOCUSED LIGHTING**
(see appendix C)
 - **easy eXchange DRIVER**
(optional)
 - **K** Further colour temperatures
(optional)
- medium beam
- asymmetric beam

| Lamp | Version | L lengthwise (standard) | L crosswise (optional) | B | H | a | Max. weight |
|------|---------|----------------------------|---------------------------|---------|--------|--------------|-------------|
| LED | m1200 | 1251 ± 2 mm | 1285 ± 2 mm | 91.5 mm | 132 mm | 980 ± 80 mm | 2.4 kg |
| LED | m1500 | 1551 ± 2 mm | 1585 ± 2 mm | 91.5 mm | 132 mm | 1280 ± 80 mm | 3.2 kg |

AREAS OF APPLICATION

Polymer luminaire for recessed ceiling mounting with LED lamps. Useable in panel ceilings with a module width of 100. Suitable, for example, in underground and suburban railway stations, passages and swimming pools (see options).

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 9010. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Lamp diffuser made of PMMA Transopal® (impact strengthened) or PC Tropal® (fracture proof) with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two access covers, two cable entries M20 and 4 x 1.5 mm² through wiring. 2 kV transient filter.

MOUNTING

Single or row mounting. Panel fixing for panel width module 100, lengthwise to the panel with stainless steel mounting clamps. Captive end caps. Ceiling mounting frame and universal panel suspensions available as accessories. Recessed mounting crosswise to the panel optional.

JENA LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|--------------------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 783 480 A4 B4 - F - ... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 783 680 A4 B4 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam

Lamp diffuser / B

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropol® (fracture proof)

JENA LED OPTIONS

| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 783 010 |
| DALI | 100 502 |
| easy eXchange DRIVER m1200 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 950 |
| easy eXchange DRIVER m1500 access cover version (only IP 65, single lamp), for easy exchange of driver | 200 951 |
| End cap crosswise to the direction of the panels (longer cover) | 781 001 |
| Further colour temperatures | See appendix B |
| Halogen-free version | 783 007 |
| HCL (Human Centric Lighting) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Lateral cable entries M20 (pair) on level with the access cover | 201 438 |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 783 960 |
| Swimming pool version | 783 036 |
| Through wiring 4 × 2.5 mm ² | 783 821 |
| Through wiring 5 × 1.5 mm ² | 783 834 |
| Through wiring 5 × 2.5 mm ² | 783 391 |
| Version for operating with PASSAU LED | See PASSAU LED |

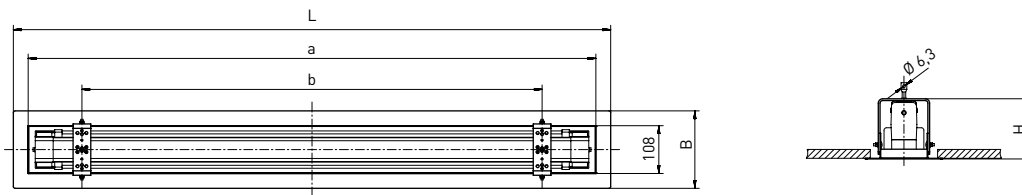
JENA LED ACCESSORIES

| Version | Article no. |
|---|----------------------|
| easy eXchange DRIVER replacement kit | Available on request |
| Mounting clamp polymer white for chlorine atmosphere, acid resistant (pair) | 200 226 |



> Optional with easy eXchange DRIVER, for more information see introduction pages

INSTALLATION IN CLOSED CEILINGS



> Dimensional drawing of ceiling installation frame for single mounting, more dimensional drawings and dimensions on request

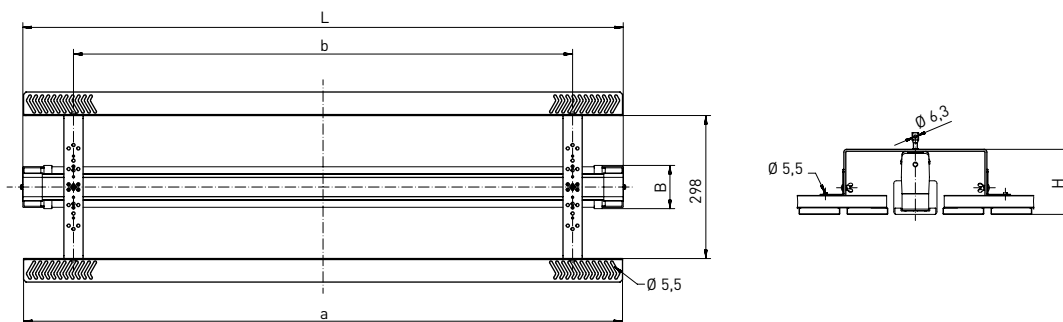
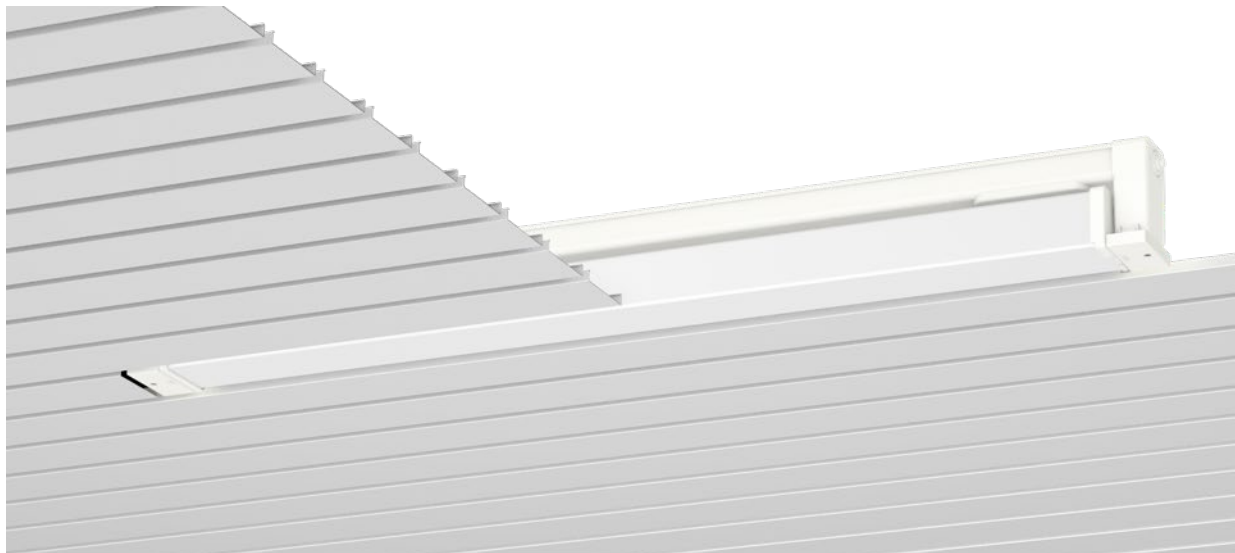
CEILING INSTALLATION FRAME FOR SINGLE MOUNTING

| Version | Required ceiling cut-out | L | B | H | a | b | Max. weight |
|---------|--------------------------|---------|--------|--------|---------|---------|-------------|
| m1200 | 1295 x 150 mm | 1350 mm | 175 mm | 136 mm | 1283 mm | 1040 mm | 3.3 kg |
| m1500 | 1595 x 150 mm | 1650 mm | 175 mm | 136 mm | 1583 mm | 1340 mm | 3.9 kg |

JENA LED ACCESSORIES

| Version | Article no. |
|--|-------------|
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting in closed ceiling initial/end | 203 288 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting in closed ceiling intermediate | 203 289 |
| Ceiling installation frame m1200, powder coated RAL 9010, for single mounting in closed ceiling | 203 238 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting in closed ceiling initial/end | 203 290 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting in closed ceiling intermediate | 203 291 |
| Ceiling installation frame m1500, powder coated RAL 9010, for single mounting in closed ceiling | 203 239 |

INSTALLATION IN PANEL CEILINGS



PANEL DIRECTION LENGTHWISE (STANDARD)

| Version | Required panel recess | L lengthwise (standard) | B | H | a | b | Max. weight |
|---------|-----------------------|-------------------------|---------|--------|---------|---------|-------------|
| m1200 | 1265 x 115 mm | 1251 mm | 91.5 mm | 134 mm | 1248 mm | 1040 mm | 3.3 kg |
| m1500 | 1565 x 115 mm | 1551 mm | 91.5 mm | 134 mm | 1548 mm | 1340 mm | 3.9 kg |

PANEL DIRECTION CROSSWISE

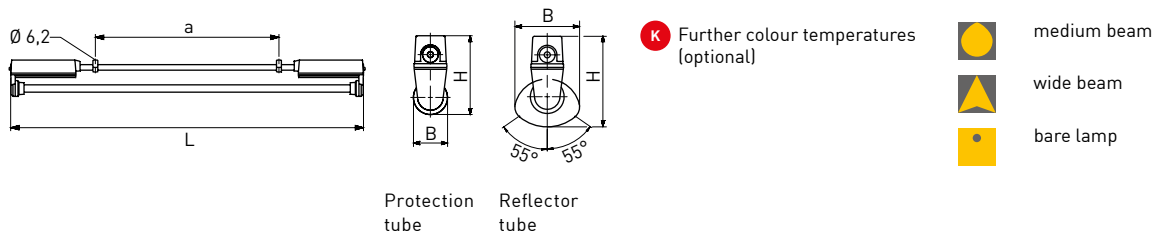
| Version | Required panel recess | L crosswise | B | H | a | b | Max. weight |
|---------|-----------------------|-------------|---------|--------|---------|---------|-------------|
| m1200 | 13 units | 1285 mm | 91.5 mm | 134 mm | 1248 mm | 1040 mm | 3.3 kg |
| m1500 | 16 units | 1585 mm | 91.5 mm | 134 mm | 1548 mm | 1340 mm | 3.9 kg |

JENA LED ACCESSORIES

| Version | Article no. |
|--|-------------|
| Panel ceiling fixings, universal (m1200) | 200 230 |
| Panel ceiling fixings, universal (m1500) | 200 231 |

KIEL LED

LED



| Lamp | Version | L | B | H | a | Max. weight |
|------|-----------------------------|-------------|--------|--------|-------------|-------------|
| LED | With protection tube, m600 | 638 ± 2 mm | 56 mm | 130 mm | 90 ± 30 mm | 2.3 kg |
| LED | With protection tube, m1200 | 1248 ± 2 mm | 56 mm | 130 mm | 650 ± 80 mm | 3.1 kg |
| LED | With protection tube, m1500 | 1548 ± 2 mm | 56 mm | 130 mm | 950 ± 80 mm | 3.9 kg |
| LED | With reflector tube, m600 | 638 ± 2 mm | 107 mm | 151 mm | 90 ± 30 mm | 2.3 kg |
| LED | With reflector tube, m1200 | 1248 ± 2 mm | 107 mm | 151 mm | 650 ± 80 mm | 3.1 kg |
| LED | With reflector tube, m1500 | 1548 ± 2 mm | 107 mm | 151 mm | 950 ± 80 mm | 3.9 kg |

AREAS OF APPLICATION

Polymer luminaire for surface ceiling mounting with LED lamps. Useable in industrial applications, stations for public transport, in underground and suburban railway stations and for facade or advertisement illumination.

HOUSING

Weather-proof luminaire housing made of thermosetting polymer, similar to RAL 9010 and RAL 9005. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

With protection tube 38 mm or a reflector tube that can be swivelled made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC. Two M20 cable entries on face side and 4 x 1.5 mm² through wiring. L80 B10 > 50,000 at +40/+45 °C.

MOUNTING

Single or row mounting. Ceiling installation using two polymer stirrup clamps, variable mounting distance.

KIEL LED – MEDIUM BEAM, WITH REFLECTOR TUBE

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1960 | 13 | -25 °C to +40 °C | 375 280 34 A1 – Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 3540 | 21 | -25 °C to +45 °C | 375 480 34 A1 – Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5490 | 33 | -25 °C to +45 °C | 375 680 34 A1 – Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Reflector tube/ A

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropolal® (fracture proof)

KIEL LED – WIDE BEAM, WITH PROTECTION TUBE

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1960 | 13 | -25 °C to +40 °C | 375 280 44 A2 – Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 3940 | 25 | -25 °C to +45 °C | 375 480 44 A2 – Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5120 | 31 | -25 °C to +45 °C | 375 680 44 A2 – Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Protection tube/ A

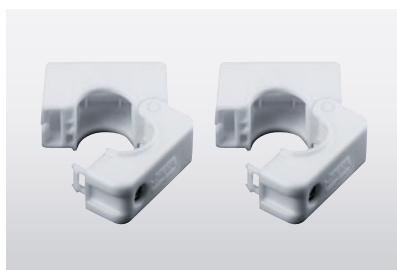
2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropolal® (fracture proof)

KIEL LED – BARE LAMP, PMMA TRANSOPAL® (IMPACT STRENGTHENED), WITH PROTECTION TUBE

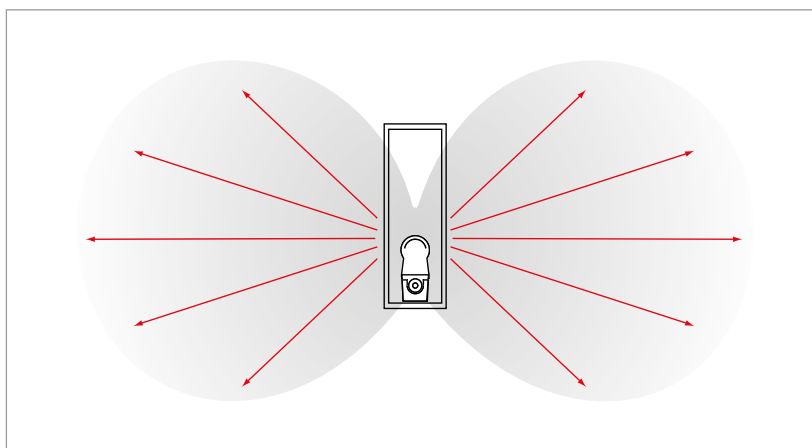
| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|--------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1960 | 13 | -25 °C to +40 °C | 375 280 44 23 – Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 3570 | 21 | -25 °C to +45 °C | 375 480 44 23 – Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 4460 | 25 | -25 °C to +45 °C | 375 680 44 23 – Z1 |

KIEL LED OPTIONS

| Version | Article no. |
|--|----------------------|
| Further colour temperatures | Available on request |
| Polymer cable gland with strain relief, M20 (pair) | 201 475 |
| RAL finish | 375 960 |
| Through wiring 4 x 2.5 mm ² | 303 822 |



- > Polymer stirrup clamps, included in scope of delivery



- > Schematic LIDC diagram of the KIEL LED bare lamp in a backlit information box (side view)

LAUSANNE

LED

IP 66

IP 67

IP 68 10m

CE



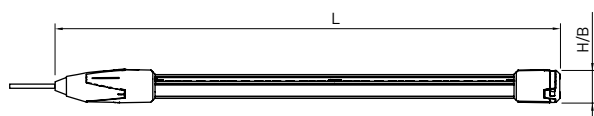
ZONE 1

ZONE 2

ZONE 21

ZONE 22

IK 11 PC



medium beam

| Lamp | Version | L | B | H | Max. weight |
|------|---------|-------------|-------|-------|-------------|
| LED | m300 | 550 ± 2 mm | 56 mm | 56 mm | 1.8 kg |
| LED | m600 | 850 ± 2 mm | 56 mm | 56 mm | 2.1 kg |
| LED | m900 | 1150 ± 2 mm | 56 mm | 56 mm | 2.6 kg |
| LED | m1200 | 1450 ± 2 mm | 56 mm | 56 mm | 2.9 kg |

AREAS OF APPLICATION

Explosion-proof tubular luminaire with LED, resistant to pressurised water. Useable in explosive atmospheres in zone 1, 2, 21 and 22. Designed according to the applicable European Directives.

HOUSING

Luminaire tube made of polymer. Useable for indoor and outdoor areas according to protection rating IP 66 and IP 67. Resistant to pressurised water according to protection rating IP 68, 10 m.

LIGHTING TECHNOLOGY

Luminaire tube made of PC (fracture proof) clear with internal diffusor.

ELECTRICAL CONSTRUCTION

Luminaire ready for installation. Built-in driver 230 V AC/DC and connecting cable 5 m (H07RN8-F 2 x 1,5 mm²).

MOUNTING

Single mounting. Ceiling or wall fixing using separate mounting parts (see accessories).

Manufactured by our partner R. Stahl. Certificate no. EPS 13 ATEX 1 597 and IECEx EPS 13.0027.

LAUSANNE

ATEX

⊕ II 2 G Ex db op is IIC T4 Gb
 ⊕ II 2 D Ex tb IIIC T100 °C Db

IECEX

Ex db op is IIC T4 Gb
 Ex tb IIIC T100 °C Db

| Version | | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|--------------|------------------|----------------|---------------------|---------------|
| m300 | ■ 850/5000 K | 1510 | 13 | -55 °C bis +70 °C | 559 180 35 41 |
| m600 | ■ 850/5000 K | 3050 | 24 | -55 °C bis +70 °C | 559 280 35 41 |
| m900 | ■ 850/5000 K | 4620 | 36 | -55 °C bis +70 °C | 559 380 35 41 |
| m1200 | ■ 850/5000 K | 6040 | 47 | -55 °C bis +70 °C | 559 480 35 41 |

LAUSANNE ACCESSORIES

| Version | Article no. |
|---|-------------|
| Double mounting clamp, polymer (pair), for mounting on pipes with a diameter of 45 to 55 mm (screws and nuts made from stainless steel V2A) | 559 003 |
| Mounting clamp, galvanised (pair) for version m300 | 559 005 |
| Mounting clamp, galvanised (pair) with magnetic base for version m300 | 559 006 |
| Mounting clamp, galvanised (pair), to screw onto thread M8 or M10 | 559 001 |
| Mounting clamp, stainless steel (pair), for surface mounting | 559 004 |
| Mounting clamp, stainless steel (pair), to screw onto thread M8 or M10 | 559 002 |



> Double mounting clamp (pair), Article no. 559 003



> Mounting clamp stainless steel (pair), to screw onto thread M8 or M10, Article no. 559 002



> Mounting clamp, stainless steel (pair), for surface mounting, Article no. 559 004



> Mounting clamp galvanised (pair), for version m300, Article no. 559 005



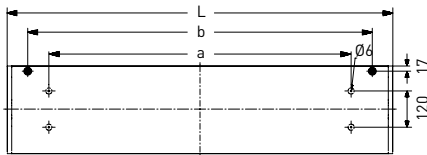
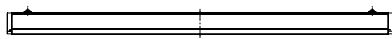
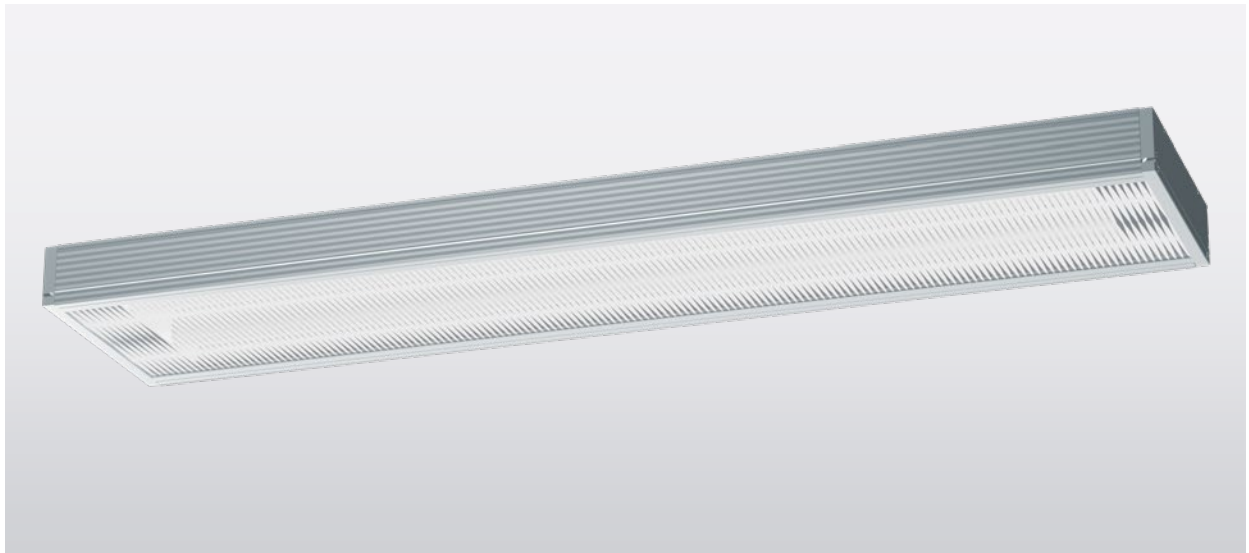
> Mounting clamp galvanised (pair), with magnetic base for version m300, Article no. 559 006



> Mounting clamp galvanised (pair), to screw onto thread M8 or M10, Article no. 559 001

LONDON LED

LED



easy eXchange

Further colour temperatures (optional)



medium beam



asymmetric beam



concentrated beam

| Lamp | Version | L | B | H | a | b | Max. weight |
|------|---------|-------------|--------|-------|-------------|-------------|-------------|
| LED | m600 | 666 ± 2 mm | 285 mm | 73 mm | 390 ± 3 mm | 530 ± 2 mm | 7.2 kg |
| LED | m1200 | 1276 ± 2 mm | 285 mm | 73 mm | 1000 ± 3 mm | 1140 ± 2 mm | 11.8 kg |
| LED | m1500 | 1576 ± 2 mm | 285 mm | 73 mm | 1300 ± 3 mm | 1440 ± 2 mm | 13.9 kg |

AREAS OF APPLICATION

Aluminium luminaire for recessed and surface ceiling mounting with LED lamps. Useable in underground stations, pedestrian underpasses and tunnels, passages, swimming pools (see options), sports halls, transport areas and under canopies.

HOUSING

Silver anodised aluminium profile housing, similar to RAL 9006. 285 mm profile width with low installed height. Cover screen with tool-free opening. Useable for indoor and outdoor areas according to protection rating IP 65. Sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber. Protection class II.

LIGHTING TECHNOLOGY

LED unit for LED and driver replacement (easy eXchange). Cover screen made of PMMA (impact strengthened) or PC (fracture proof), clear with decorative screen print pattern. Internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

LED units with reverse polarity protected connection plugs. Built-in DALI driver 230 V AC/ DC, optionally suitable for emergency lighting. **Through wiring 5 x 1.5 mm² and additional 2 x 1.5 mm² control wiring.** Ready for connection via two rear-mounted cable entries. 2 kV transient filter.

MOUNTING

Single mounting. Optional continuous row version or on NORKA trunking system 285 (the luminaire must be ordered in this specification). Mounting on four concealed mounting apertures at the rear. Ceiling mounting frame optionally available (see accessories).



LONDON LED – SINGLE LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1950 | 14 | -25 °C bis +40 °C | 618 280 A4 B4 – Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 4900 | 30 | -25 °C bis +40 °C | 618 480 A4 B4 – Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 6740 | 41 | -25 °C bis +40 °C | 618 680 A4 B4 – Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam
8 = concentrated beam

Cover screen / A

3 = PMMA (impact strengthened) clear with decorative screen print pattern
5 = PC (fracture proof) clear with decorative screen print pattern

LONDON LED – TWIN LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 3540 | 23 | -25 °C bis +40 °C | 619 280 A4 B4 – Z1 |
| m1200 <input type="checkbox"/> 840/4000 K | 9020 | 57 | -25 °C bis +40 °C | 619 480 A4 B4 – Z1 |
| m1500 <input type="checkbox"/> 840/4000 K | 12240 | 75 | -25 °C bis +40 °C | 619 680 A4 B4 – Z1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam
8 = concentrated beam

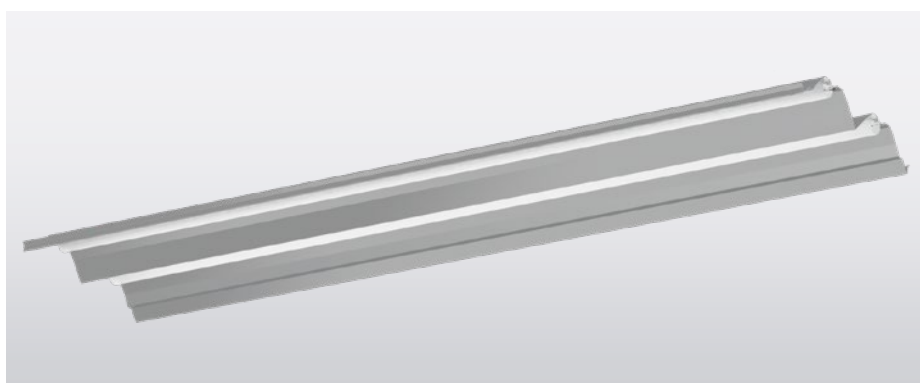
Cover screen / A

3 = PMMA (impact strengthened) clear with decorative screen print pattern
5 = PC (fracture proof) clear with decorative screen print pattern

LONDON LED OPTIONS

| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Ball impact resistant version | 100 901 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 610 010 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures 3000 K or 5000 K | Available on request |
| Halogen-free version | 610 023 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Protection against unauthorised opening | 610 003 |
| Swimming pool version | 686 036 |
| Through wiring 5 x 2.5 mm ² | 610 823 |
| Version for NORKA trunking system 285 | 610 103 |
| Version for operating with PASSAU LED | Available on request |
| Version with two pairs of cable entries on the face side (continuous row version) | 201 442 |

IMPROVED LED UNIT: NEW DESIGN



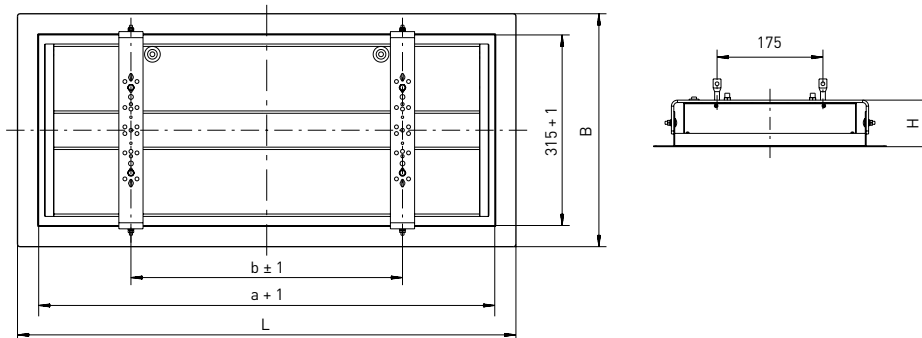
- > Better light guidance and luminaire light output
- > Various light distributions
- > Higher luminous flux

> LED unit with twin lamp

For additional articles, please turn the page! ►

LONDON LED ACCESSORIES

| Version | Article no. |
|--|----------------------|
| Ceiling installation frame m600, powder coated RAL 9010, for continuous row mounting initial/end | 203 193 |
| Ceiling installation frame m600, powder coated RAL 9010, for continuous row mounting intermediate | 203 196 |
| Ceiling installation frame m600, powder coated RAL 9010, for single mounting | 203 190 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting initial/end | 203 194 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting intermediate | 203 197 |
| Ceiling installation frame m1200, powder coated RAL 9010, for single mounting | 203 191 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting initial/end | 203 192 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting intermediate | 203 198 |
| Ceiling installation frame m1500, powder coated RAL 9010, for single mounting | 203 195 |
| easy eXchange replacement kit | Available on request |

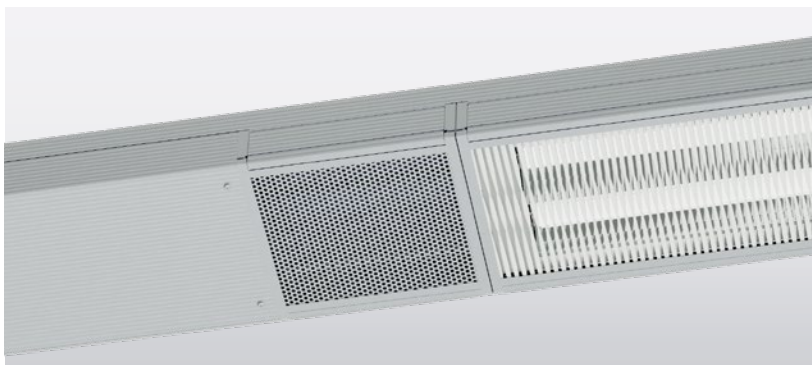


- > Dimensional drawing of ceiling installation frame for single mounting, more dimensional drawings and dimensions on request

CEILING INSTALLATION FRAME FOR SINGLE MOUNTING

| Version | Required ceiling cut-out | L | B | H | a | b | Max. weight |
|---------|--------------------------|---------|--------|-------|---------|---------|-------------|
| m600 | 700 x 356 mm | 754 mm | 385 mm | 77 mm | 684 mm | 390 mm | 3.1 kg |
| m1200 | 1310 x 356 mm | 1364 mm | 385 mm | 77 mm | 1294 mm | 1000 mm | 4.2 kg |
| m1500 | 1610 x 356 mm | 1664 mm | 385 mm | 77 mm | 1594 mm | 1300 mm | 4.8 kg |

SUITABLE SUPPLEMENT



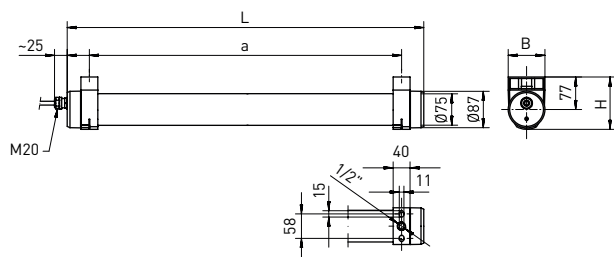
TRUNKING SYSTEM 285

- > TRUNKING SYSTEM 285 with LONDON LED, blind cover and speaker housing



LUGANO

LED



K Further colour temperatures (optional)



medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|-------------|-------|--------|--------------|-------------|
| LED | m600 | 650 ± 2 mm | 87 mm | 124 mm | 545 - 10 mm | 2.7 kg |
| LED | m1200 | 1260 ± 2 mm | 87 mm | 124 mm | 1155 - 10 mm | 3.7 kg |
| LED | m1500 | 1560 ± 2 mm | 87 mm | 124 mm | 1455 - 10 mm | 4.6 kg |

AREAS OF APPLICATION

Gas-tight and ammonia-resistant tubular luminaire with LED lamps. Useable indoors and outdoors with special requirements.

HOUSING

Luminaire tube (Ø 75 mm) made of polymer with two end caps made of PBT, electric grey. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water up to 20 m; compliant with protection rating IP 68, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K.

LIGHTING TECHNOLOGY

Luminaire tube made of PMMA Transopal® (impact strengthened), homogeneously illuminated.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in DALI driver 230 V AC/DC and 2 m connecting cable 5 x 1.5 mm² (mains 3 x 1.5 mm², DALI 2 x 1.5 mm²).

L80 B10 > 100,000 h at +40 °C.

8 years warranty.

MOUNTING

Single or continuous row mounting. Ceiling or wall fixing with two polymer mounting clamps.

LUGANO

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------|
| m600 <input type="checkbox"/> 840/4000 K | 1740 | 13 | -25 °C to +40 °C | 776 280 34 21 |
| m1200 <input type="checkbox"/> 840/4000 K | 3480 | 25 | -25 °C to +40 °C | 776 480 34 21 |
| m1500 <input type="checkbox"/> 840/4000 K | 5240 | 36 | -25 °C to +40 °C | 776 680 34 21 |

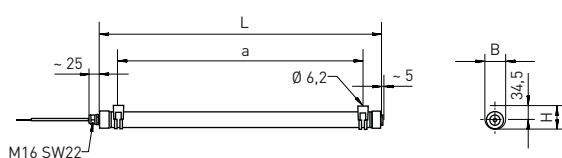
LUGANO OPTIONS

| Version | Article no. |
|---|----------------------|
| Further colour temperatures | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Luminaire tube coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 776 010 |
| Through wiring 5 x 1.5 mm ² (mains 3 x 1.5 mm ² , DALI 2 x 1.5 mm ²) with second connecting cable (2 m) | 776 831 |
| Version for operating with PASSAU LED | Available on request |



LUZERN 38 LED

LED



o FOCUSED LIGHTING
(see appendix C)

K Further colour temperatures
(optional)



medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|-------------|-------|---------|--------------|-------------|
| LED | m600 | 690 ± 2 mm | 50 mm | 57.5 mm | 600 - 10 mm | 0.6 kg |
| LED | m1200 | 1250 ± 2 mm | 50 mm | 57.5 mm | 1160 - 10 mm | 0.9 kg |
| LED | m1500 | 1530 ± 2 mm | 50 mm | 57.5 mm | 1440 - 10 mm | 1.0 kg |

AREAS OF APPLICATION

Tubular luminaire with LED lamps. Useable in industrial applications, multi-storey car parks, for facade or advertisement illumination and for decorative indoor and outdoor lighting.

HOUSING

Polymer luminaire tube (Ø 38 mm). End caps white. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water to 1 m due to protection rating IP 68, 1 m.

LIGHTING TECHNOLOGY

Luminaire tube made of PMMA Transopal® [impact strengthened] or PC Tropol® [fracture proof].

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. One cable gland M16 on face side. Built-in driver 230 V AC/DC. 2 kV transient filter and 2 x 1.5 mm² 2 m connecting cable without plug. Protection class II. Adjustable luminous flux via NFC programming (optionally available).

MOUNTING

Single mounting. Ceiling or wall fixing using two stainless steel/transparent polymer mounting clamps, variable mounting distance or pendant suspension (see options).

LUZERN 38 LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-----------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +35 °C | 538 280 34 A4 -F-... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6720 | 15 - 19 - 34 | -25 °C to +35 °C | 538 480 34 A4 -F-... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +35 °C | 538 680 34 A4 -F-... |

■ Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

Luminaire tube / A

- 3 = PC Tropol® (fracture proof)
- 4 = PMMA Transopal® (impact strengthened)

LUZERN 38 LED OPTIONS

| Version | Article no. |
|---|----------------|
| Adjustable luminous flux via NFC programming (barcode and RFID detection device required) | 100 037 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 538 010 |
| DALI | 100 502 |
| Further colour temperatures | See appendix B |
| Halogen-free version | 538 032 |
| Swimming pool version | 538 036 |
| Through wiring 2 x 1.5 mm ² with 2nd connecting cable 2 m, open end | 538 690 |

- > Standard version with 2 m connecting cable
2 x 1.5 mm², open end



- > Optional: Through wiring 2 x 1.5 mm² with
2nd connecting cable 2 m, open end
Article no. 538 690

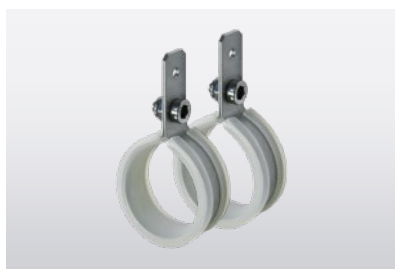


LUZERN 38 LED ACCESSORIES

| Version | Article no. |
|---|-------------|
| Mobile barcode and RFID detection device for NFC programming | 106 598 |
| Mounting clamps, chlorine resistant, polymer grey, Ø 38 mm, for ceiling and wall mounting (pair) | 538 003 |
| Mounting clamps, stainless steel/polymer transparent, Ø 38 mm, for suspension system (pair), (not suitable for chlorine atmosphere) | 538 319 |
| Suspension system, 1 m, made of stainless steel/polymer transparent, Ø 38 mm, pair, (not suitable for chlorine atmosphere) | 537 266 |



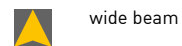
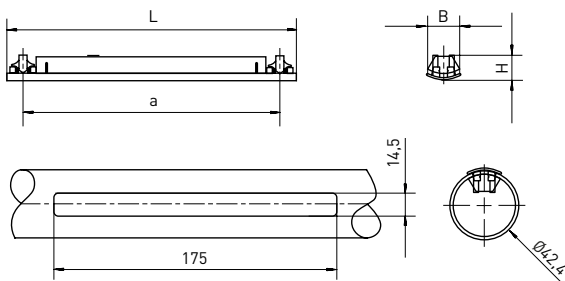
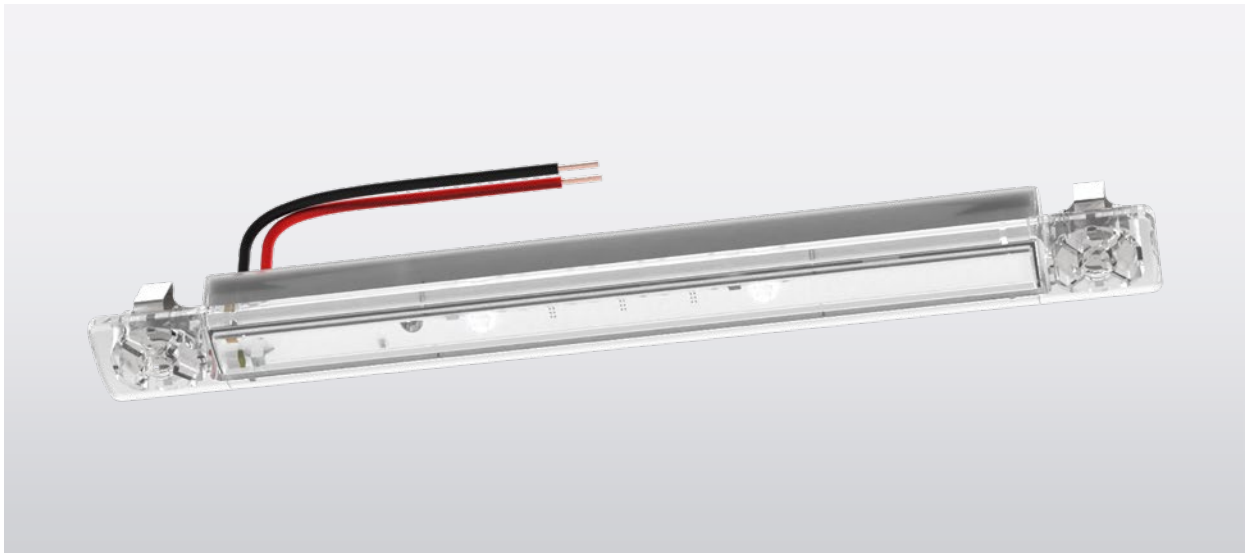
- > Mounting clamps for LUZERN 38 LED, stainless steel / transparent polymer (pair), (not suitable for chlorine atmosphere), included in scope of delivery



- > Mounting clamps for LUZERN 38 LED, stainless steel/polymer transparent, Ø 38 mm, for suspension system (pair), (not suitable for chlorine atmosphere), Article no. 538 319



- > Mounting clamps for LUZERN LED 38, chlorine resistant, polymer grey, Ø 38 mm, for ceiling and wall mounting (pair), Article no. 538 003



| Lamp | Version | L | B | H | a | Max. weight |
|------|-----------|--------|-------|-------|------------|-------------|
| LED | Hand rail | 180 mm | 19 mm | 15 mm | 159 ± 2 mm | < 0,1 kg |

AREAS OF APPLICATION

Luminaire for integration into hand rails for emergency lighting according to DIN EN 60598-2-22, usable as tunnel safety lighting in railway stations and stairways or for path illumination.

HOUSING

Usable for indoor and outdoor areas according to protection rating IP 66. Resistant to pressurised water up to 1 m compliant with IP 68 protection rating, 1 m.

LIGHTING TECHNOLOGY

Lamp diffuser made from PC (fracture proof), clear.

ELECTRICAL VERSION

The operation of this luminaire requires a separate SELV, which is connected to the 230 V mains and supplies 24 V constant voltage (SK III).

L80 B10 > 90,000 h at +45 °C.

MOUNTING

Installation using two latching retaining clips.

MEPPEN WITH MONITORING

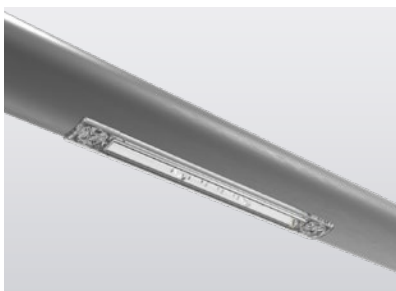
The MEPPEN luminaire is also available in a monitoring version for connection to the INOTEC CLS emergency lighting system. Monitoring is carried out without an additional data cable via the 24 V supply line. Function and operating duration tests required in accordance with DIN EN 62034 have been carried out and recorded using the INOTEC CLS emergency lighting unit. Faults with destination information of the luminaire are displayed on the control unit of the CLS emergency lighting unit or forwarded to a higher-level monitoring system (PC software or website).

MEPPEN – WITHOUT MONITORING

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------|
| Hand rail <input type="checkbox"/> 740/4000 K | 129 | 1.16 | -25 °C to +45 °C | 856 180 44 41 – MC3 |
| Hand rail <input type="checkbox"/> 740/4000 K | 374 | 2.79 | -25 °C to +45 °C | 856 180 44 41 – MC7 |

MEPPEN – WITH MONITORING

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------|
| Hand rail <input type="checkbox"/> 740/4000 K | 129 | 1.56 | -25 °C to +45 °C | 856 180 44 42 – MC3 |
| Hand rail <input type="checkbox"/> 740/4000 K | 374 | 2.88 | -25 °C to +45 °C | 856 180 44 42 – MC7 |



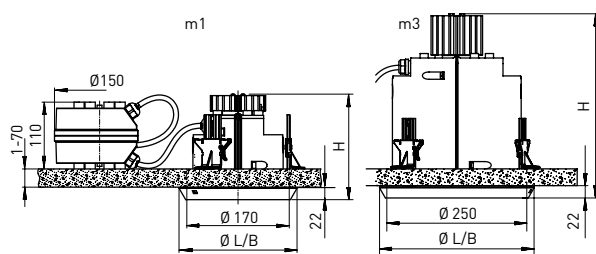
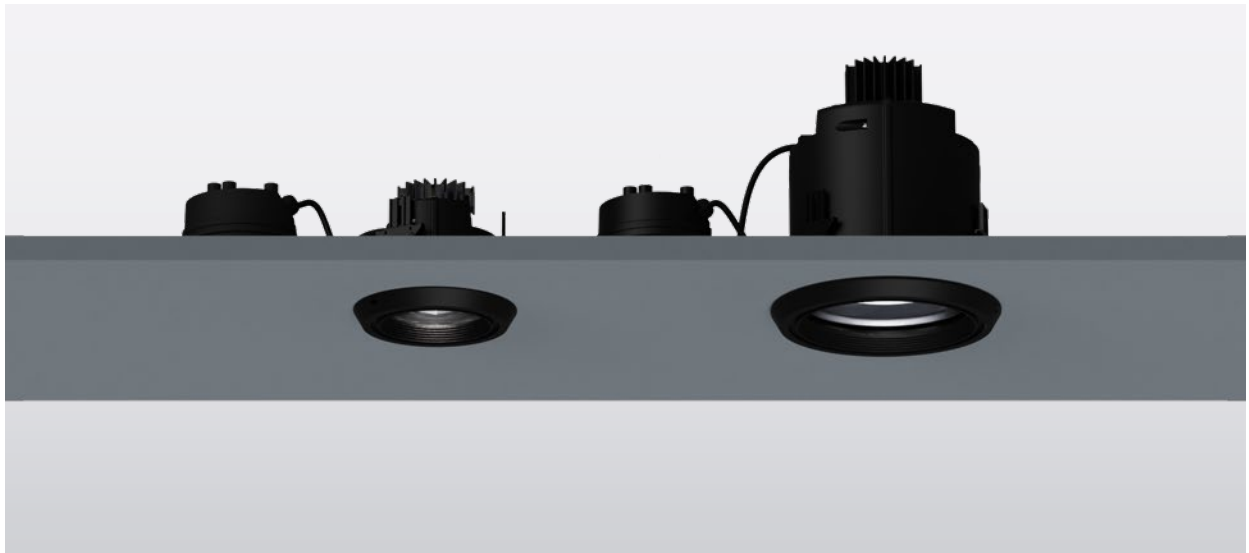
> MEPPEN installed in hand rail



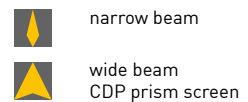
> The luminaire MEPPEN is fixed with two latching retaining clips within the hand rail.

MERKUR LED

LED



K Further colour temperatures (optional)



| Lamp | Version | L | B | H | Max. weight |
|------|---------|--------|--------|--------|-------------|
| LED | m1 | 196 mm | 196 mm | 177 mm | 2.2 kg |
| LED | m3 | 276 mm | 276 mm | 329 mm | 4.0 kg |

AREAS OF APPLICATION

Recess-mounted ceiling luminaire made of polymer that is resistant to temperature, acid, alkaline substances and fuel. Useable in sports and multi purpose halls, swimming pools (see options), shower rooms, public transport stations, in underground and metro stations and passages.

HOUSING

Weather-proof luminaire housing made of fibreglass-reinforced polymer, similar to RAL 9005. Useable for indoor and outdoor areas according to protection rating IP 65. Sealing system made of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Cover screen made of single pane safety glass with polymer frame for cover glass. Internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. With connecting cable (1.5 m) 5 x 1.5 mm². DALI driver, supply voltage 220-240 V AC/DC, suitable for emergency lighting. 2 kV transient filter.

MOUNTING

Separated driver chamber, useable in addition to the luminaire. Mounting with quick-mounting frame with mounting clamp system. Frame for cover glass with easy to install snap lock.

MERKUR LED – VERSION M1

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|--|------------------|----------------|---------------------|---------------------------|
| m1 <input type="checkbox"/> 840/4000 K | 4300 | 27 | -25 °C bis +45 °C | 978 140 A4 61 – H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

2 = narrow beam
4 = wide beam
(CDP prism screen)

MERKUR LED – VERSION M3

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|--|------------------|----------------|---------------------|---------------------------|
| m3 <input type="checkbox"/> 840/4000 K | 2260 | 15 | -25 °C bis +45 °C | 979 022 A4 61 – H1 |
| m3 <input type="checkbox"/> 840/4000 K | 3200 | 20 | -25 °C bis +45 °C | 979 032 A4 61 – H1 |
| m3 <input type="checkbox"/> 840/4000 K | 4300 | 27 | -25 °C bis +45 °C | 979 044 A4 61 – H1 |
| m3 <input type="checkbox"/> 840/4000 K | 7550 | 45 | -25 °C bis +35 °C | 979 075 A4 61 – H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

2 = narrow beam
4 = wide beam

MERKUR LED OPTIONS

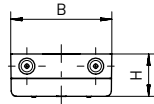
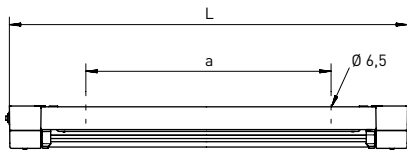
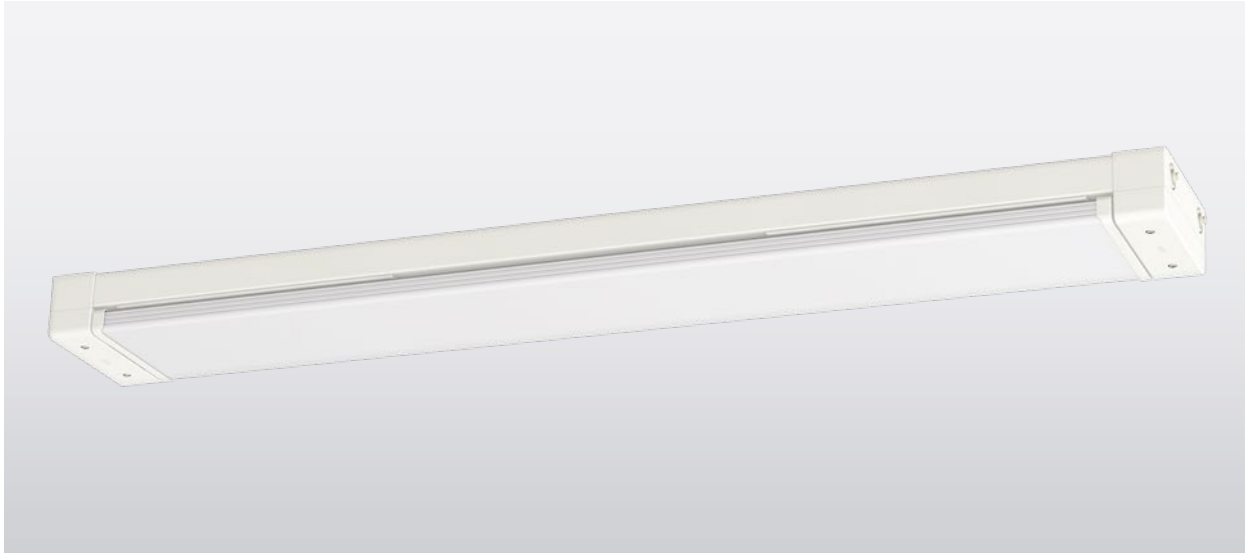
| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Further colour temperatures | Available on request |
| Impact resistance IK10 | 100 555 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish for frame for cover glass | 978 911 |
| Swimming pool version | 978 970 |
| Theft protection for frame for cover glass | 975 901 |
| Version for operating with PASSAU LED | Available on request |

MERKUR LED ACCESSORIES

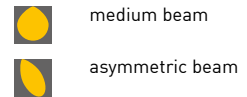
| Version | Article no. |
|--|----------------------|
| Adapter ring for ceiling cutout Ø 200 mm for version m1 | 978 901 |
| Adapter ring for ceiling cutout Ø 250 mm for version m1 | 978 902 |
| Blind cover for partial mounting, height up to 100 mm | Available on request |
| CDP prism screen, circular de glare for version m3 | 978 903 |
| Panel ceiling suspension with module plate, for module 100, for version m1 | 975 911 |
| Panel ceiling suspension with module plate, for module 100, for version m3 | 977 911 |



> MERKUR LED m1 with blind cover for partial mounting



- **FOCUSSED LIGHTING**
[see appendix C]
- **XARA® lighting control**
(optional)
- **K** Further colour temperatures
(optional)



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|-------------|--------|-------|-------------|-------------|
| LED | m600 | 782 ± 2 mm | 191 mm | 80 mm | 493 ± 5 mm | 3.5 kg |
| LED | m1200 | 1392 ± 2 mm | 191 mm | 80 mm | 1103 ± 5 mm | 5.6 kg |
| LED | m1500 | 1692 ± 2 mm | 191 mm | 80 mm | 1403 ± 5 mm | 6.1 kg |

AREAS OF APPLICATION

Polymer luminaire for recessed and surface ceiling mounting with LED lamps. Useable, e.g., in underground and suburban railway stations, passages and swimming pools (see options). Useable in production facilities and suppliers in the food and beverage industry.

HOUSING

Flat, weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 9010, with low installed height. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Lamp diffuser made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof) with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Two access covers, four cable entries M20 on the face side and 4 x 1.5 mm² through wiring. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. 2 kV transient filter.

MOUNTING

Single or row mounting. Ceiling installation or installation on NORKA trunking system 191 using split washers for easy mounting. Captive end caps. Ceiling mounting frames and universal panel suspensions optionally available (see accessories).

MÜNCHEN LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|--------------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +40 °C | 455 280 A4 B4 - F - ... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 455 480 A4 B4 - F - ... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 455 680 A4 B4 - F - ... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam

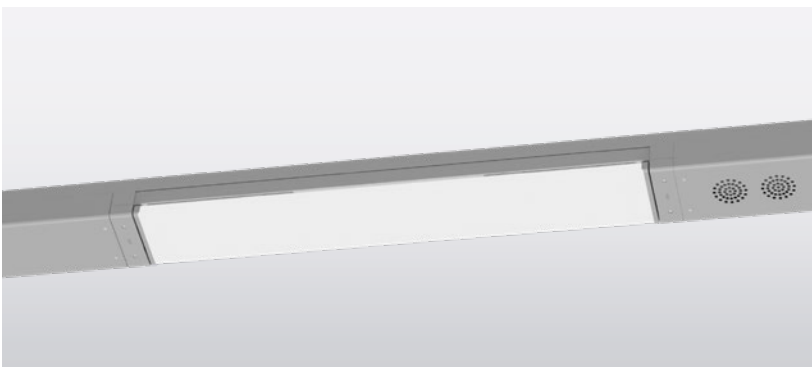
Lamp diffuser / B

2 = PMMA Transopal®
(impact strengthened)
8 = PC Tropol® (fracture proof)

MÜNCHEN LED OPTIONS

| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 455 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 455 032 |
| HCL (Human Centric Lighting) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| Polymer cable gland with strain relief, M20 (both sides) | 201 427 |
| Polymer cable gland with strain relief, M20 (single sided) | 200 427 |
| RAL finish | 455 960 |
| Rear-mounted cable entry M20 (4 pieces), sides closed | 201 310 |
| Swimming pool version | 455 036 |
| Through wiring 4 × 2.5 mm ² | 455 823 |
| Through wiring 5 × 1.5 mm ² | 455 833 |
| Through wiring 5 × 2.5 mm ² | 455 393 |
| Version for operating with PASSAU LED | See PASSAU LED |

SUITABLE SUPPLEMENT

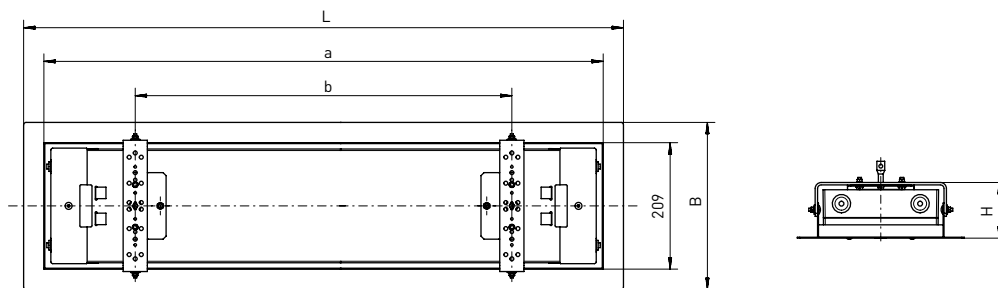


TRUNKING SYSTEM 191

- > MÜNCHEN LED in colour-coordinated RAL-finish on trunking system 191 with blind cover and speaker housing

For additional articles, please turn the page! ►

INSTALLATION IN CLOSED CEILINGS



> Dimensional drawing of ceiling installation frame for single mounting, more dimensional drawings and dimensions on request

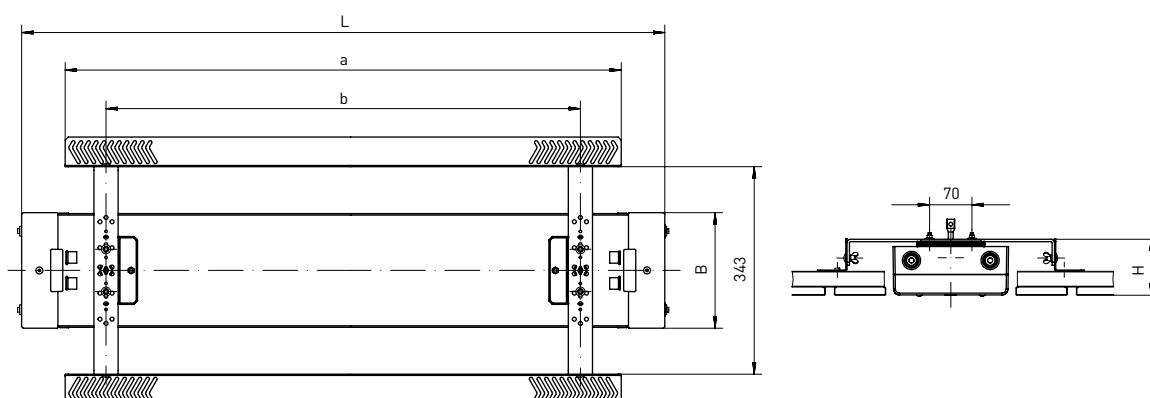
CEILING INSTALLATION FRAME FOR SINGLE MOUNTING

| Version | Required ceiling cut-out | L | B | H | a | b | Max. weight |
|---------|--------------------------|---------|--------|-------|---------|---------|-------------|
| m600 | 820 x 242 mm | 872 mm | 276 mm | 92 mm | 805 mm | 503 mm | 2.5 kg |
| m1200 | 1430 x 242 mm | 1482 mm | 276 mm | 92 mm | 1415 mm | 1113 mm | 3.6 kg |
| m1500 | 1730 x 242 mm | 1782 mm | 276 mm | 92 mm | 1715 mm | 1413 mm | 4.2 kg |

MÜNCHEN LED ACCESSORIES

| Version | Article no. |
|--|-------------|
| Ceiling installation frame m600, powder coated RAL 9010, for continuous row mounting in closed ceiling initial/end | 203 210 |
| Ceiling installation frame m600, powder coated RAL 9010, for continuous row mounting in closed ceiling intermediate | 203 211 |
| Ceiling installation frame m600, powder coated RAL 9010, for single mounting in closed ceiling | 203 226 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting in closed ceiling initial/end | 203 212 |
| Ceiling installation frame m1200, powder coated RAL 9010, for continuous row mounting in closed ceiling intermediate | 203 213 |
| Ceiling installation frame m1200, powder coated RAL 9010, for single mounting in closed ceiling | 203 227 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting in closed ceiling initial/end | 203 214 |
| Ceiling installation frame m1500, powder coated RAL 9010, for continuous row mounting in closed ceiling intermediate | 203 215 |
| Ceiling installation frame m1500, powder coated RAL 9010, for single mounting in closed ceiling | 203 228 |

INSTALLATION IN PANEL CEILINGS



> Dimensional drawing for panel ceiling fixings (direction lengthwise)

PANEL DIRECTION LENGTHWISE

| Version | Required panel recess | L lengthwise | B | H | a | b | Max. weight |
|---------|-----------------------|--------------|--------|-------|---------|---------|-------------|
| m600 | 797 x 215 mm | 782 mm | 191 mm | 92 mm | 638 mm | 503 mm | 1.8 kg |
| m1200 | 1470 x 215 mm | 1392 mm | 191 mm | 92 mm | 1248 mm | 1113 mm | 3.6 kg |
| m1500 | 1707 x 215 mm | 1692 mm | 191 mm | 92 mm | 1548 mm | 1413 mm | 4.2 kg |

PANEL DIRECTION CROSSWISE

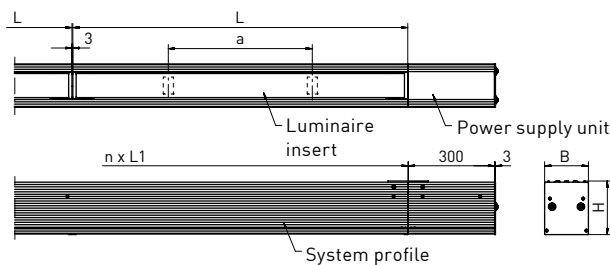
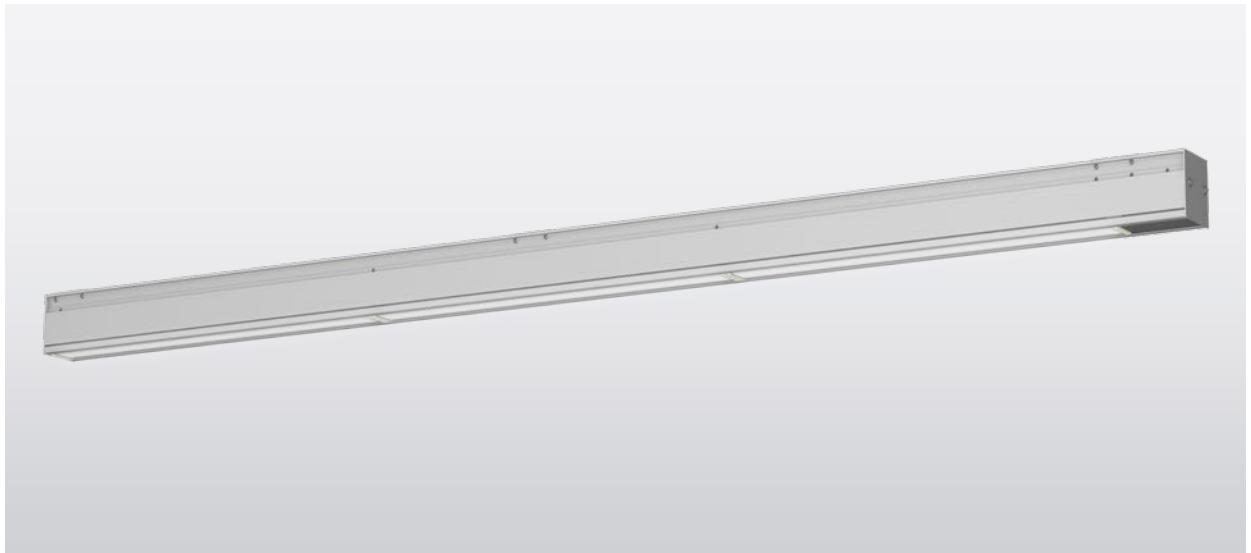
| Version | Required panel recess | L crosswise | B | H | a | b | Max. weight |
|---------|-----------------------|-------------|--------|-------|---------|---------|-------------|
| m600 | 8 units | 782 mm | 191 mm | 92 mm | 638 mm | 503 mm | 1.8 kg |
| m1200 | 14 units | 1392 mm | 191 mm | 92 mm | 1248 mm | 1113 mm | 3.6 kg |
| m1500 | 17 units | 1692 mm | 191 mm | 92 mm | 1548 mm | 1413 mm | 4.2 kg |

MÜNCHEN LED ACCESSORIES

| Version | Article no. |
|---|-------------|
| Panel ceiling fixings, universal, m600 | 220 233 |
| Panel ceiling fixings, universal, m1200 | 200 234 |
| Panel ceiling fixings, universal, m1500 | 200 235 |

NIGHTLINE

LED



- FOCUSSED LIGHTING**
(see appendix C)
- easy eXchange DRIVER**
(optional)
- XARA® lighting control**
(optional)
- Further colour temperatures**
(optional)

- medium beam
- asymmetric beam

| Lamp | Version | L | L1 | B | H | a | Max. weight |
|------|---------|-------------|---------|--------|--------|-------------|-------------|
| LED | m1500 | 1443 ± 2 mm | 4338 mm | 152 mm | 186 mm | 780 ± 25 mm | 12.0 kg/m |

AREAS OF APPLICATION

Continuous row version made of anodised extruded aluminium profile with LED lamps. Continuous, homogeneous light emission. Useable in underground and metro stations, foyers and swimming pools (optional).

HOUSING

Weather and age resistant extruded profile made of anodised aluminium. Luminaire insert made of fibre-glass-reinforced polymer. Useable for indoor and outdoor areas according to protection rating IP 65. Thermally separated lamp chamber and driver chamber. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

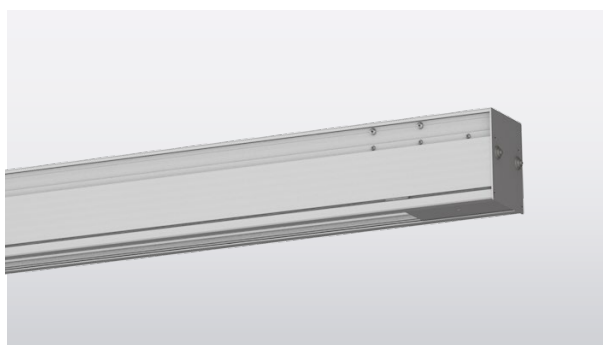
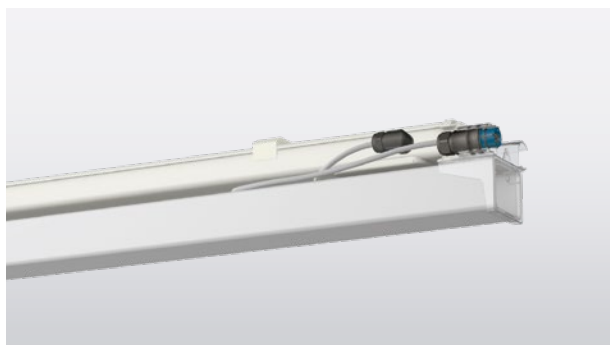
Lamp diffuser made of PMMA Transopal® (impact strengthened) or PC Tropal® (fracture proof) with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire insert ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Through wiring 5 x 2.5 mm² (DALI 7 x 2.5 mm²) with plug-and-socket system. 2 kV transient filter.

MOUNTING

Continuous row mounting of the aluminium profile to the ceiling module. Mounting with tube pendulum possible (see accessories).



NOTE

NIGHTLINE consists of two parts: the luminaire inserts and the system profile made of aluminium.

NIGHTLINE – LUMINAIRE INSERT, MEDIUM BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-----------------------------|
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 788 680 34 A4 -F-... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

Lamp diffuser / A

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)

NIGHTLINE – LUMINAIRE INSERT, ASYMMETRIC BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-----------------------------|
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 788 680 64 AB -F-... |

Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

Lamp diffuser / A

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)

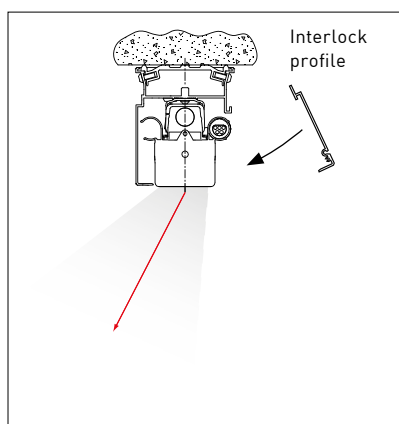
Direction (see overview below) / B

- 1 = Version asymmetric beam 1
- 2 = Version asymmetric beam 2

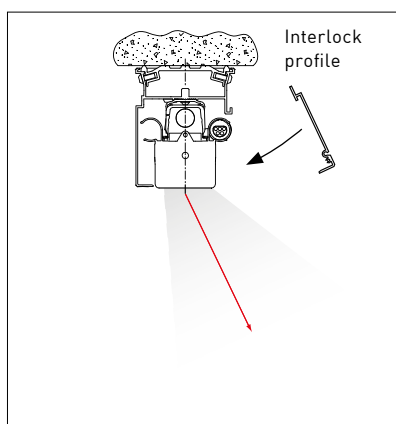
NIGHTLINE SYSTEM PROFILE

| Version | Article no. |
|---|-------------|
| NIGHTLINE Power supply unit (5-pole) | 788 105 |
| NIGHTLINE Power supply unit (7-pole) | 788 107 |
| NIGHTLINE System profile end cap | 788 101 |
| NIGHTLINE System profile for 3 x m1500, max. length 4338 mm | 788 150 |

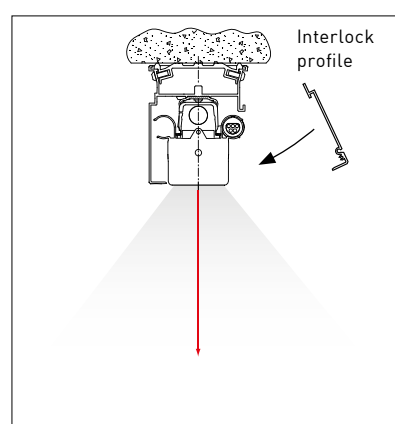
NIGHTLINE – OVERVIEW DIRECTION



> NIGHTLINE version asymmetric beam 1



> NIGHTLINE version asymmetric beam 2



> NIGHTLINE version medium beam

NIGHTLINE OPTIONS

| Version | Article no. |
|---|----------------------|
| 4 kV transient filter | 100 530 |
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 788 010 |
| DALI | 100 502 |
| easy eXchange DRIVER m1500 access cover version (only IP 65, single lamp) | 200 951 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| HCL (Human Centric Lighting) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Swimming pool version | 788 036 |
| Version for operating with PASSAU LED | Available on request |

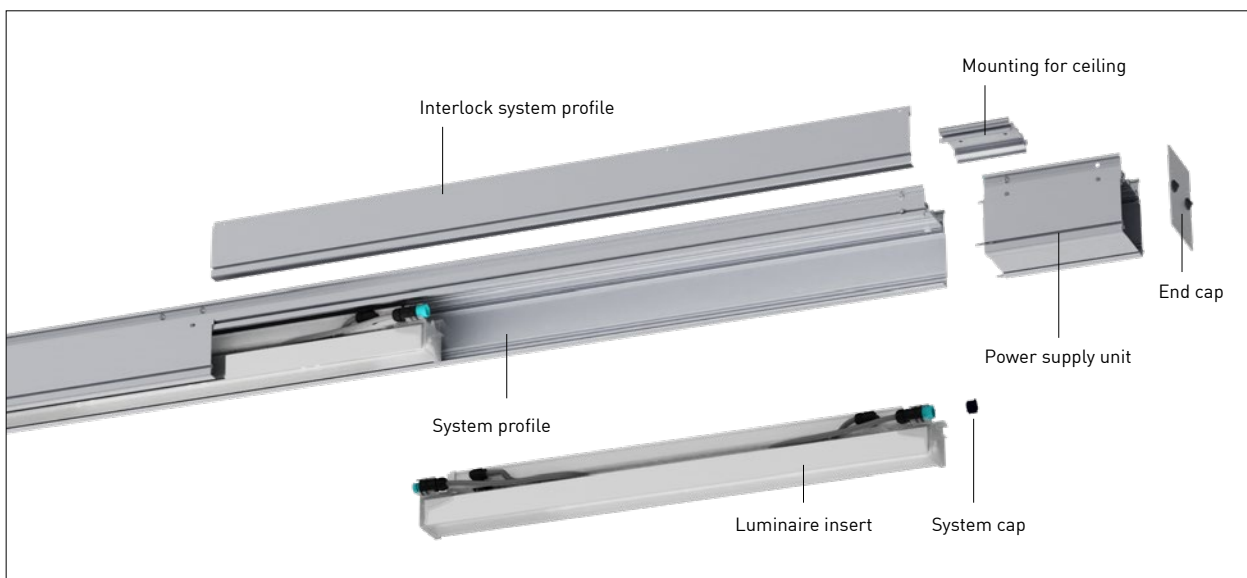
NIGHTLINE ACCESSORIES

| Version | Article no. |
|---|----------------------|
| Additional auxiliary tool for luminaire insert | 788 207 |
| Blind cover m1500 incl. connection cable 5 x 2.5 mm ² , plug/socket system | 788 203 |
| Blind cover m1500 incl. connection cable 7 x 2.5 mm ² , plug/socket system | 788 204 |
| easy eXchange DRIVER replacement kit | Available on request |
| Mounting kit for ceiling mounting, for system profile 3 x m1500 | 788 201 |
| Mounting kit for pendant installation, for system profile 3 x m1500 (pair), system height 500 mm (other heights available on request) | 788 202 |
| Plug/Socket system cap for luminaire insert at the end, 5-pole | 788 205 |
| Plug/Socket system cap for luminaire insert at the end, 7-pole | 788 206 |

Example of configuration

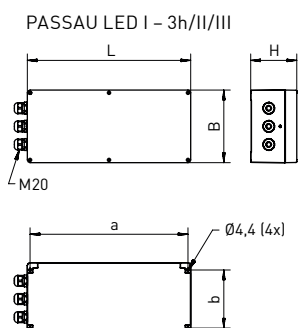
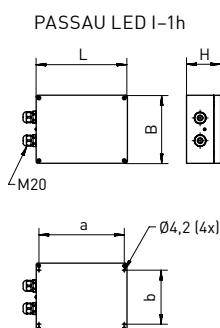
Example of configurate for ca. 13.02 meters of the NIGHTLINE continuous row system

| Amount | Description | Article no. |
|--------|--|-------------------------|
| 9 x | NIGHTLINE luminaire insert, medium beam, PMMA Transopal® (impact strengthened) | 788 680 34 24 - E - MC3 |
| 1 x | NIGHTLINE Power supply unit (5-pole) | 788 105 |
| 2 x | NIGHTLINE System profile end cap | 788 101 |
| 3 x | NIGHTLINE System profile for 3 x m1500, max. length 4338 mm | 788 150 |
| 3 x | Mounting kit for ceiling mounting, for system profile 3 x m1500 | 788 201 |
| 1 x | Plug/Socket system cap for luminaire insert at the end, 5-pole | 788 205 |





PASSAU LED



FOCUSED LIGHTING
PASSAU LED II

| Lamp | Version | Emergency lighting duration | Emergency lighting duration | | H | a | b | Max. weight |
|------|----------------|-----------------------------|-----------------------------|--------|--------|--------|--------|-------------|
| | | | L | B | | | | |
| LED | PASSAU LED I | 1 h | 200 mm | 150 mm | 75 mm | 188 mm | 119 mm | 1.2 kg |
| LED | PASSAU LED I | 3 h | 360 mm | 160 mm | 100 mm | 348 mm | 128 mm | 2.2 kg |
| LED | PASSAU LED II | 1 h / 3 h | 360 mm | 160 mm | 100 mm | 348 mm | 128 mm | 2.2 kg |
| LED | PASSAU LED III | 1 h / 3 h | 360 mm | 160 mm | 100 mm | 348 mm | 128 mm | 2.2 kg |

AREAS OF APPLICATION

Electronic single-battery emergency lighting supply unit for the supply of a LED luminaire. Useable in emergency lighting systems according to EN 50172/ VDE 0108 in industrial applications. Permissible ambient temperature in continuous mode -5°C to $+35^{\circ}\text{C}$; in standby mode 0°C to $+40^{\circ}\text{C}$.

HOUSING

Housing made of fiberglass-reinforced polymer. Useable for indoor and outdoor areas according to protection rating IP 65.

ELECTRICAL CONSTRUCTION

Fully automatic self test with status display by LED according to EN 62034, electronic driver for mains and emergency operation, mains monitoring, battery charging, protection against total discharge, including maintenance-free NiMh battery. Emergency lighting duration 1 h or 3 h. Maximum cable length between luminaire and supply unit: 50 m. Two or three cable glands.

MOUNTING

Wall fixing through four fastening points.

NOTE

The desired luminaire for operation on a PASSAU LED emergency lighting supply unit must be ordered separately.

NOT SUITABLE FOR STANDARD LED LUMINAIRES! When ordering the luminaire, add the note "PASSAU LED" as the construction of the luminaire must be adapted.

PASSAU LED I – FOR TEGEL

Please order the luminaire separately. When ordering the luminaire, please add the note "PASSAU LED".

| Version | Luminous flux/lm Emergency mode | System- leistung/W | Ambient temperature | Article no. |
|-----------|------------------------------------|-----------------------|---|----------------|
| for TEGEL | 320 | 6 W | -5 °C to + 35 °C / CO 0 °C to + 40 °C / SO | 845 AB0 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Emergency lighting duration / A
1 = 1 h
3 = 3 h

Driver / B
0 = Standard
1 = DALI driver and DALI emergency lighting supply unit

PASSAU LED II – FOR LUMINAIRE WITH FOCUSED LIGHTING

Please order the luminaire separately. When ordering the luminaire, please add the note "PASSAU LED".

| Version | Luminous flux/lm Emergency mode | System- leistung/W | Ambient temperature | Article no. |
|---------|------------------------------------|-----------------------|---|------------------------|
| m600 | 745 | Luminaire plus 2 W | -5 °C to + 35 °C / CO 0 °C to + 40 °C / SO | 847 AB1 – m600 |
| m1200 | 1020 | Luminaire plus 2 W | -5 °C to + 35 °C / CO 0 °C to + 40 °C / SO | 847 ABC – m1200 |
| m1500 | 1055 | Luminaire plus 2 W | -5 °C to + 35 °C / CO 0 °C to + 40 °C / SO | 847 ABC – m1500 |

Continuous operation = CO
Standby operation = SO

When ordering, please replace the highlighted letters with the corresponding numbers.

Emergency lighting duration / A
1 = 1 h
3 = 3 h

Driver / B
0 = Standard
1 = DALI driver and DALI emergency lighting supply unit

Lumen package / C
7 = MC1 – MC7
9 = MC9

PASSAU LED III – FOR URANUS, URANUS PF

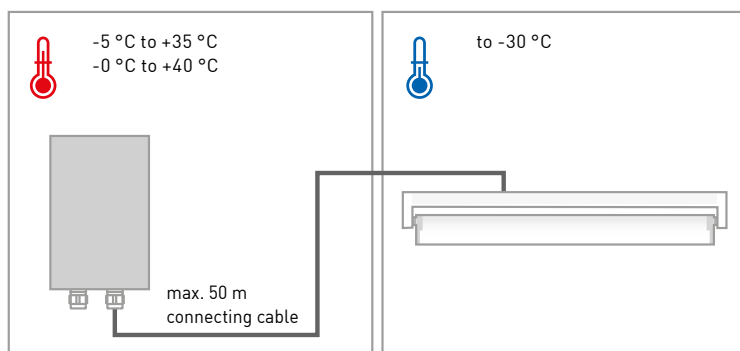
Please order the luminaire separately. When ordering the luminaire, please add the note "PASSAU LED".

| Version | Luminous flux/lm Emergency mode | System- leistung/W | Ambient temperature | Article no. |
|-----------------------|------------------------------------|-----------------------|---|----------------|
| for URANUS, URANUS PF | 720 | Luminaire plus 2 W | -5 °C to + 35 °C / CO 0 °C to + 40 °C / SO | 849 AB0 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Emergency lighting duration / A
1 = 1 h
3 = 3 h

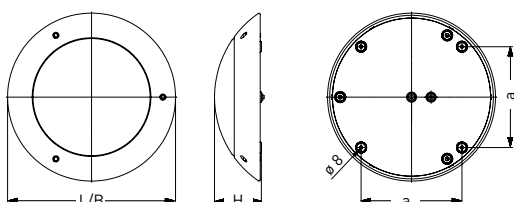
Driver / B
0 = Standard
1 = DALI driver and DALI emergency lighting supply unit




> The external use of the PASSAU LED permits an expanded useful temperature range.

PHALANX 430

LED



-  **XARA® lighting control**
[optional]
-  Further colour temperatures
[optional]

 medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|--------|--------|--------|--------|-------------|
| LED | 430 | 430 mm | 430 mm | 120 mm | 258 mm | 5.8 kg |

AREAS OF APPLICATION

Extremely impact-resistant surface mounted luminaire with LED lamps. Vandalism-proof up to 150 Joule while retaining full operation. Useable in all areas at risk of deliberate or negligent destruction.

HOUSING

Luminaire housing made of cast aluminium, powder-coated RAL 7016. Useable for indoor and outdoor areas according to protection rating IP65. Anti-graffiti coating for lamp diffuser protects against dirt and paint residue, optionally available (see options).

LIGHTING TECHNOLOGY

Convex, 4 mm thick lamp diffuser made of PC (fracture proof), opal white.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two rear-mounted cable entries M20. 4 kV transient filter.

L80 B10 > 100,000 h at +30 °C. Retains operation in case of vandalism.

8 years warranty.

MOUNTING

Single mounting. Ceiling or wall fixing with four concealed mounting apertures on the rear. Special caps optionally available (see options).

PHALANX 430

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|------------------|
| 430 <input type="checkbox"/> 840/4000 K | 1970 | 13 | -25 °C to +30 °C | 318 480 34 01 -F |
| 430 <input type="checkbox"/> 840/4000 K | 2500 | 15 | -25 °C to +30 °C | 318 480 34 02 -F |

PHALANX 430 OPTIONS

| Version | Article no. |
|---|----------------------|
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 318 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| Special nut, three holes (requires special tool) | 318 009 |
| Version for operating with PASSAU LED | Available on request |

PHALANX 430 ACCESSORIES

| Version | Article no. |
|--|-------------|
| Screwdriver bit for three hole screw/nut | 734 008 |



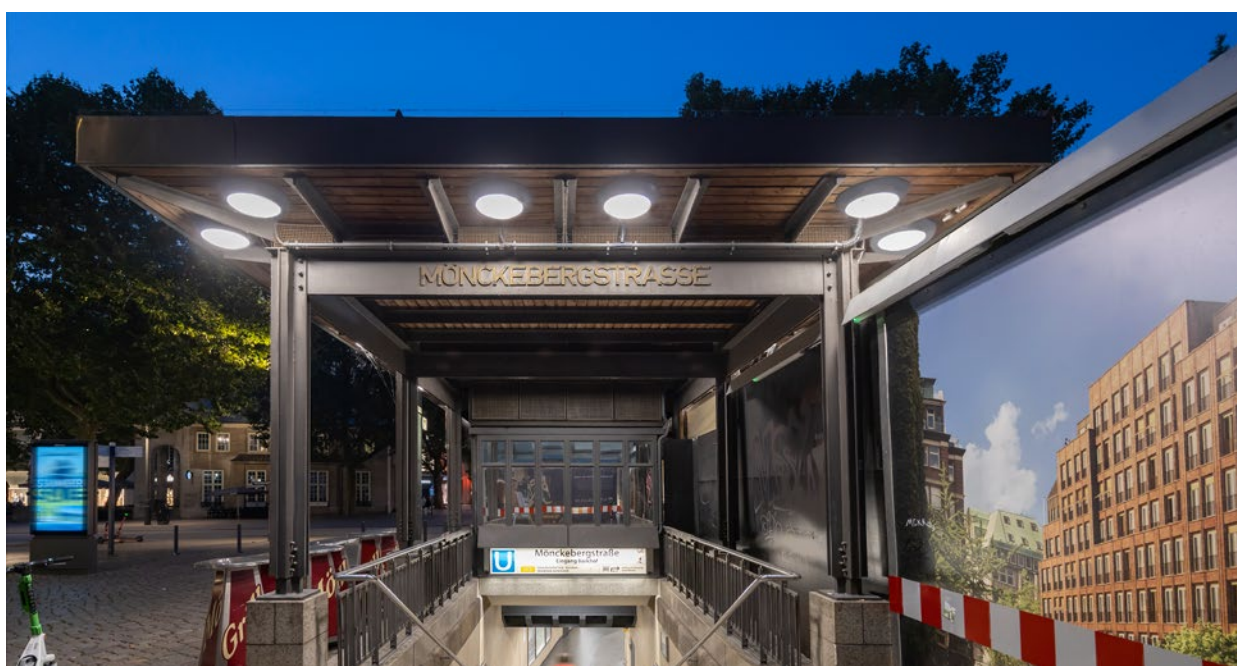
> Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating), Article no. 318 010



> Special nut, three holes Article no. 318 009

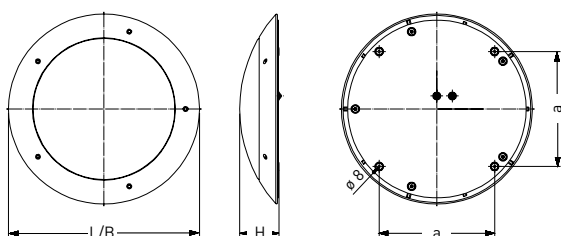


> Screwdriver bit for three hole screw/nut, Article no. 734 008




PHALANX 620

LED



-  **XARA® lighting control**
[optional]
-  Further colour temperatures
[optional]

 medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|--------|--------|--------|--------|-------------|
| LED | 620 | 620 mm | 620 mm | 128 mm | 375 mm | 11.5 kg |

AREAS OF APPLICATION

Extremely impact-resistant surface mounted luminaire with LED lamps. Vandalism-proof up to 150 Joule while retaining full operation. Useable in all areas at risk of deliberate or negligent destruction.

HOUSING

Luminaire housing made of cast aluminium, powder-coated RAL 7016. Useable for indoor and outdoor areas according to protection rating IP 65. Anti-graffiti coating for lamp diffuser protects against dirt and paint residue, optionally available [see options].

LIGHTING TECHNOLOGY

Convex, 4 mm thick lamp diffuser made of PC (fracture proof), opal white.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two rear-mounted cable entries M20. 4 kV transient filter.

L80 B10 > 100,000 h at +40 °. Retains operation in case of vandalism. 8 years warranty.

MOUNTING

Single mounting. Ceiling or wall fixing with four concealed mounting apertures on the rear. Special caps optionally available [see options].

PHALANX 620

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------|
| 620 <input type="checkbox"/> 840/4000 K | 3030 | 23 | -40 °C to +40 °C | 319 680 34 01 |
| 620 <input type="checkbox"/> 840/4000 K | 6900 | 54 | -40 °C to +40 °C | 319 680 34 02 |

PHALANX 620 OPTIONS

| Version | Article no. |
|---|----------------------|
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 318 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| Special nut, three holes (requires special tool) | 318 009 |
| Version for operating with PASSAU LED | Available on request |

PHALANX 620 ACCESSORIES

| Version | Article no. |
|--|-------------|
| Screwdriver bit for three hole screw/nut | 734 008 |



> Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating), Article no. 318 010



> Special nut, three holes
Article no. 318 009



> Screwdriver bit for three hole screw/nut,
Article no. 734 008

PHALANX LINEAR 75

LED

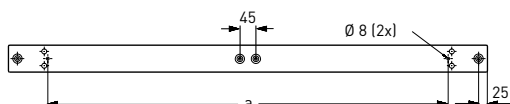


XARA® lighting control
(optional)



medium beam

K Further colour temperatures
(optional)



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|-------------|-------|-------|-------------|-------------|
| LED | m1200 | 1340 ± 2 mm | 75 mm | 75 mm | 1120 ± 2 mm | 5.3 kg |
| LED | m1500 | 1640 ± 2 mm | 75 mm | 75 mm | 1420 ± 2 mm | 6.5 kg |

AREAS OF APPLICATION

Extremely impact-resistant surface mounted ceiling luminaire with LED lamps. Vandalism-proof up to 150 joules. Useable in prisons, detention cells and all areas at risk of deliberate or negligent destruction.

HOUSING

Luminaire housing made of metal, powder-coated RAL 7016, protection rating IP 44. Anti-graffiti coating for lamp diffuser protects against dirt and paint residue, optionally available (see options).

LIGHTING TECHNOLOGY

Rectangular, 4 mm thick lamp diffuser made of PC (fracture proof) opal white or PC (fracture proof) clear structured.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver, 230 V AC/DC, optionally suitable for emergency lighting. LED unit exchangeable. Four rear-mounted cable entries M20 and 3 x 1.5 mm² through wiring. 4 kV transient filter.

L80 B10 > 100,000 h at +40 °C. Retains operation in case of vandalism. 8 years warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing with two concealed rear mounting apertures. Luminaire cover fixing with two stainless steel sealing screws with hexagon sockets. Special screws optionally available (see options).

PHALANX LINEAR 75

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 655 480 34 A1 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -40 °C to +40 °C | 655 680 34 A1 |

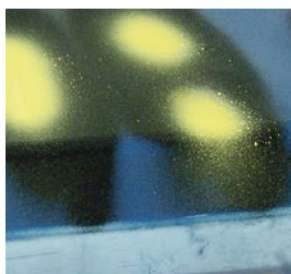
When ordering, please replace the highlighted letters with the corresponding numbers.

Luminaire cover / A

0 = PC (fracture proof) opal white
9 = PC (fracture proof) clear structured

PHALANX LINEAR 75 OPTIONS

| Version | Article no. |
|---|----------------------|
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 655 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Halogen-free version | 655 007 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| Special screw, oval (requires special tool) | 700 003 |
| Special screw, semi-circle (requires special tool) | 700 001 |
| Special screw, three hole (requires special tool) | 700 002 |
| Through wiring 5 × 1.5 mm ² | 655 832 |
| Through wiring 5 × 2.5 mm ² | 655 392 |
| Version for operating with PASSAU LED | Available on request |



> Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating),
Article no. 655 010



> Version with lamp diffuser, PC (fracture proof), clear structured



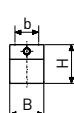
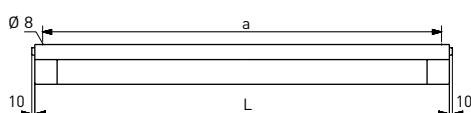
> Special three hole, semi-circle and oval screws,
Article no. 700 002 / 700 001 / 700 003



PHALANX LINEAR 75 ACCESSORIES



| Version | Article no. |
|--|-------------|
| Screwdriver bit for oval screw | 717 008 |
| Screwdriver bit for semi-circle screw | 734 007 |
| Screwdriver bit for three hole screw/nut | 734 008 |

PHALANX LINEAR 115

LED



-  **XARA® lighting control** (optional)
-  Further colour temperatures (optional)

-  medium beam
-  asymmetric beam

| Lamp | Version | L | B | H | a | b | Max. weight |
|------|---------|-------------|--------|--------|-------------|-----------|-------------|
| LED | m1200 | 1340 ± 2 mm | 115 mm | 130 mm | 1290 ± 2 mm | 80 ± 2 mm | 8.2 kg |
| LED | m1500 | 1640 ± 2 mm | 115 mm | 130 mm | 1590 ± 2 mm | 80 ± 2 mm | 10.5 kg |

AREAS OF APPLICATION

Extremely impact-resistant surface mounted ceiling luminaire with LED lamps. Vandalism-proof up to 150 joules. Useable in prisons, detention cells and all areas at risk of deliberate or negligent destruction.

HOUSING

Luminaire housing made of metal, powder-coated similar to RAL 7016, protection rating IP 44, with integrated polymer luminaire. Useable for indoor and outdoor areas according to protection rating IP 65. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. Anti-graffiti coating for lamp diffuser protects against dirt and paint residue, optionally available (see options). Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Rectangular, 4 mm thick lamp diffuser made of PC (fracture proof) opal white or PC (fracture proof) clear structured.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver, 230 V AC/DC, optionally suitable for emergency lighting. Luminaire housing with two face-side cable entries M20, recessed luminaire with two access covers. 4 x 1.5 mm² through wiring. 4 kV transient filter.

L80 B10 > 100,000 h at +40 °C. Retains operation in case of vandalism. 8 years warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing with four concealed mounting apertures on the rear. Luminaire cover fixing with two stainless steel sealing screws with hexagon sockets. Special screws optionally available (see options).

PHALANX LINEAR 115 – PC (FRACTURE PROOF) OPAL WHITE, MEDIUM BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 743 480 A4 92 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -40 °C to +40 °C | 743 680 A4 92 |

PHALANX LINEAR 115 – PC (FRACTURE PROOF) CLEAR STRUCTURED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 743 480 A4 92 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -40 °C to +40 °C | 743 680 A4 92 |

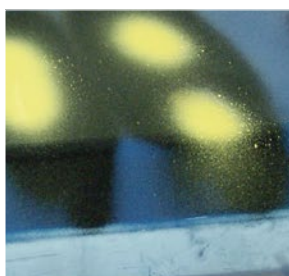
When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam

PHALANX LINEAR 115 OPTIONS

| Version | Article no. |
|---|----------------------|
| Closed on face side with two rear mounted cable entries | Available on request |
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 743 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Halogen-free version | 743 007 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated motion sensor XARA® | Available on request |
| Special screw, oval (requires special tool) | 700 003 |
| Special screw, semi-circle (requires special tool) | 700 001 |
| Special screw, three hole (requires special tool) | 700 002 |
| Through wiring 4 × 2.5 mm ² | 743 822 |
| Through wiring 5 × 1.5 mm ² | 743 832 |
| Through wiring 5 × 2.5 mm ² | 743 392 |
| Version for operating with PASSAU LED | Available on request |
| Version MARBURG LED (stainless steel housing) | 743 100 |



> Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating), Article no. 743 010



> Version with luminaire cover in PC (fracture proof) clear structured and option MARBURG LED (stainless steel housing)



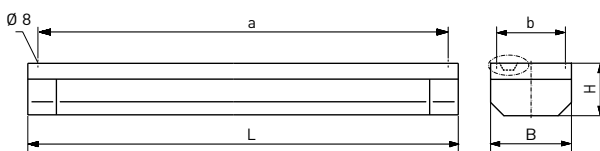
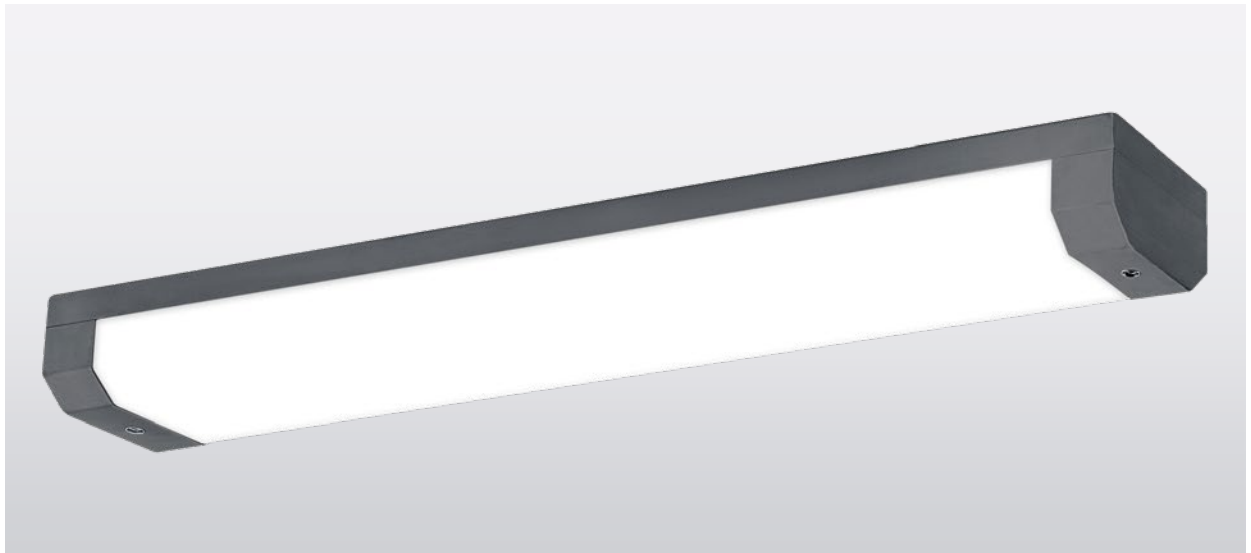
> Special three hole, semi-circle and oval screws, Article no. 700 002 / 700 001 / 700 003



PHALANX LINEAR 115 ACCESSORIES



| Version | Article no. |
|--|-------------|
| Screwdriver bit for oval screw | 717 008 |
| Screwdriver bit for semi-circle screw | 734 007 |
| Screwdriver bit for three hole screw/nut | 734 008 |

PHALANX LINEAR 200

LED



-  **XARA® lighting control** (optional)
-  Further colour temperatures (optional)

-  medium beam
-  asymmetric beam

| Lamp | Version | L | B | H | a | b | Max. weight |
|------|---------|-------------|------------|--------|-------------|--------|-------------|
| LED | m1200 | 1340 ± 2 mm | 200 ± 2 mm | 130 mm | 1290 ± 2 mm | 170 mm | 15.3 kg |
| LED | m1500 | 1640 ± 2 mm | 200 ± 2 mm | 130 mm | 1590 ± 2 mm | 170 mm | 18.3 kg |

AREAS OF APPLICATION

Extremely impact-resistant surface mounted ceiling luminaire with LED lamps. Vandalism-proof up to 150 joules. Useable in all areas at risk of deliberate or negligent destruction.

HOUSING

Luminaire housing made of metal, powder coated similar to RAL 7016, protection rating IP 44, with integrated polymer luminaire. Useable for indoor and outdoor areas according to protection rating IP 65. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. With concealed cable channel on the rear. Anti-graffiti coating for lamp diffuser protects against dirt and paint residue, optionally available (see options). Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Rectangular, 4 mm thick lamp diffuser made of PC (fracture proof) opal white or PC (fracture proof) clear structured.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Luminaire housing with two rear-side cable entries M20, recessed luminaire with two access covers. 4 x 1.5 mm² through wiring. 4 kV transient filter.

L80 B10 > 100,000 h at +40 °C. Retains operation in case of vandalism. 8 years warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing with four concealed mounting apertures on the rear. Concealed cable duct on rear with 2 x M20 for flush mounting. Luminaire cover fixing with two stainless steel sealing screws with hexagon sockets. Special screws optionally available (see options).

PHALANX LINEAR 200 – PC (FRACTURE PROOF) OPAL WHITE, MEDIUM BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------|
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 733 480 34 02 |
| m1200 <input type="checkbox"/> 840/4000 K | 10660 | 76 | -40 °C to +40 °C | 736 480 34 02 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -40 °C to +40 °C | 733 680 34 02 |
| m1500 <input type="checkbox"/> 840/4000 K | 13320 | 94 | -40 °C to +40 °C | 736 680 34 02 |

PHALANX LINEAR 200 – PC (FRACTURE PROOF) CLEAR STRUCTURED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 733 480 A4 92 |
| m1200 <input type="checkbox"/> 840/4000 K | 10660 | 76 | -40 °C to +40 °C | 736 480 A4 92 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -40 °C to +40 °C | 733 680 A4 92 |
| m1500 <input type="checkbox"/> 840/4000 K | 13320 | 94 | -40 °C to +40 °C | 736 680 A4 92 |

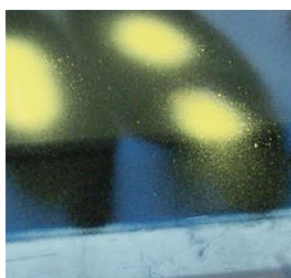
When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam

PHALANX LINEAR 200 OPTIONS

| Version | Article no. |
|---|----------------------|
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 733 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Halogen-free version | 733 007 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated motion sensor XARA® | Available on request |
| Special screw, oval (requires special tool) | 700 003 |
| Special screw, semi-circle (requires special tool) | 700 001 |
| Special screw, three hole (requires special tool) | 700 002 |
| Through wiring 4 × 2.5 mm ² | 733 822 |
| Through wiring 5 × 1.5 mm ² | 733 832 |
| Through wiring 5 × 2.5 mm ² | 733 392 |
| Version for operating with PASSAU LED | Available on request |
| Version KREUZBERG LED (stainless steel housing) | 733 100 |



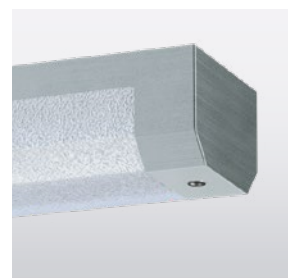
> Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating), Article no. 733 010



> Special three hole, semi-circle and oval screws, Article no. 700 002 / 700 001 / 700 003



> Concealed rearward cable channel



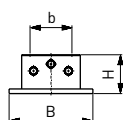
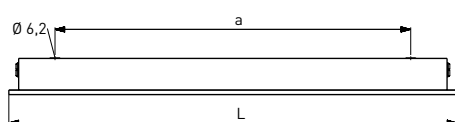
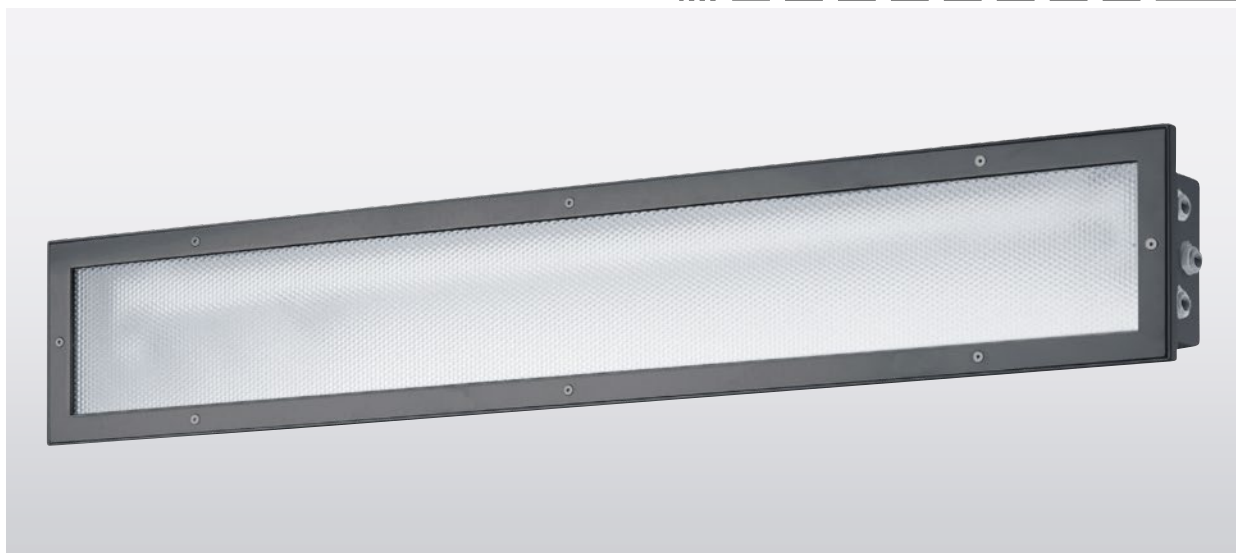
> Version with luminaire cover in PC (fracture proof) clear structured and option KREUZBERG LED (stainless steel housing)

PHALANX LINEAR 200 ACCESSORIES

| Version | Article no. |
|--|-------------|
| Screwdriver bit for oval screw | 717 008 |
| Screwdriver bit for semi-circle screw | 734 007 |
| Screwdriver bit for three hole screw/nut | 734 008 |

PHALANX LINEAR 240

LED



K Further colour temperatures (optional)



medium beam



asymmetric beam

| Lamp | Version | L | B | H | a | b | Max. weight |
|------|---------|-------------|--------|--------|---------|--------|-------------|
| LED | m1200 | 1360 ± 2 mm | 240 mm | 112 mm | 1065 mm | 120 mm | 7.9 kg |
| LED | m1500 | 1660 ± 2 mm | 240 mm | 112 mm | 1365 mm | 120 mm | 10.0 kg |

AREAS OF APPLICATION

Extremely impact-resistant luminaire for wall and ceiling surface mounting with LED lamps. Vandalism-proof up to 150 joules. Useable in all areas at risk of deliberate or negligent destruction.

HOUSING

Metal installation housing, powder coated inside and outside, RAL 7016. With integrated polymer luminaire. Useable for indoor and outdoor areas according to protection rating IP 65. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. Anti-graffiti coating for lamp diffuser protects against dirt and paint residue, optionally available (see options). Short sealing system consisting of age-resistant, form retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Flat, 3 mm thick cover screen made of PC (fracture proof), clear/structured or PC (fracture proof) opal white.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Luminaire housing with six face-side cable entries M20, recessed luminaire with two access covers. 4 x 1.5 mm² through wiring. 4 kV transient filter.

L80 B10 > 100,000 h at +40 °C. Retains functionality in case of vandalism. 8 years warranty.

MOUNTING

Single or row mounting. Fixing with four rear bores, flush on the rear recess wall. Fixing of the luminaire cover with stainless steel sealing screws with hexagon sockets. Special screws optionally available (see options).

PHALANX LINEAR 240 – COVER SCREEN PC (FRACTURE PROOF) OPAL WHITE, MEDIUM BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------|
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 729 480 34 02 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -40 °C to +40 °C | 729 680 34 02 |

PHALANX LINEAR 240 – COVER SCREEN PC (FRACTURE PROOF) CLEAR STRUCTURED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 5330 | 38 | -40 °C to +40 °C | 729 480 A4 92 |
| m1500 <input type="checkbox"/> 840/4000 K | 6660 | 47 | -40 °C to +40 °C | 729 680 A4 92 |

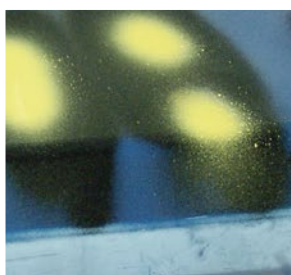
When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

3 = medium beam
6 = asymmetric beam

PHALANX LINEAR 240 OPTIONS

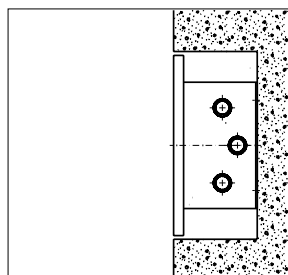
| Version | Article no. |
|---|----------------------|
| Coating to RAL | Available on request |
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 729 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Halogen-free version | 729 007 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Special screw, two-hole (requires special tool) | 700 004 |
| Through wiring 4 × 2.5 mm ² | 729 822 |
| Through wiring 5 × 1.5 mm ² | 729 832 |
| Through wiring 5 × 2.5 mm ² | 729 392 |
| Version for operating with PASSAU LED | Available on request |
| Version LUTTEROTH LED (stainless steel housing, powder-coated RAL 9010) | 729 100 |



> Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating), Article no. 729 010



> Special two-hole screw, Article no. 700 004



> Concrete recess dimensions: Luminaire dimensions + 10 mm



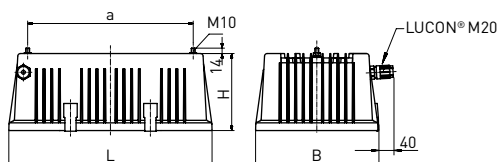
> Version with cover screen PC (fracture proof) opal white

PHALANX LINEAR 240 ACCESSORIES

| Version | Article no. |
|------------------------------------|-------------|
| Screwdriver bit for two-hole screw | 734 009 |



POLARIS with fixing bolts



Further dimensioned drawings available on our website

- narrow beam
CDP prism screen
- medium beam
PMMA Transopal®
(impact strengthened)
- asymmetric beam
- concentrated beam

| Lamp | Version | L | B | H | a | Max. weight |
|-----------|---------------------------------|--------|--------|--------|--------|-------------|
| LED array | with fixing bolts | 528 mm | 318 mm | 200 mm | 430 mm | 11.0 kg |
| LED Array | with swivel bracket, crosswise | 589 mm | 358 mm | 340 mm | 430 mm | 13.0 kg |
| LED Array | with swivel bracket, lengthwise | 568 mm | 380 mm | 445 mm | 200 mm | 13.0 kg |
| LED Array | prepared for suspension system | 528 mm | 318 mm | 260 mm | 430 mm | 11.0 kg |

AREAS OF APPLICATION

Floodlights with LED array. Useable in cold storage, warehouses, dispatch and outdoor facilities and industrial cranes, as well as, optionally, environments containing chlorine, such as swimming pools. **POLARIS HT version up to +65 °C.**

HOUSING

Robust luminaire housing, made of cast aluminium with coated surface, colour similar to RAL 9006. Useable for indoor and outdoor areas according to protection rating IP 65. Sealing system made of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Hinged, frameless cover screen made of PC (fracture proof) clear or safety glass cover screen (single pane) clear. Internal aluminium reflector (MIRO-SILVER®) with adapter for a CDP prism screen for circular deglare.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Supply voltage 220-240 V AC/DC. Two types are available:

Standard version

Built-in DALI-driver. Ready for connection via LUCON® luminaire connection system.

Version HT

Built-in DALI-driver. Ready for connection via LUCON® luminaire connection system. Maximum ambient temperature up to +65 °C.

MOUNTING

Ceiling installation with two fixing bolts M10 or stainless steel swivel bracket. Pole-mount adapter for swivel bracket (lengthwise or crosswise) or ceiling plate for short ceiling mounting distances optionally available (see accessories). Lengthwise pole attachment also available. Suspension system possible. Optional anti-vibration damper (not chlorine-resistant, only suspended installation) for cranes.

POLARIS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|------------------|----------------|---------------------|---------------------------|
| 248 | 24100 | 142 | -35 °C bis +55 °C | 988 248 AB CD - H1 |
| 310 | 31000 | 184 | -35 °C bis +45 °C | 988 310 AB CD - H1 |
| 186 HT | 19000 | 114 | -35 °C bis +65 °C | 988 187 AB CD - H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

- 2 = narrow beam (with additional CDP prism screen)
- 3 = medium beam (with additional screen PMMA tranopal®)
- 6 = asymmetric beam
- 8 = concentrated beam

Colour temperature / B

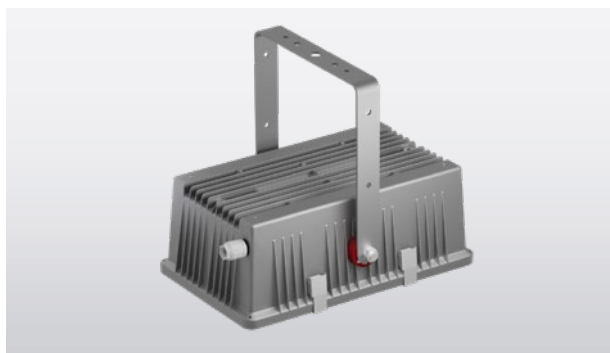
- 3 = 830/3000 K
- 4 = 840/4000 K
- 5 = 850/5000 K

Cover screen / C

- 4 = PC (fracture proof) clear
- 6 = Single pane safety glass clear

Installation type / C

- 1 = Ceiling mounting with 2 x M10 bolts
- 2 = Swivel bracket, attached lengthwise
- 3 = Swivel bracket, attached crosswise
- 4 = Swivel bracket, anti vibration damper, attached lengthwise
- 5 = Swivel bracket, anti vibration damper, attached crosswise
- 6 = Prepared for suspension system

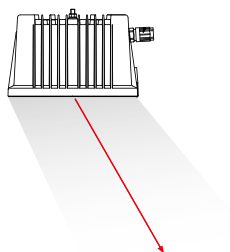


> Version POLARIS with swivel bracket, attached lengthwise

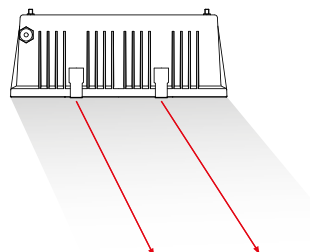


> Version POLARIS with swivel bracket, attached crosswise

POLARIS – OVERVIEW VERSIONS WITH ASYMMETRIC BEAM



> POLARIS with asymmetric beam: The main alignment of the LIDC is done along the long side of the floodlight.



> POLARIS with asymmetric beam with option "Version asymmetric beam over short side": The LIDC is primarily aligned via the short side of the floodlight. This option is only available for models 186 HT and 248.

For additional articles, please turn the page! ►

POLARIS OPTIONS

| Version | Article no. |
|--|----------------------|
| Ball impact resistant version via locking swivel bracket | 982 007 |
| Ceiling bracket for ball impact resistant version (pair) | 982 110 |
| Halogen-free version | 988 032 |
| Polymer cable gland with strain relief, M20 | 988 936 |
| RAL finish | 988 960 |
| Swimming pool version prepared for suspension system | 988 036 |
| Swimming pool version with swivel bracket, crosswise | 982 108 |
| Version for harsh operating conditions (only in combination with vibration-proof version) | 982 193 |
| Version for operating with PASSAU LED | Available on request |
| Version with asymmetric beam over short side for version 186 HT or 248 | 982 116 |
| Vibration-proof version with anti-vibration damper (swivel bracket for crane fixing, not chlorine resistant) | 982 189 |

POLARIS ACCESSORIES

| Version | Article no. |
|--|-------------|
| Ceiling bracket for short ceiling distance (pair) | 982 109 |
| Pole extension, can be swivelled and locked from 8° to 53°, for pole-top diameter of 76 mm | 982 128 |
| Pole-mount adapter for swivel bracket for a pole-top diameter of 70 to 89 mm | 982 125 |
| Pole-mount adapter for swivel bracket for a pole-top diameter of 96 to 110 mm | 982 126 |
| Wearing screen with frame | 982 103 |

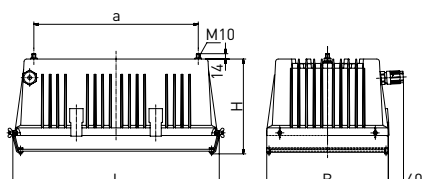


POLARIS ACCESSORIES



> POLARIS with pole-mount adapter

Can be swivelled and locked 8° to 53°, for pole top diameter 76 mm
Pole-mount adapter, article no. 982 128

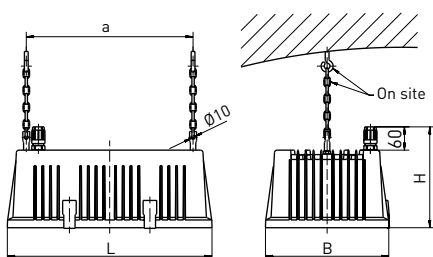


> POLARIS with wearing screen

Wearing screen, article no. 982 103

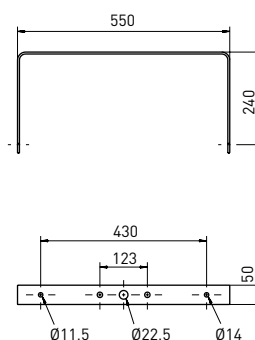
> Pole-mount adapter for swivel bracket

For pole top diameter
70 - 89 mm – article no. 982 125
96 - 110 mm – article no. 982 126



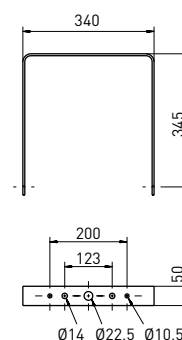
> POLARIS for suspension system

Suspension system and ceiling installation
have to be provided on site



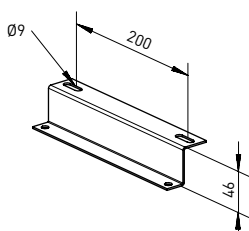
> Swivel bracket

Fixed crosswise
Dimensions in mm ± 2 mm



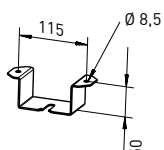
> Swivel bracket

Fixed lengthwise
Dimensions in mm ± 2 mm



> Ceiling bracket for ball impact resistant version

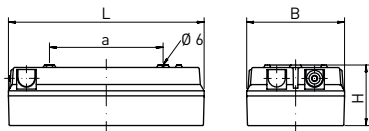
(see options)
(pair), article no. 982 110



> Ceiling bracket for short ceiling distance

(pair), article no. 982 109

| Lamp | Version | L | B | H | a | Max. weight |
|-----------|-----------------------|--------|--------|--------|--------|-------------|
| LED Array | with pole attachment | 571 mm | 318 mm | 200 mm | - | 14.0 kg |
| LED Array | with wearing screen | 540 mm | 318 mm | 248 mm | 430 mm | 14.0 kg |
| LED array | for suspension system | 528 mm | 318 mm | 260 mm | 430 mm | 11.0 kg |



Picture 1



Picture 2



Picture 3

| Lamp | Version | L | B | H | a | Max. weight |
|------|------------------------|--------|--------|-------|--------|-------------|
| LED | Escape route luminaire | 310 mm | 155 mm | 96 mm | 180 mm | 1.1 kg |

AREAS OF APPLICATION

Single-battery escape route luminaire with LED lamps. Viewing distance 28 m.

HOUSING

Weather-proof and UV-resistant luminaire housing made of polymer, anthracite. Useable for indoor and outdoor areas according to protection rating IP 65. Sealing system made of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Hinged lamp diffuser made of PC (fracture proof) opal or with pictogram according to EN ISO 7010 for safety luminaires.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. One M20 lateral cable entry. Emergency operation through integrated emergency lighting unit, including automatic self-test, charging, indicator, mains monitoring and protection against total discharge. Emergency lighting duration 1 h or 3 h.

MOUNTING

Single mounting. Wall fixing through two sealed openings in the luminaire base.

SCHÖNEFELD – PC (FRACTURE PROOF) OPAL WHITE, SINGLE-BATTERY ESCAPE ROUTE LUMINAIRE

| Version | Emergency lighting duration/h | System power/W | Ambient temperature | Article no. |
|--|-------------------------------|----------------|---|-------------|
| No picture <input type="checkbox"/> 840/4000 K | 1 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 610-F |
| Picture 1 <input type="checkbox"/> 840/4000 K | 1 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 611-F |
| Picture 2 <input type="checkbox"/> 840/4000 K | 1 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 612-F |
| Picture 3 <input type="checkbox"/> 840/4000 K | 1 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 613-F |
| No picture <input type="checkbox"/> 840/4000 K | 3 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 620-F |
| Picture 1 <input type="checkbox"/> 840/4000 K | 3 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 621-F |
| Picture 2 <input type="checkbox"/> 840/4000 K | 3 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 622-F |
| Picture 3 <input type="checkbox"/> 840/4000 K | 3 | 6 | -5 °C bis +30 °C / CO 0 °C bis +35 °C / SO | 421 623-F |

Continuous operation = CO
Standby operation = SO

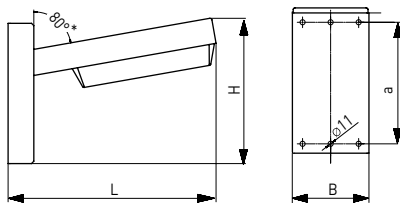
SCHÖNEFELD OPTIONS

| Version | Article no. |
|-------------------------|----------------------|
| DALI central monitoring | Available on request |



SPANDAU LED

LED



The angle of rotation is already taken into account in the LDC.



extreme wide beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------------|--------|--------|--------|--------|-------------|
| LED | Wall mounting | 445 mm | 164 mm | 311 mm | 260 mm | 4.1 kg |

AREAS OF APPLICATION

Luminaire for wall mounting with LED. Usable for tunnel and aisle lighting as well as underpass lighting. Tested and certified for 350 km/h transit speed, luminaire mounting distance up to 17 m.

HOUSING

Weather and UV-resistant polymere luminaire housing, anthracite, with stainless steel wall bracket. Can be used indoors and outdoors according to protection class IP 65 and IP 66. Sealing system consisting of age-resistant, form-stable silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Lamp cover made of PC Tropol® (fracture proof), Batwing light distribution optimized for large distances in tunnels, extremely wide beam.

ELECTRICAL CONSTRUCTION

Luminaire ready for installation and connection. A separate SELV operating device is required to operate this luminaire, which is connected to the 230 V AC/DC mains, suitable for emergency lighting. One M20 cable entry.

MOUNTING

Wall mounting with stainless steel wall bracket.

SPANDAU LED

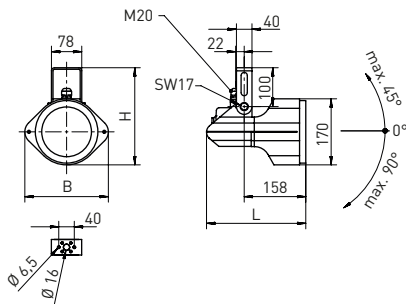
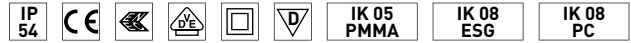
| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|-------------------------|-----------------------|----------------------------|--------------------|
| Wall mounting <input type="checkbox"/> 840/4000 K | 1500 | 9 | -25 °C bis +30 °C | 741 212 548 -F |

SPANDAU LED OPTION




| Version | Article no. |
|---|--------------------|
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |

SPICA LED

LED



K Further colour temperatures (optional)

-  narrow beam
-  concentrated beam
CDP prism screen
-  medium beam
PC (fracture proof)
opal white

| Lamp | Version | L | B | H | Max. weight |
|------|------------|--------|--------|--------|-------------|
| LED | Floodlight | 256 mm | 215 mm | 250 mm | 1.4 kg |

AREAS OF APPLICATION

Polymer floodlight for ceiling and wall-surface mounting with LED. Useable in industrial facilities, under canopies and for facade illumination.

HOUSING

Luminaire housing made from weather-proof thermoplastic PPO, similar to RAL 9005. Aluminium swivel bracket, coated. Useable for indoor and outdoor areas according to protection rating IP54. Additional cover frame and cover screen for preventing water accumulation during uplighting optionally available (see accessories). Short sealing system comprised of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Cover screen made from single-pane safety glass or PMMA CDP prism screen or PC (fracture proof) opal white with internal aluminium reflector.

ELECTRICAL CONSTRUCTION

Luminaire ready for installation and connection via plug-in terminal. Built-in driver, supply voltage 220-240 V AC/DC. 2 kV transient filter. One cable entry M20.

MOUNTING

Ceiling or wall fixation via swivel bracket.

SPICA LED – SAFETY GLASS COVER SCREEN CLEAR, NARROW BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|-------------------------|------------------|----------------|---------------------|---------------|
| Floodlight □ 840/4000 K | 3400 | 22 | -25 °C bis +40 °C | 983 100 24 61 |

SPICA LED – PMMA CDP PRISM SCREEN, CONCENTRATED BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|-------------------------|------------------|----------------|---------------------|---------------|
| Floodlight □ 840/4000 K | 3400 | 22 | -25 °C bis +40 °C | 983 100 84 11 |

SPICA LED – PC (FRACTURE PROOF) OPAL WHITE, MEDIUM BEAM

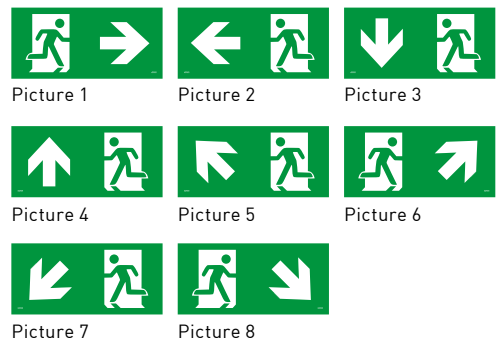
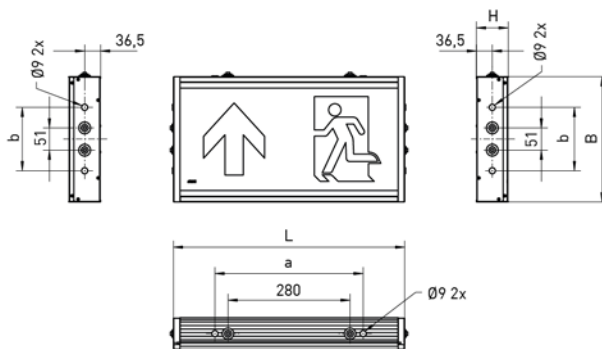
| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|-------------------------|------------------|----------------|---------------------|---------------|
| Floodlight □ 840/4000 K | 4240 | 27 | -25 °C bis +25 °C | 983 100 34 01 |

SPICA LED OPTIONS

| Version | Article no. |
|--|----------------------|
| DALI | 100 502 |
| Further colour temperatures 3000 K or 5000 K | Available on request |
| RAL finish | 983 960 |
| Swimming pool version | 983 970 |

SPICA LED ACCESSORIES

| Version | Article no. |
|--------------------------------------|-------------|
| Cover frame for ceiling illumination | 981 929 |



| Lamp | Version | L | B | H | a | b | Max. weight |
|------|------------------------|------------|--------|-------|--------|--------|-------------|
| LED | Escape route luminaire | 530 ± 2 mm | 285 mm | 73 mm | 340 mm | 145 mm | 4.6 kg |

AREAS OF APPLICATION

Centrally powered escape route luminaires with LED lamps. Suitable for use in emergency lighting mode according to EN 50172 (VDE0108). Useable in industrial applications. Viewing distance 48 m.

HOUSING

Luminaire housing made of anodised aluminium profile, similar to RAL 9006. Useable for indoor and outdoor areas according to protection rating IP 65. Short sealing system consisting of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Hinged lamp diffuser made of PC opal white with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Mains operation using LED driver 230 V AC/DC. Ready for connection with lateral M20 cable entries. 2 kV transient filter.

MOUNTING

Single mounting. Ceiling or wall mounting with sealed mounting apertures.

STEGLITZ

| Version | | System power/W | Ambient temperature | Article no. |
|------------|-------------------------------------|----------------|---------------------|-----------------------------|
| No picture | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-0 A |
| Picture 1 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-1 A |
| Picture 2 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-2 A |
| Picture 3 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-3 A |
| Picture 4 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-4 A |
| Picture 5 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-5 A |
| Picture 6 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-6 A |
| Picture 7 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-7 A |
| Picture 8 | <input type="checkbox"/> 840/4000 K | 9 | -25 °C bis +30 °C | 617 290 34 01 -F-8 A |

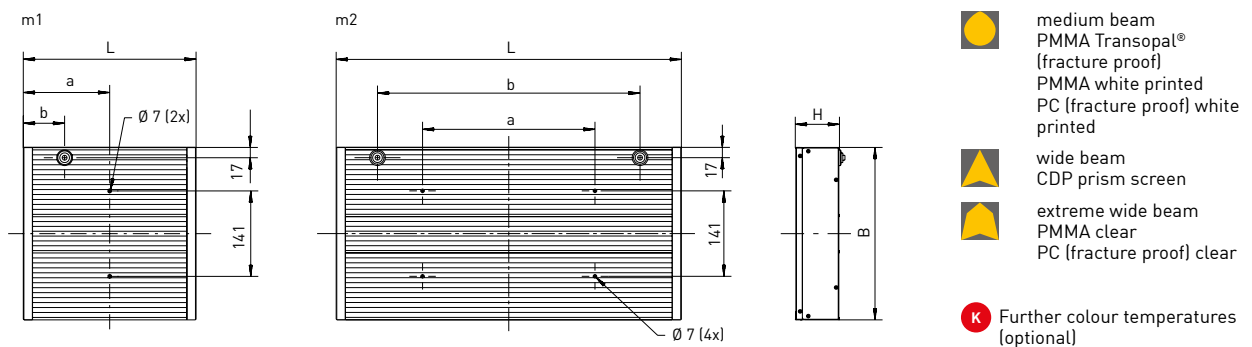
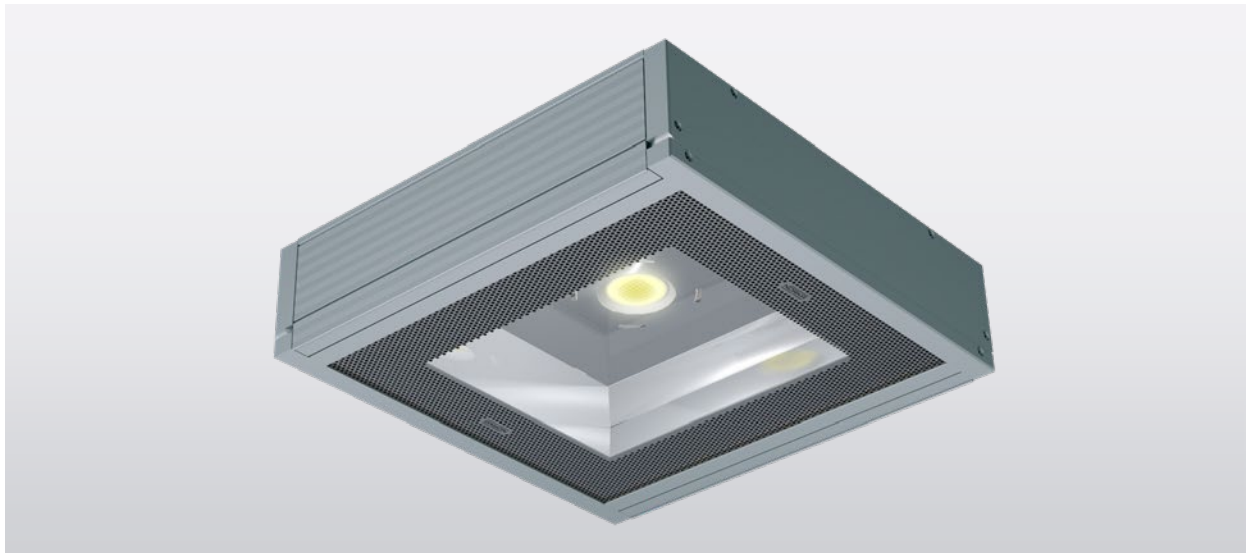
When ordering, please replace the highlighted letters with the corresponding numbers.

Connection point / A

- 1 = left
- 2 = right
- 3 = top

STEGLITZ OPTIONS

| Version | Article no. |
|--------------------|----------------------|
| Central monitoring | Available on request |



| Lamp | Version | L | B | H | a | b | Max. weight |
|-----------|---------|--------|--------|-------|----------|--------|-------------|
| LED Array | m1 | 285 mm | 285 mm | 73 mm | 142.5 mm | 68 mm | 5.0 kg |
| LED Array | m2 | 570 mm | 285 mm | 73 mm | 285 mm | 434 mm | 8.8 kg |

AREAS OF APPLICATION

Aluminium luminaire for recessed and surface ceiling mounting with LED array, single or twin lamp. Useable in underground and suburban railway stations, pedestrian underpasses and tunnels, passages, swimming pools (see options), transport areas, under canopies and façades.

HOUSING

Silver anodised aluminium profile housing. Hinged cover screen. Useable for indoor and outdoor areas according to protection rating IP 65. Protection class II.

LIGHTING TECHNOLOGY

Clear cover screen made of PMMA or PC (fracture proof) with printed image, or white printed cover screen made of PMMA or PC (fracture proof), or PMMA Transopal® (impact strengthened) without printed image. Internal aluminium reflector, extreme wide beam. Version with integrated prism screen for rotation-symmetric glare reduction (circular deglare), wide beam.

ELECTRICAL CONSTRUCTION

Built-in driver 230 V AC/DC supply voltage. Ready for connection via one rear-mounted cable entry. 2 kV transient filter.

MOUNTING

Single mounting. Optional continuous row version or on NORKA trunking system 285. Ceiling installation via rear 2/4-point fixing system.

TALON – ONE LED ARRAY

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m1 ■ 830/3000 K | 2260 | 15 | -35 °C bis +45 °C | 685 127 03 A9 – H1 |
| m1 ■ 830/3000 K | 4770 | 29 | -35 °C bis +40 °C | 685 142 03 A9 – H1 |
| m1 □ 840/4000 K | 2260 | 15 | -35 °C bis +45 °C | 685 127 04 A9 – H1 |
| m1 □ 840/4000 K | 4770 | 29 | -35 °C bis +40 °C | 685 142 04 A9 – H1 |
| m1 ■ 850/5000 K | 2260 | 15 | -35 °C bis +45 °C | 685 123 05 A9 – H1 |
| m1 ■ 850/5000 K | 4770 | 29 | -35 °C bis +40 °C | 685 142 05 A9 – H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

extreme wide beam:**Cover screen / A**

- 1 = PMMA clear
- 4 = PC (fracture proof) clear

medium beam:**Cover screen / A**

- 2 = PMMA Transopal® (impact strengthened)
- 3 = PMMA white printed
- 5 = PC (fracture proof) white printed

TALON – ONE LED ARRAY AND CDP PRISM SCREEN, WIDE BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m1 ■ 830/3000 K | 2260 | 15 | -35 °C bis +45 °C | 685 127 83 A9 – H1 |
| m1 ■ 830/3000 K | 4770 | 29 | -35 °C bis +40 °C | 685 142 83 A9 – H1 |
| m1 □ 840/4000 K | 2260 | 15 | -35 °C bis +45 °C | 685 127 84 A9 – H1 |
| m1 □ 840/4000 K | 4770 | 29 | -35 °C bis +40 °C | 685 142 84 A9 – H1 |
| m1 ■ 850/5000 K | 2260 | 15 | -35 °C bis +45 °C | 685 123 85 A9 – H1 |
| m1 ■ 850/5000 K | 4770 | 29 | -35 °C bis +40 °C | 685 142 85 A9 – H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Cover screen / A

- 1 = PMMA clear
- 4 = PC (fracture proof) clear

TALON – TWO LED ARRAYS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|---------------------------|
| m2 ■ 830/3000 K | 9540 | 55 | -35 °C bis +35 °C | 685 242 03 A9 – H1 |
| m2 □ 840/4000 K | 9540 | 55 | -35 °C bis +35 °C | 685 242 04 A9 – H1 |
| m2 ■ 850/5000 K | 9540 | 55 | -35 °C bis +35 °C | 685 242 05 A9 – H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

extreme wide beam:**Cover screen / A**

- 1 = PMMA clear
- 4 = PC (fracture proof) clear

medium beam:**Cover screen / A**

- 2 = PMMA Transopal® (impact strengthened)
- 3 = PMMA white printed
- 5 = PC (fracture proof) white printed

For additional articles, please turn the page! ►

TALON – TWO LED ARRAYS AND CDP PRISM SCREEN, WIDE BEAM

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|--------------------------|
| m2 ■ 830/3000 K | 9540 | 55 | -35 °C bis +35 °C | 685 242 83 A9 -H1 |
| m2 □ 840/4000 K | 9540 | 55 | -35 °C bis +35 °C | 685 242 84 A9 -H1 |
| m2 ■ 850/5000 K | 9540 | 55 | -35 °C bis +35 °C | 685 242 85 A9 -H1 |

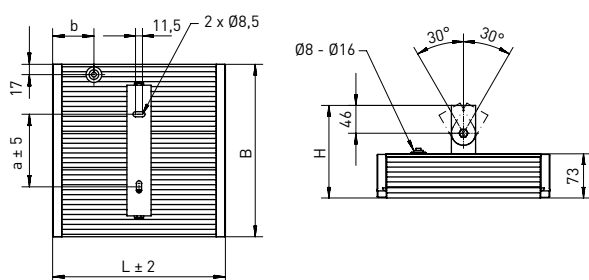
When ordering, please replace the highlighted letters with the corresponding numbers.

Cover screen / A

1 = PMMA clear
4 = PC (fracture proof) clear

TALON OPTIONS

| Version | Article no. |
|---|----------------------|
| Ball impact resistant version | 100 901 |
| DALI | 100 502 |
| Further colour temperatures | Available on request |
| Protection against unauthorised opening | 610 003 |
| Swimming pool version | 685 036 |
| Swivel bracket for module size m1 | 685 107 |
| Version for NORKA trunking system 285 | 685 037 |
| Version with two pairs of cable entries on the face side (continuous row version) | 201 442 |

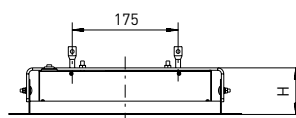
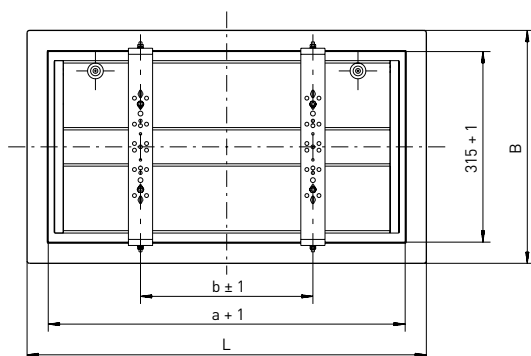


> Swivel bracket for module size m1,
Article no. 685 107

| Version | L ± 2 | B | H | a ± 5 | b ± 2 | Max. weight |
|---|--------|--------|--------|--------|-------|-------------|
| TALON with swivel bracket, module size m1 | 285 mm | 285 mm | 153 mm | 120 mm | 68 mm | 5.9 kg |

TALON ACCESSORIES

| Version | Article no. |
|---|-------------|
| Recessed ceiling mounting frame, powder coated RAL 9010, module size m1 | 685 610 |
| Recessed ceiling mounting frame, powder coated RAL 9010, module size m2 | 685 620 |

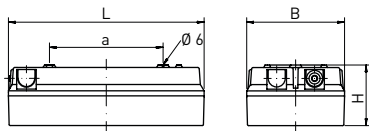


> Dimensional drawing of ceiling installation frame for single mounting

| Version | Required ceiling cut-out | L | B | H | a | b | Max. weight |
|---------|--------------------------|--------|--------|-------|--------|--------|-------------|
| m1 | 325 x 356 mm | 375 mm | 385 mm | 77 mm | 305 mm | 215 mm | 1.5 kg |
| m2 | 610 x 356 mm | 660 mm | 385 mm | 77 mm | 590 mm | 285 mm | 2.2 kg |



Bludenz
Schrus
Vandans
Tschagguns
Bartholomäberg
Kaltbrunn
Vandans
St. Anton im Montafon
Bartholomäberg
Lorüns
Bludenz-Moos
Vandans
Bludenz
Bartholomäberg
Schrus



Picture 1

Picture 2

Picture 3

| Lamp | Version | L | B | H | a | Max. weight |
|------|------------------------|--------|--------|-------|--------|-------------|
| LED | Escape route luminaire | 310 mm | 155 mm | 96 mm | 180 mm | 1.1 kg |

AREAS OF APPLICATION

Escape route luminaire with LED lamps. Viewing distance 28 m.

HOUSING

Weather-proof and UV-resistant luminaire housing made of polymer, anthracite. Useable for indoor and outdoor areas according to protection rating IP 65. Sealing system made of age-resistant, form-retaining silicone/synthetic rubber.

LIGHTING TECHNOLOGY

Hinged lamp diffuser made of PC (fracture proof) opal or with pictogram according to EN ISO 7010 for safety luminaires.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation with one lateral cable gland M20.

There are two types of luminaire:

Version centrally powered

TEGEL as centrally powered escape route luminaire with built-in driver 230 V AC/DC.

Version for PASSAU LED I

TEGEL without driver for operation on PASSAU LED I. The emergency lighting supply unit PASSAU LED I must be ordered separately.

MOUNTING

Single mounting. Wall fixing through two openings in the luminaire base.

TEGEL – PC (FRACTURE PROOF) OPAL WHITE, AS CENTRALLY POWERED ESCAPE ROUTE LUMINAIRE

| Version | | System power/W | Ambient temperature | Article no. |
|------------|-------------------------------------|----------------|---------------------|-------------|
| No picture | <input type="checkbox"/> 840/4000 K | 4 | -30 °C bis +40 °C | 421 520-F |
| Picture 1 | <input type="checkbox"/> 840/4000 K | 4 | -30 °C bis +40 °C | 421 521-F |
| Picture 2 | <input type="checkbox"/> 840/4000 K | 4 | -30 °C bis +40 °C | 421 522-F |
| Picture 3 | <input type="checkbox"/> 840/4000 K | 4 | -30 °C bis +40 °C | 421 523-F |

TEGEL – PC (FRACTURE PROOF) OPAL WHITE, FOR OPERATION WITH PASSAU LED I

Electronic single-battery emergency lighting supply unit PASSAU LED I to be ordered separately

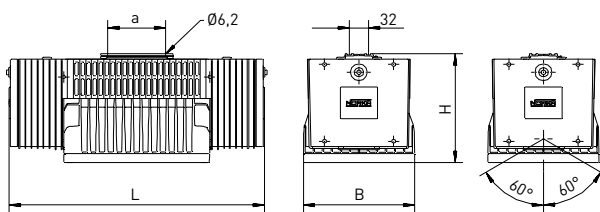
| Version | | System power/W | Ambient temperature | Article no. |
|------------|-------------------------------------|----------------|---------------------|-------------|
| No picture | <input type="checkbox"/> 840/4000 K | 6 | -30 °C bis +40 °C | 421 525-F |
| Picture 1 | <input type="checkbox"/> 840/4000 K | 6 | -30 °C bis +40 °C | 421 526-F |
| Picture 2 | <input type="checkbox"/> 840/4000 K | 6 | -30 °C bis +40 °C | 421 527-F |
| Picture 3 | <input type="checkbox"/> 840/4000 K | 6 | -30 °C bis +40 °C | 421 528-F |






TEGEL OPTIONS

| Version | Article no. |
|--------------------|----------------------|
| Central monitoring | Available on request |

URANUS

LED



-  narrow beam
-  medium beam
(PMMA Transopal®
(impact strengthened)
with additional screen)
-  wide beam
CDP prism screen
-  extreme wide beam
-  concentrated beam

| Lamp | Version | L | B | H | a | Max. weight |
|-----------|------------|----------|--------|--------|-------|-------------|
| LED Array | Floodlight | 425.5 mm | 185 mm | 180 mm | 96 mm | 4.7 kg |

AREAS OF APPLICATION

Floodlight with LED array. Useable in industrial facilities with different mounting heights, swimming pools (see options), for illuminating buildings and advertising spaces and for car park illumination.

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer. Reflector housing made of cast aluminium, similar to RAL 9005. Reflector housing swivelling and locking up to 120°. Thermally separated lamp chamber and driver chamber. Sealing system made of age-resistant, form-retaining silicone/synthetic rubber. Useable for indoor and outdoor areas according to protection rating IP 65. Protection class II.

LIGHTING TECHNOLOGY

Cover screen made of single pane safety glass clear or PC (fracture proof), clear with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230-240 V AC/DC, optionally suitable for emergency lighting. Two cable glands on face side M20 and 5 x 2.5 mm² through wiring. Two additional, concealed cable glands M20 at rear.

MOUNTING

Single mounting. Ceiling or wall fixing using aluminium mounting clamp.

URANUS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|------------------|----------------|---------------------|--------------------------|
| 077 | 7500 | 49 | -25 °C bis +45 °C | 967 077 AB C9 -H1 |
| 113 | 11400 | 72 | -25 °C bis +45 °C | 967 113 AB C9 -H1 |
| 150 | 15100 | 95 | -25 °C bis +45 °C | 967 150 AB C9 -H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

LIDC characteristic / A

- 2 = narrow beam
- 3 = medium beam
PMMA Transopal® (impact strengthened) with additional screen
- 4 = wide beam
(CDP prism screen)
- 5 = extreme wide beam
- 8 = concentrated beam

Colour temperature / B

- 3 = 830/3000 K
- 4 = 840/4000 K
- 5 = 850/5000 K

Cover screen / C

- 4 = PC (fracture proof) clear
- 6 = Single pane safety glass clear

URANUS OPTIONS

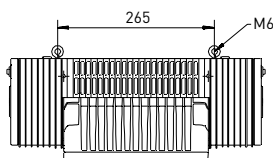
| Version | Article no. |
|---|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 967 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish | 967 960 |
| Swimming pool version | 967 036 |
| Version for operating with PASSAU LED | See PASSAU LED |



- > Aluminium mounting clamps, included in scope of delivery

URANUS ACCESSORIES

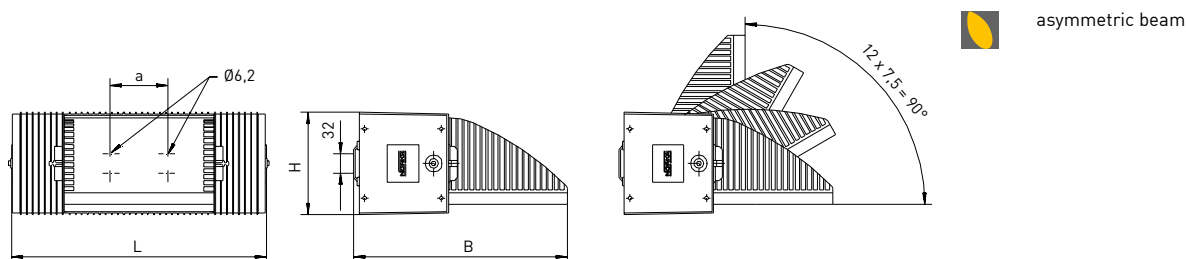
| Version | Article no. |
|--|-------------|
| Anti-vibration damper | 967 935 |
| Eyebolts M6 (pair), galvanised steel, for suspended installation | 967 901 |



- > **Eyebolts M6 (pair)**
Galvanised steel, for suspension system, Article no.967 901

URANUS PF

LED



| Lamp | Version | L | B | H | a | Max. weight |
|-----------|------------|--------|--------|--------|-------|-------------|
| LED Array | Floodlight | 424 mm | 364 mm | 170 mm | 96 mm | 5.4 kg |

AREAS OF APPLICATION

Floodlight with LED array. Useable in industrial facilities with different mounting heights, swimming pools (see options), for illuminating buildings and advertising spaces and for car park illumination.

HOUSING

Weather-proof and UV-resistant luminaire housing made of fibre-glass-reinforced polymer. Reflector housing made of cast aluminium, similar to RAL 9005. Reflector housing can be swivelled and locked up to 90°. Thermally separated lamp chamber and driver chamber. Sealing system made of age-resistant, form-retaining silicone/synthetic rubber. Useable for indoor and outdoor areas according to protection rating IP 65. Protection class II.

LIGHTING TECHNOLOGY

Cover screen made of single pane safety glass clear or PC (fracture proof), clear with internal aluminium reflector (MIRO-SILVER®).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230-240 V AC/DC, optionally suitable for emergency lighting. Two cable glands on face side M20 and 5 x 2.5 mm² through wiring. Two additional, concealed cable glands M20 at rear.

MOUNTING

Single mounting. Ceiling or wall fixing using aluminium mounting clamp.

URANUS PF

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|------------------|----------------|---------------------|---------------------------|
| 077 | 7500 | 49 | -25 °C bis +45 °C | 968 077 1 A B 9-H1 |
| 113 | 11400 | 72 | -25 °C bis +45 °C | 968 113 1 A B 9-H1 |
| 150 | 15100 | 95 | -25 °C bis +45 °C | 968 150 1 A B 9-H1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Colour temperature / A

3 = 830/3000 K
4 = 840/4000 K
5 = 850/5000 K

Cover screen / B

4 = PC (fracture proof) clear
6 = Single pane safety glass clear

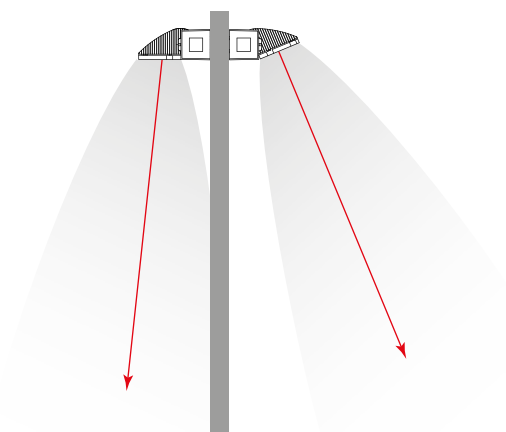
URANUS PF OPTIONS

| Version | Article no. |
|---|----------------------|
| Cover coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 967 010 |
| DALI | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| RAL finish | 967 960 |
| Swimming pool version | 967 036 |
| Version for operating with PASSAU LED | See PASSAU LED |

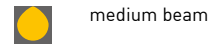
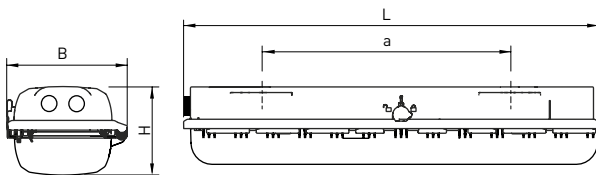


- > Aluminium mounting clamps, included in scope of delivery

URANUS PF – SAMPLE OF APPLICATION



- > Illumination of car parks and forecourts with URANUS PF, external rotation in 12 x 7.5° stages



| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|--------|--------|--------|-------------|
| LED | m600 | 700 mm | 184 mm | 125 mm | 400 mm | 4.1 kg |
| LED | m1200 | 1310 mm | 184 mm | 125 mm | 800 mm | 6.4 kg |
| LED | m1500 | 1610 mm | 184 mm | 125 mm | 800 mm | 7.6 kg |

AREAS OF APPLICATION

Explosion-proof surface mounted ceiling luminaire made of polymer with LED lamps. Useable in industrial applications with explosive atmospheres according to zone 1, 2, 21 and 22. Designed according to the applicable European Directives.

HOUSING

Luminaire housing made of fibre-glass-reinforced polymer, similar to RAL 7035. Useable for indoor and outdoor areas according to protection rating IP 66 an IP 67 (m600 and m1200). Sealing system consisting of age-resistant elastomer.

LIGHTING TECHNOLOGY

Lamp cover made of PC (fracture proof) clear with internal diffusor.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC. Two cable entries on one face side, one cable entry on the other face side. Two cable glands M25 and two sealing plugs M25 enclosed. Through wiring 5 x 2.5 mm².

MOUNTING

Single or row mounting. Ceiling installation via two threads M8 and separate mounting parts (see accessories).

Manufactured by our partner R. Stahl. Certificate no. IBExU 14 ATEX 1088 and IECEx IBE 14.0035.

WEIMAR

ATEX

⊕ II 2 G Ex db eb ib op is IIC T4 Gb

⊕ II 2 D Ex tb op is IIIC T100 °C Db

IECEX

Ex db eb ib op is IIC T4 Gb

Ex tb op is IIIC T100 °C Db

| Version | | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---------|--------------|------------------|----------------|---------------------|----------------------|
| m600 | ■ 850/5000 K | 3000 | 18 | -40 °C bis +50 °C | 558 280 35 4A |
| m1200 | ■ 850/5000 K | 5900 | 35 | -40 °C bis +50 °C | 558 480 35 4A |
| m1500 | ■ 850/5000 K | 8350 | 50 | -20 °C bis +50 °C | 558 680 35 4A |

When ordering, please replace the highlighted letters with the corresponding numbers.

Type of switch / A

1 = standard

2 = with safety switch

WEIMAR ACCESSORIES

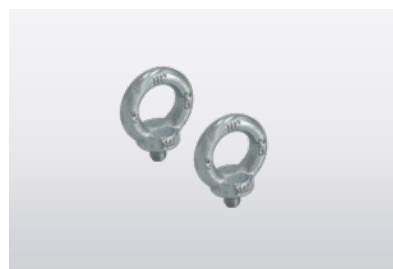
| Version | Article no. |
|---|-------------|
| Mounting bracket (pair), mounted on a mounting rail vor variable mounting distance | 558 007 |
| Mounting clamp R1 1/2", stainless steel (pair) with mounting rail for variable mounting distance | 558 003 |
| Mounting clamp R1 1/4", stainless steel (pair) with mounting rail for variable mounting distance | 558 004 |
| Mounting clamp R2", stainless steel (pair) with mounting rail for variable mounting distance | 558 005 |
| Mounting rail (pair) | 558 001 |
| Ring bolt M8 (pair), can be mounted direktly in press-in nuts | 558 002 |
| Wall and ceiling bracket, stainless steel (pair), mounted on a mounting rail for variable mounting distance, luminaire can be swivelled in steps of 15° | 558 006 |



> Mounting bracket (pair), mounted on a mounting rail vor variable mounting distance,
Article no. 558 007



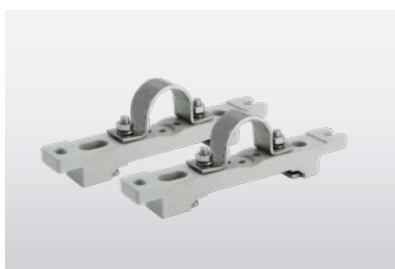
> Mounting rail (pair),
Article no. 558 001



> Ring bolt M8 (pair), can be mounted direktly in press-in nuts,
Article no. 558 002



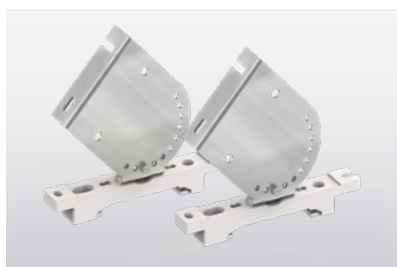
> mounting clamp R1 1/2", stainless steel (pair) with mounting rail for variable mounting distance,
Article no. 558 003



> Mounting clamp R1 1/4", stainless steel (pair) with mounting rail for variable mounting distance,
Article no. 558 004



> Mounting clamp R2", stainless steel (pair) with mounting rail for variable mounting distance,
Article no. 558 005



> Wall and ceiling bracket, stainless steel (pair),
Article no. 558 006



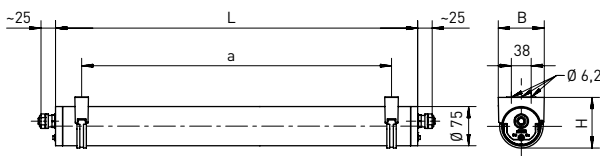


MARKT
(PYRA

High IP protection ratings protect the inner workings of the luminaires against fine dusts such as brake dust from trams and underground trains.

ZUG LED

LED



- FOCUSSED LIGHTING**
(see appendix C)
 - XARA® lighting control**
(optional)
 - Further colour temperatures**
(optional)
- medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|-------|-------|--------------|-------------|
| LED | m600 | 802 mm | 89 mm | 97 mm | 700 ± 25 mm | 2.7 kg |
| LED | m1200 | 1412 mm | 89 mm | 97 mm | 1310 ± 25 mm | 3.9 kg |
| LED | m1500 | 1712 mm | 89 mm | 97 mm | 1610 ± 25 mm | 4.9 kg |

AREAS OF APPLICATION

Tubular luminaire with LED lamps. Useable in industrial applications, in work pits used for maintenance and repair work and for decorative indoor and outdoor lighting with special requirements, such as swimming pools (see options). Useable in production facilities and suppliers in the food and beverage industry.

HOUSING

Polymer luminaire tube (Ø 75 mm) with two quick-mounting pressure caps and protection against unauthorised opening. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water up to 20 m; due to protection rating IP 68, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K.

LIGHTING TECHNOLOGY

Luminaire tube made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof), homogeneous illumination.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. One cable gland M20 per face side and 4 x 1.5 mm² through wiring. 2 kV transient filter.

MOUNTING

Single or row mounting. Ceiling or wall fixing using two mounting clamps made of stainless steel and black and transparent polymer with variable mounting distance.

ZUG LED

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|--------------------|--------------------|----------------|---------------------|-------------------------|
| m600 □ 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C bis +40 °C | 775 280 34 A4 - F - ... |
| m1200 □ 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C bis +40 °C | 775 480 34 A4 - F - ... |
| m1500 □ 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C bis +40 °C | 775 680 34 A4 - F - ... |

■ Standard luminous flux T8, for other lumen packages, see appendix C

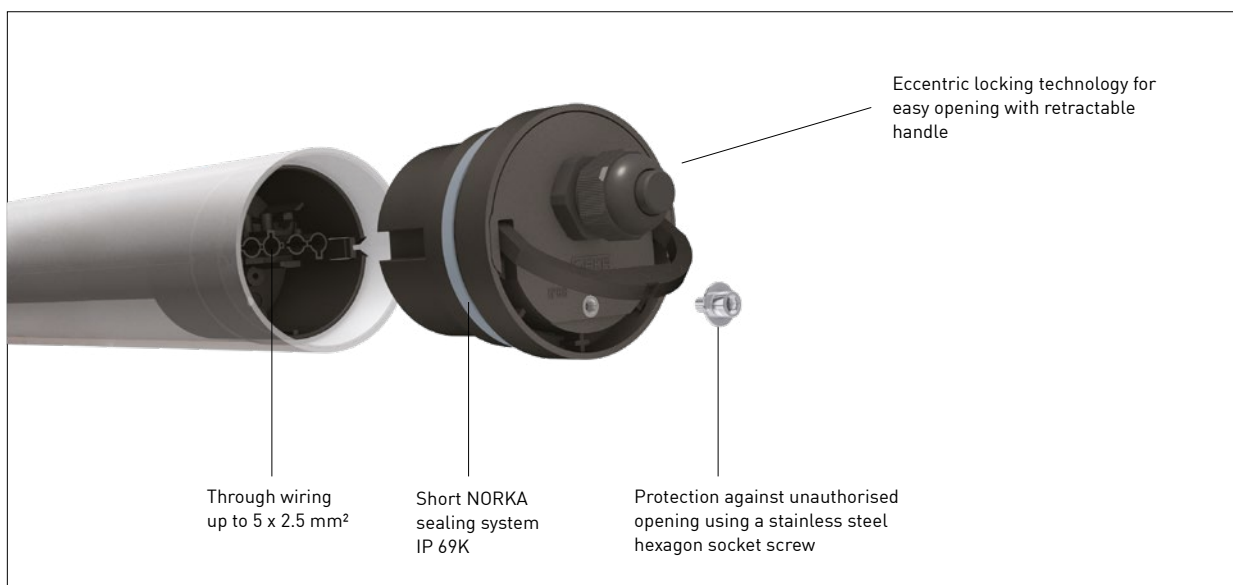
When ordering, please replace the highlighted letters with the corresponding numbers and add the desired lumen package (see appendix C).

Luminaire tube / A

2 = PMMA Transopal® (impact strengthened)
8 = PC Tropol® (fracture proof)

ZUG LED OPTIONS

| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| DALI (through wiring includes 2 x 1.5 mm ² control line) | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 770 035 |
| HCL (Human Centric Lighting) | Available on request |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light- and motion sensor XARA® | Available on request |
| Luminaire tube coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 775 010 |
| Swimming pool version without polymer mounting clamps | 770 038 |
| Through wiring 4 x 2.5 mm ² | 775 981 |
| Through wiring 5 x 1.5 mm ² | 775 831 |
| Through wiring 5 x 2.5 mm ² | 775 392 |
| Version for operating with PASSAU LED | See PASSAU LED |



> ZUG LED quick-mounting pressure cap

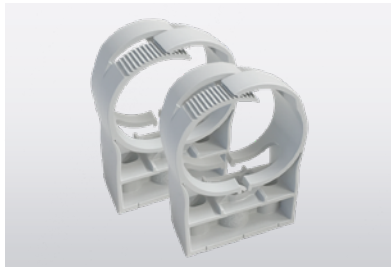
For additional articles, please turn the page! ►

ZUG LED ACCESSORIES

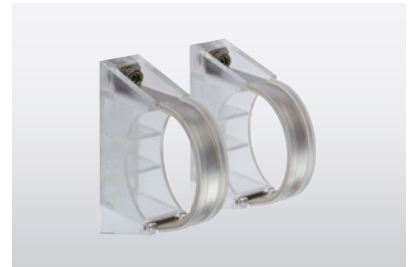
| Version | Article no. |
|---|-------------|
| Mounting bracket, chlorine resistant, polymer grey, Ø 75 mm, for ceiling- and wall-mounting (pair) | 770 210 |
| Mounting clamp stainless steel/transparent polymer (pair), (not suitable for a chlorinated atmosphere) | 770 208 |
| Mounting clamps, stainless steel V4A, angled (pair), (not suitable for chlorine atmosphere) | 770 118 |
| Mounting clamps, stainless steel/black polymer (pair), (not suitable for chlorine atmosphere) | 770 209 |
| Quick mounting clamp (pair), (not suitable for chlorine atmosphere) | 770 211 |
| Suspension system for 1 m suspension with stainless steel clamps (pair), (not suitable for chlorine atmosphere) | 770 166 |



> Mounting clamps stainless steel and black and transparent polymer (pair), (not suitable for chlorine atmosphere), included in scope of delivery



> Mounting bracket, chlorine resistant, polymer grey, Ø 75 mm, for ceiling- and wall-mounting (pair), Article no. 770 210



> Mounting clamp stainless steel/transparent polymer (pair), (not suitable for chlorine atmosphere), Article no. 770 208



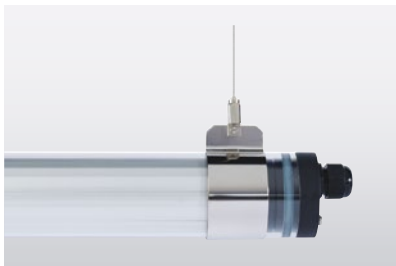
> Mounting clamps, stainless steel V4A, angled (pair), (not suitable for chlorine atmosphere), Article no. 770 118



> Mounting clamps stainless steel/black polymer (pair), (not suitable for chlorine atmosphere), Article no. 770 209



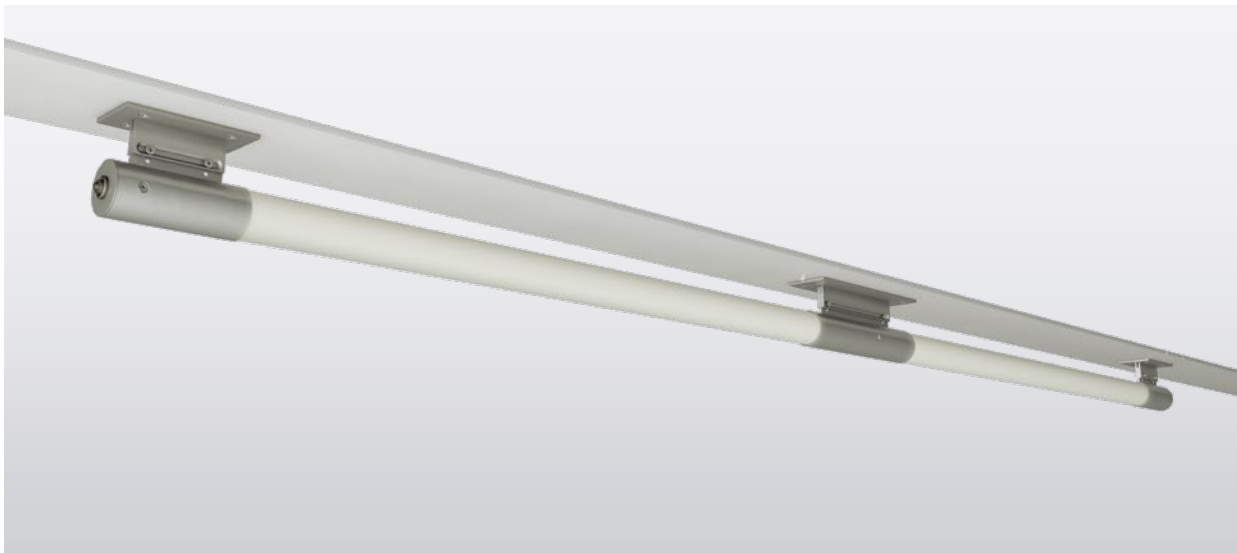
> Quick mounting clamp (pair), (not suitable for chlorine atmosphere), Article no. 770 211



> Suspension system for 1 m suspension with stainless steel clamps (pair), (not suitable for chlorine atmosphere), Article no. 770 166

ZUG LED ACCESSORIES

| Version | Article no. |
|--|-------------|
| Center piece (not suitable for chlorine atmosphere) | 775 008 |
| End cap with internal luminaire fastening clamp (fixes the luminaire in 5 x 45° steps for a uniform appearance in the continuous row system), (not suitable for chlorine atmosphere) | 775 007 |
| End cap without luminaire fastening clamp (not suitable for chlorine atmosphere) | 775 009 |



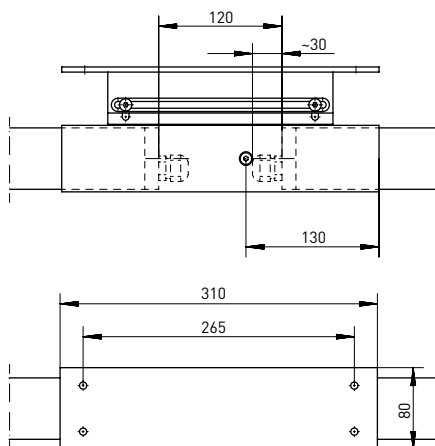
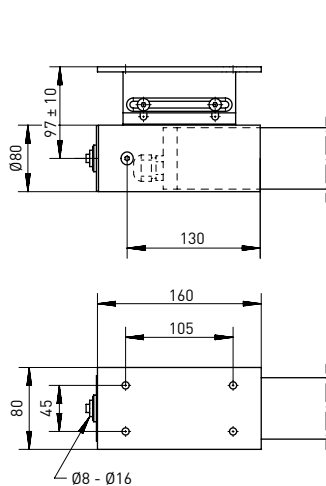
> Stainless steel suspension system with end cap and centre piece (not suitable for chlorine atmosphere)



> End cap (not suitable for chlorine atmosphere)
Article no. 775 007 with internal luminaire fastening clamp
Article no. 775 009 without luminaire fastening clamp

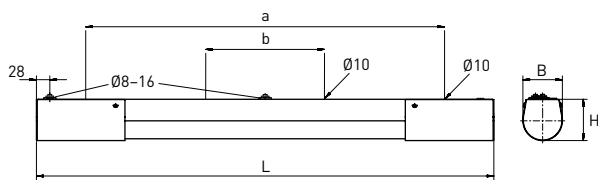


> Centre piece (not suitable for chlorine atmosphere)
Article no. 775 008



ZUG LED AL

LED



- **FOCUSED LIGHTING**
[see appendix C]
- **K** Further colour temperatures (optional)
- medium beam

| Lamp | Version | L | B | H | a | b | Max. weight |
|------|---------|---------|---------|-------|---------|--------|-------------|
| LED | m600 | 956 mm | 82.5 mm | 86 mm | 750 mm | - | 5.7 kg |
| LED | m1200 | 1566 mm | 82.5 mm | 86 mm | 1350 mm | 360 mm | 8.0 kg |

AREAS OF APPLICATION

Extremely impact-resistant surface mounted ceiling luminaire with LED lamps. Vandalism-proof up to 50 joules. Useable in prisons, detention cells and all areas at risk of deliberate or negligent destruction.

HOUSING

Polymer luminaire tube (Ø 75 mm) with two quick-mounting pressure caps in vandalism-proof, polished stainless steel housing. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water to 20 m due to protection rating IP 68, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K. Anti-graffiti coating for luminaire tube protects against dirt and paint residue, optionally available (see options).

LIGHTING TECHNOLOGY

3,5 mm thick cover screen made of PC Tropal® (fracture proof).

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Luminaire housing with three rear-side cable entries M20 and 4 x 1.5 mm² through wiring.

MOUNTING

Single mounting. Ceiling or wall mounting with two or four concealed rearward mounting apertures.

ZUG LED AL

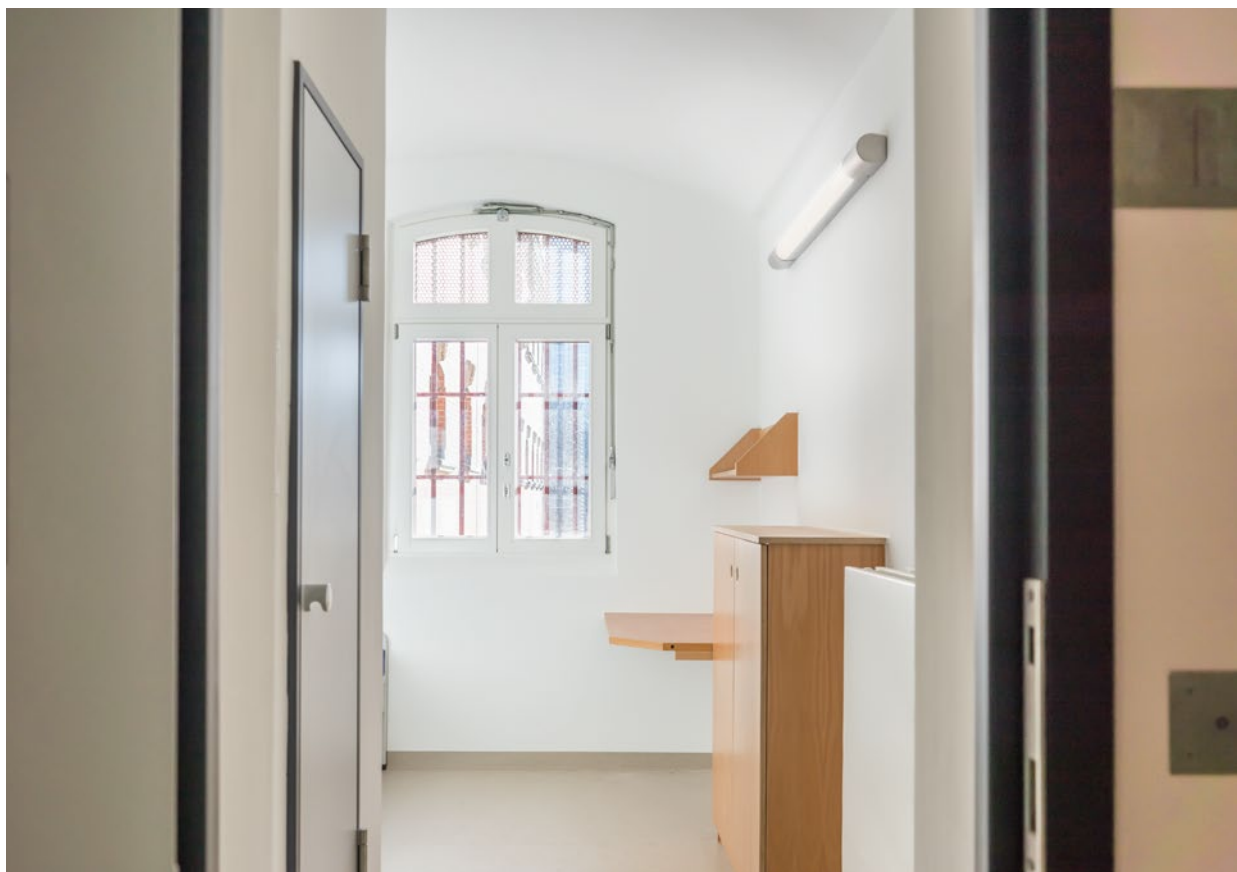
| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no.+ MC |
|---|--------------------|----------------|---------------------|-------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C bis +40 °C | 722 280 34 84 - F - ... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C bis +40 °C | 722 480 34 84 - F - ... |

■ Standard luminous flux T8, for other lumen packages, see appendix C

When ordering, please add the desired lumen package (see appendix C).

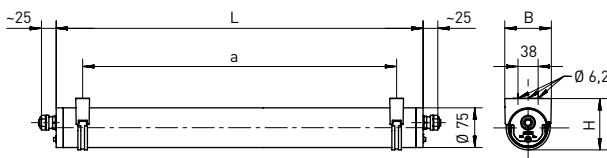
ZUG LED AL OPTIONS

| Version | Article no. |
|--|----------------------|
| 4 kV transient filter | 100 530 |
| DALI (through wiring includes 2 x 1.5 mm ² control line) | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | See appendix B |
| Halogen-free version | 770 035 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Luminaire tube coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 775 010 |
| Through wiring 4 x 2.5 mm ² | 775 981 |
| Through wiring 5 x 1.5 mm ² | 775 831 |
| Through wiring 5 x 2.5 mm ² | 775 392 |
| Version for operating with PASSAU LED | See PASSAU LED |



ZUG LED EXTREME

LED



K Further colour temperatures (optional)



medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|-------|-------|--------------|-------------|
| LED | m1200 | 1412 mm | 89 mm | 97 mm | 1310 ± 25 mm | 4.0 kg |
| LED | m1500 | 1712 mm | 89 mm | 97 mm | 1610 ± 25 mm | 4.9 kg |

AREAS OF APPLICATION

Tubular luminaire with LED lamps. Useable in industrial applications, harbour facilities, surroundings with especially high or low temperature, in work pits for maintenance and repair workshops and for decorative indoor and outdoor lighting with special requirements. Useable in production facilities and suppliers in the food and beverage industry. **Long expected service life, useable up to +65 °C.**

HOUSING

Polymer luminaire tube (Ø 75 mm) with two quick-mounting pressure caps and protection against unauthorised opening. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water up to 20 m; due to protection rating IP 68, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K.

LIGHTING TECHNOLOGY

Luminaire tube made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof), homogeneous illumination.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. One cable gland M20 per face side and 4 x 1.5 mm² through wiring.

L80 B10 > 100.000 h at +65 °C. 4 kV transient filter. 8 years warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing using two mounting clamps made of stainless steel and black and clear polymer with variable mounting distance.

ZUG LED EXTREME

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|---|------------------|----------------|---------------------|----------------------|
| m1200 <input type="checkbox"/> 840/4000 K | 4030 | 28 | -40 °C bis +65 °C | 777 480 34 A1 |
| m1500 <input type="checkbox"/> 840/4000 K | 5050 | 35 | -40 °C bis +65 °C | 777 680 34 A1 |

When ordering, please replace the highlighted letters with the corresponding numbers.

Luminaire tube / A

2 = PMMA Transopal® (impact strengthened)

8 = PC Tropol® (fracture proof)

ZUG LED EXTREME OPTIONS

| Version | Article no. |
|--|----------------------|
| DALI (through wiring includes 2 x 1.5 mm ² control line) | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Halogen-free version | 770 035 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Luminaire tube coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 775 010 |
| Swimming pool version without polymer mounting clamps | 770 038 |
| Through wiring 4 x 2.5 mm ² | 775 981 |
| Through wiring 5 x 1.5 mm ² | 775 831 |
| Through wiring 5 x 2.5 mm ² | 775 392 |
| Version for operating with PASSAU LED | Available on request |

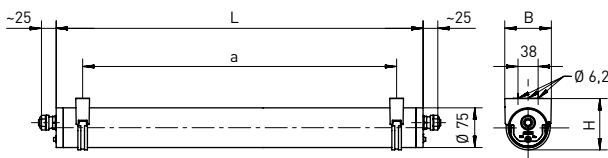
ZUG LED EXTREME ACCESSORIES

| Version | Article no. |
|--|-------------|
| Center piece (not suitable for chlorine atmosphere) | 775 008 |
| End cap with internal luminaire fastening clamp (fixes the luminaire in 5 x 45° steps for a uniform appearance in the continuous row system), (not suitable for chlorine atmosphere) | 775 007 |
| End cap without luminaire fastening clamp (not suitable for chlorine atmosphere) | 775 009 |
| Mounting bracket, chlorine resistant, polymer grey, Ø 75 mm, for ceiling- and wall-mounting (pair) | 770 210 |
| Mounting clamp stainless steel/transparent polymer (pair), (not suitable for a chlorinated atmosphere) | 770 208 |
| Mounting clamps, stainless steel V4A, angled (pair), (not suitable for chlorine atmosphere) | 770 118 |
| Mounting clamps, stainless steel/black polymer (pair), (not suitable for chlorine atmosphere) | 770 209 |
| Quick mounting clamp (pair), (not suitable for chlorine atmosphere) | 770 211 |
| Suspension system for 1 m suspension with stainless steel clamps (pair), (not suitable for chlorine atmosphere) | 770 166 |

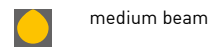
Images of
accessories
see ZUG LED

ZUG LED HIGH OUTPUT

LED



- XARA® lighting control** (optional)
- Further colour temperatures (optional)



medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|-------|-------|--------------|-------------|
| LED | m1200 | 1412 mm | 89 mm | 97 mm | 1310 ± 25 mm | 4.0 kg |
| LED | m1500 | 1712 mm | 89 mm | 97 mm | 1610 ± 25 mm | 4.9 kg |

AREAS OF APPLICATION

Tubular luminaire with LED lamps. Useable in industrial applications and for areas with special safety requirements and special demands on the illumination level from great mounting heights. **Useable up to +35 °C.**

HOUSING

Polymer luminaire tube (Ø 75 mm) with two quick-mounting pressure caps and protection against unauthorised opening. Useable in indoor and outdoor areas according to IP 65, IP 66 and IP 67. Resistant to pressurised water up to 20 m due to protection rating IP 68 rating, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K.

LIGHTING TECHNOLOGY

Luminaire tube made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof), homogeneous illumination.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. Two face side cable glands (M20) and 4 x 1.5 mm² through wiring.

L80 B10 > 100.000 h at +35 °C.

4 kV transient filter. 8 years warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing using two mounting clamps made of stainless steel/polymer black/clear with variable mounting distance.

ZUG LED HIGH OUTPUT

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|------------------------|------------------|----------------|---------------------|--------------------------------|
| m1200 H01 □ 840/4000 K | 5330 | 38 | -40 °C bis +35 °C | 778 480 34 A1 - 5330lm |
| m1200 H02 □ 840/4000 K | 6610 | 48 | -40 °C bis +35 °C | 778 480 34 A1 - 6610lm |
| m1200 H03 □ 840/4000 K | 7900 | 58 | -40 °C bis +35 °C | 778 480 34 A1 - 7900lm |
| m1500 H01 □ 840/4000 K | 6600 | 47 | -40 °C bis +35 °C | 778 680 34 A1 - 6600lm |
| m1500 H02 □ 840/4000 K | 11490 | 85 | -40 °C bis +35 °C | 778 680 34 A1 - 11490lm |
| m1500 H03 □ 840/4000 K | 13100 | 97 | -40 °C bis +35 °C | 778 680 34 A1 - 13100lm |

When ordering, please replace the highlighted letters with the corresponding numbers.

Luminaire tube / A

2 = PMMA Transopal® (impact strengthened)

8 = PC Tropolal® (fracture proof)

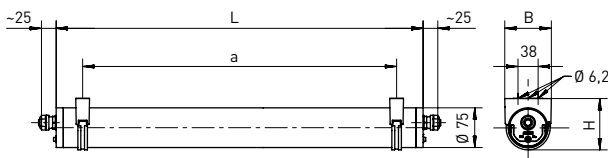
ZUG LED HIGH OUTPUT OPTIONS

| Version | Article no. |
|--|----------------------|
| DALI (through wiring includes 2 x 1.5 mm ² control line) | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Further colour temperatures | Available on request |
| Halogen-free version | 770 035 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light and motion sensor XARA® | Available on request |
| Luminaire tube coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 775 010 |
| Swimming pool version without polymer mounting clamps | 770 038 |
| Through wiring 4 x 2.5 mm ² | 775 981 |
| Through wiring 5 x 1.5 mm ² | 775 831 |
| Through wiring 5 x 2.5 mm ² | 775 392 |
| Version for operating with PASSAU LED | Available on request |


ZUG LED HIGH OUTPUT ACCESSORIES

| Version | Article no. |
|--|-------------|
| Center piece (not suitable for chlorine atmosphere) | 775 008 |
| End cap with internal luminaire fastening clamp (fixes the luminaire in 5 x 45° steps for a uniform appearance in the continuous row system), (not suitable for chlorine atmosphere) | 775 007 |
| End cap without luminaire fastening clamp (not suitable for chlorine atmosphere) | 775 009 |
| Mounting bracket, chlorine resistant, polymer grey, Ø 75 mm, for ceiling- and wall-mounting (pair) | 770 210 |
| Mounting clamp stainless steel/transparent polymer (pair), (not suitable for a chlorinated atmosphere) | 770 208 |
| Mounting clamps, stainless steel V4A, angled (pair), (not suitable for chlorine atmosphere) | 770 118 |
| Mounting clamps, stainless steel/black polymer (pair), (not suitable for chlorine atmosphere) | 770 209 |
| Quick mounting clamp (pair), (not suitable for chlorine atmosphere) | 770 211 |
| Suspension system for 1 m suspension with stainless steel clamps (pair), (not suitable for chlorine atmosphere) | 770 166 |

Images of
accessories
see ZUG LED



 **XARA® lighting control**
(optional)

 medium beam

| Lamp | Version | L | B | H | a | Max. weight |
|------|---------|---------|-------|-------|--------------|-------------|
| LED | m1200 | 1412 mm | 89 mm | 97 mm | 1310 ± 25 mm | 4.0 kg |
| LED | m1500 | 1712 mm | 89 mm | 97 mm | 1610 ± 25 mm | 4.9 kg |

AREAS OF APPLICATION

Tubular luminaire with LED lamps. Useable in industrial applications, in work pits used for maintenance and repair work and for decorative indoor and outdoor lighting with special requirements, such as swimming pools (see options). **Long expected service life, useable up to +55 °C.**

HOUSING

Polymer luminaire tube (Ø 75 mm) with two quick-mounting pressure caps and protection against unauthorised opening. Useable for indoor and outdoor areas according to protection rating IP 65, IP 66 and IP 67. Resistant to pressurised water up to 20 m due to protection rating IP 68, 20 m. Suitable for intensive cleaning processes using pressure washers due to high protection rating IP 69K.

LIGHTING TECHNOLOGY

Luminaire tube made of PMMA Transopal® (impact strengthened) or PC Tropol® (fracture proof), homogeneous illumination.

ELECTRICAL CONSTRUCTION

Luminaire ready for mounting and installation. Built-in driver 230 V AC/DC, optionally suitable for emergency lighting. One cable gland M20 per face side and 4 x 1.5 mm² through wiring.

L80 B10 > 75,000 h at +55°C. 4 kV transient filter. 8 years manufacturer warranty.

MOUNTING

Single or row mounting. Ceiling or wall fixing using two mounting clamps made of stainless steel and black and clear polymer with variable mounting distance.

ZUG LED INDUSTRY

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|--------------------|------------------|----------------|---------------------|---------------------------------|
| m1200 □ 840/4000 K | 4640 | 25 | -40 °C bis +55 °C | 779 480 34 A4 -F-4640lm |
| m1200 □ 840/4000 K | 8300 | 44 | -40 °C bis +55 °C | 779 480 34 A4 -F-8300lm |
| m1500 □ 840/4000 K | 6300 | 33 | -40 °C bis +55 °C | 779 680 34 A4 -F-6300lm |
| m1500 □ 840/4000 K | 10380 | 54 | -40 °C bis +55 °C | 779 680 34 A4 -F-10380lm |

When ordering, please replace the highlighted letters with the corresponding numbers.

Luminaire tube / A

2 = PMMA Transopal® (impact strengthened)

8 = PC Tropol® (fracture proof)

ZUG LED INDUSTRY OPTIONS

| Version | Article no. |
|--|----------------------|
| DALI (through wiring includes 2 x 1.5 mm ² control line) | 100 502 |
| Emergency lighting version (Please specify precise specifications in your inquiry) | Available on request |
| Halogen-free version | 770 035 |
| Inrush current limiter ESSB II v2 (including 4 kV transient filter) | 100 922 |
| Integrated light and motion sensor XARA® | Available on request |
| Luminaire tube coated, increased resistance to acids, bases, cleaning agents (anti-graffiti coating) | 775 010 |
| Swimming pool version without polymer mounting clamps | 770 038 |
| Through wiring 4 x 2.5 mm ² | 775 981 |
| Through wiring 5 x 1.5 mm ² | 775 831 |
| Through wiring 5 x 2.5 mm ² | 775 392 |
| Version for operating with PASSAU LED | Available on request |

ZUG LED INDUSTRY ACCESSORIES

| Version | Article no. |
|--|-------------|
| Center piece (not suitable for chlorine atmosphere) | 775 008 |
| End cap with internal luminaire fastening clamp (fixes the luminaire in 5 x 45° steps for a uniform appearance in the continuous row system), (not suitable for chlorine atmosphere) | 775 007 |
| End cap without luminaire fastening clamp (not suitable for chlorine atmosphere) | 775 009 |
| Mounting bracket, chlorine resistant, polymer grey, Ø 75 mm, for ceiling- and wall-mounting (pair) | 770 210 |
| Mounting clamp stainless steel/transparent polymer (pair), (not suitable for a chlorinated atmosphere) | 770 208 |
| Mounting clamps, stainless steel V4A, angled (pair), (not suitable for chlorine atmosphere) | 770 118 |
| Mounting clamps, stainless steel/black polymer (pair), (not suitable for chlorine atmosphere) | 770 209 |
| Quick mounting clamp (pair), (not suitable for chlorine atmosphere) | 770 211 |
| Suspension system for 1 m suspension with stainless steel clamps (pair), (not suitable for chlorine atmosphere) | 770 166 |

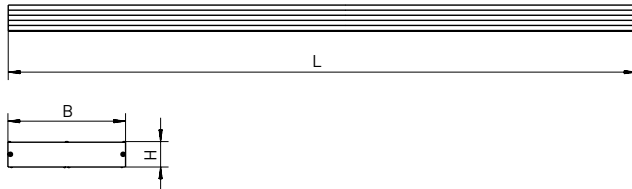
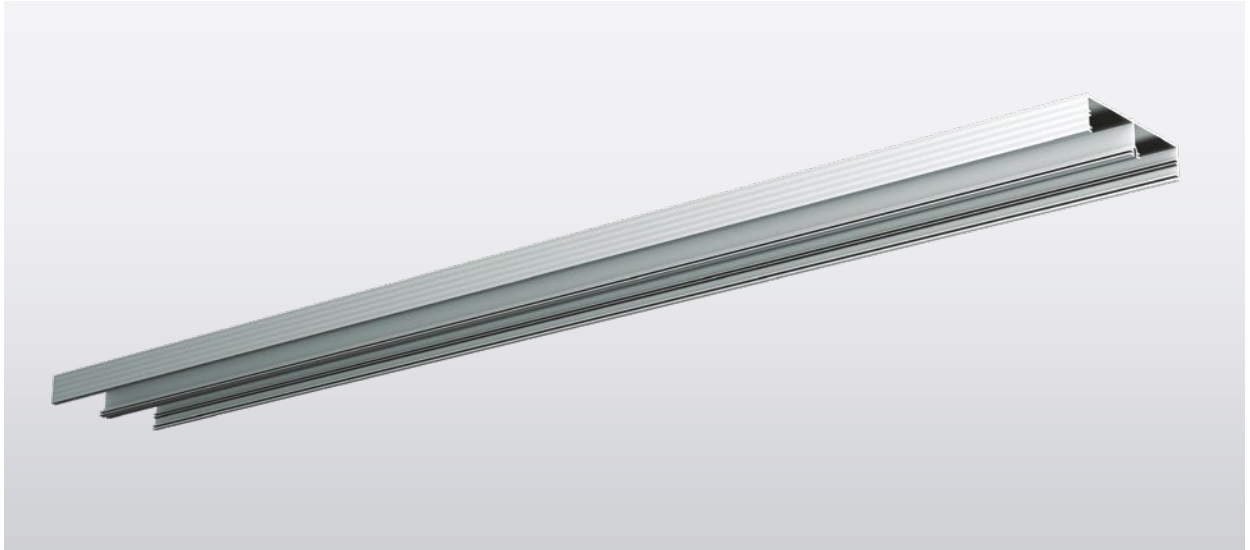
Images of
accessories
see ZUG LED





Mounting rails and trunking systems are used in numerous environments, for example to compensate for structural conditions and simplify installation, as here in a salt mine.

TRUNKING SYSTEM 185



| Version | H | Weight | Article no. |
|---|--------------|----------|-------------|
| Trunking system, aluminium, per metre or part thereof | 40 mm ± 5 mm | 2.6 kg/m | 580 100 |
| Trunking system, aluminium, per metre or part thereof | 70 mm ± 5 mm | 3.2 kg/m | 580 150 |

AREAS OF APPLICATION

Trunking system with a module width of 185 mm. Mounting accessories for the DUBLIN LED luminaires. Useable in underground and suburban railway stations, pedestrian underpasses and tunnels, passages, swimming pools, transport areas and under canopies.

HOUSING

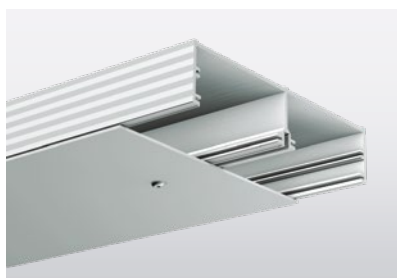
Anodised silver extruded aluminium profile in customisable lengths with two subdivided cable ducts or the separate laying of cables for various applications and equipment. Cables and wires are fixed using the four enclosed cable holders in the installation grooves, depending on the standard length.

MOUNTING

Row mounting. Ceiling installation via rear fixing points, spacing depending on the mounting situation (on site). Suspension system possible (on site).

TRUNKING SYSTEM 185 ACCESSORIES

| Version | Module size | Weight | Article no. |
|--|--------------------|----------|-------------|
| Additional cable holder for trunking system 185 | | | 580 105 |
| Blind cover for trunking system 185, aluminium, height 70 mm, with fixing, pre-cut (max. 2.0 m), per metre or part thereof | pre-cut max. 2.0 m | 3.2 kg/m | 580 114 |
| Cover plate for trunking system 185, aluminium, 2 mm, per metre or part thereof | pre-cut max. 2.0 m | 1.0 kg/m | 580 102 |
| End cap for trunking system 185, height 40 mm, incl. mounting parts | | | 580 101 |
| End cap for trunking system 185, height 70 mm, incl. mounting parts | | | 583 101 |
| Speaker housing with aluminium shutter for trunking system 185, 300 x 185 x 70 mm, perforated | | | 580 115 |
| Threaded eyebolt M8 x 30, galvanised steel, for on-site suspension system | | | 200 458 |



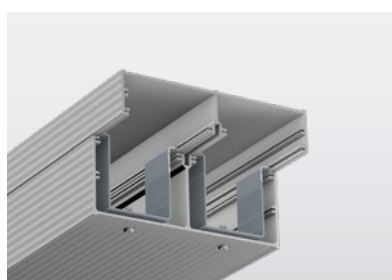
> Cover plate for trunking system 185, aluminium, Article no. 580 102



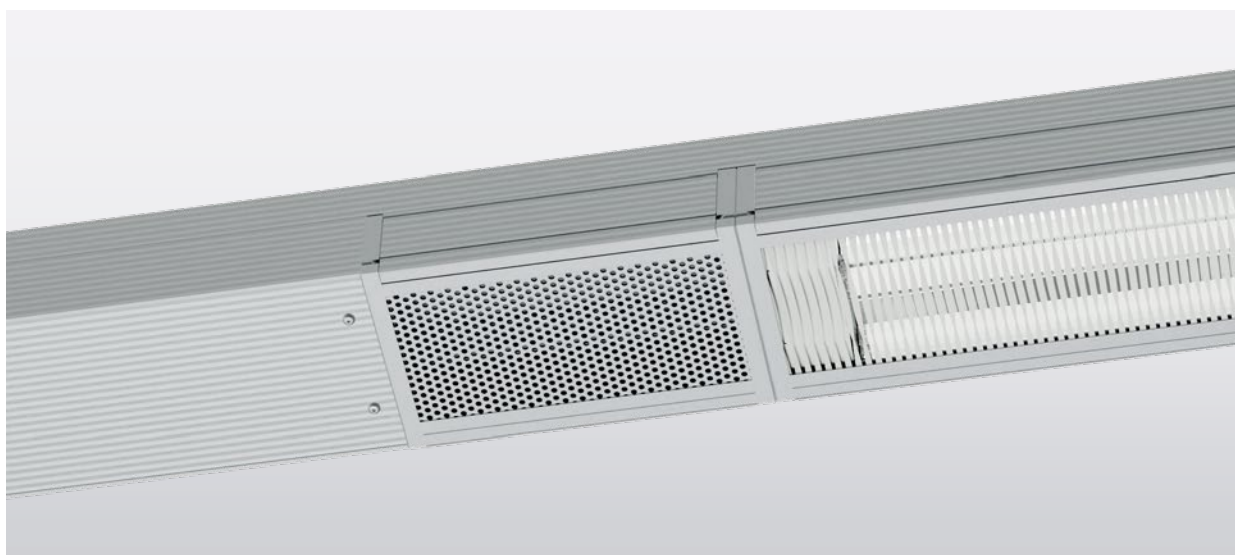
> Speaker housing with aluminium shutter, Article no. 580 115



> Blind cover aluminium, 70 mm, Article no. 580 114

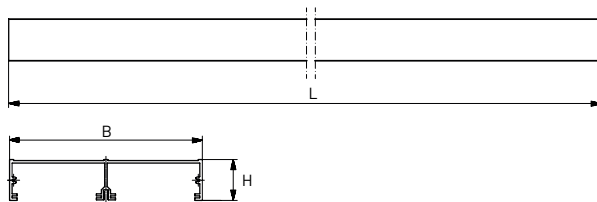
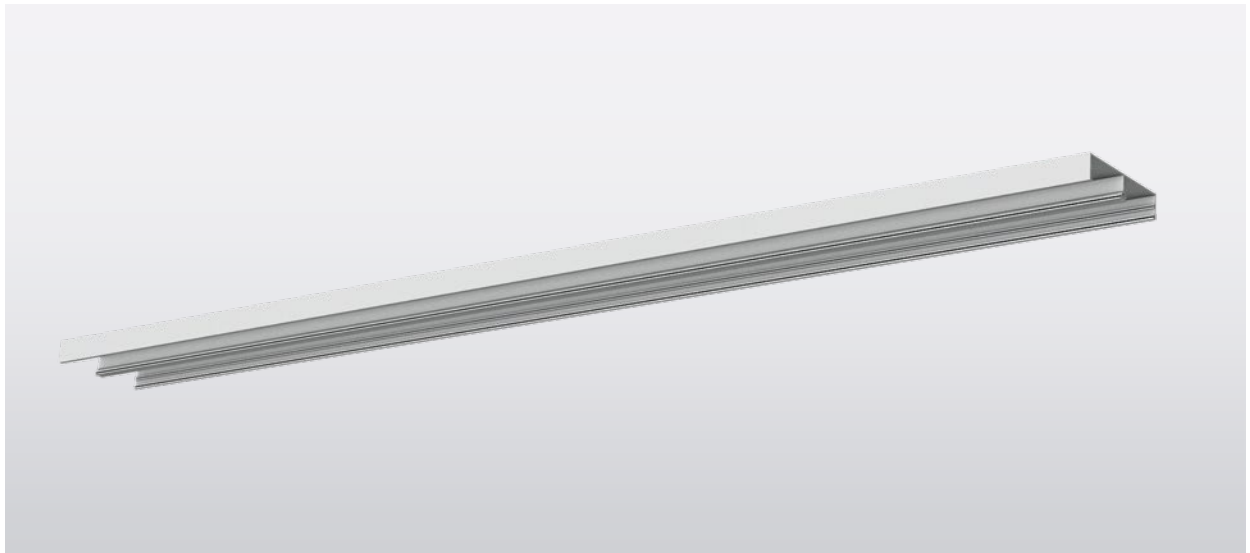


> Fixing for blind cover, included in blind cover



> TRUNKING SYSTEM 185 with DUBLIN LED, blind cover and speaker housing

TRUNKING SYSTEM 191



| Version | H | Weight | Article no. |
|---|--------------|----------|-------------|
| Trunking system, aluminium, per metre or part thereof | 40 mm ± 5 mm | 2.5 kg/m | 466 100 |

AREAS OF APPLICATION

Trunking system with a module width of 191 mm. Mounting accessories for the MÜNCHEN LED luminaires. Useable in underground and suburban railway stations, pedestrian underpasses and tunnels, passages, swimming pools, transport areas and under canopies.

HOUSING

Anodised silver extruded aluminium profile in customisable lengths with two subdivided cable ducts or the separate laying of cables for various applications and equipment. Cables and wires are fixed using the four enclosed cable holders in the installation grooves, depending on the standard length.

MOUNTING

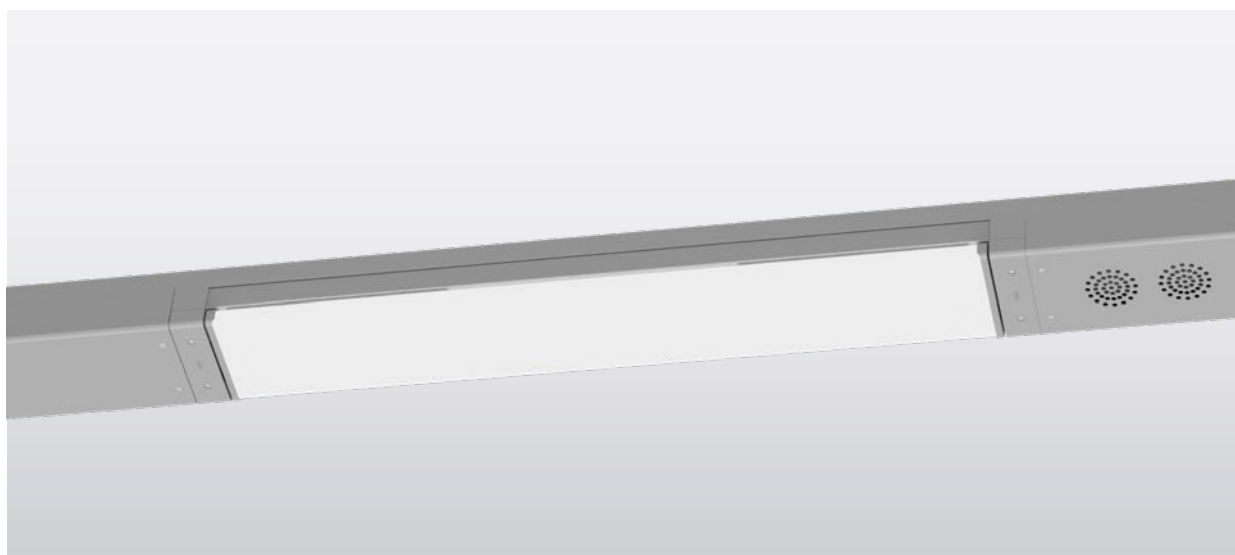
Row mounting. Ceiling installation via rear fixing points, spacing depending on the mounting situation (on site). Suspension system possible (on site).

TRUNKING SYSTEM 191 ACCESSORIES

| Version | Module size | Weight | Article no. |
|---|--------------------|----------|----------------------|
| Additional cable holder for trunking System 191 | | | 466 105 |
| Blind cover for trunking system 191, aluminium, height 80 mm, with fixing, pre-cut (max. 2.0 m) | pre-cut max. 2.0 m | 3.1 kg/m | 466 114 |
| End cap for trunking system 191, height 40 mm, incl. mounting parts | | | 466 101 |
| Speaker housing | | | Available on request |
| Threaded eyebolt M8 × 30, galvanised steel, for on-site suspension system | | | 200 458 |

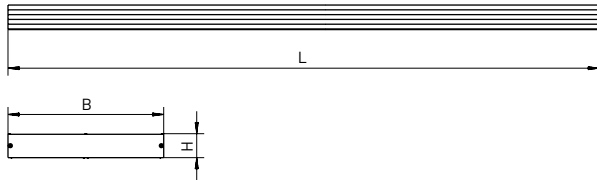
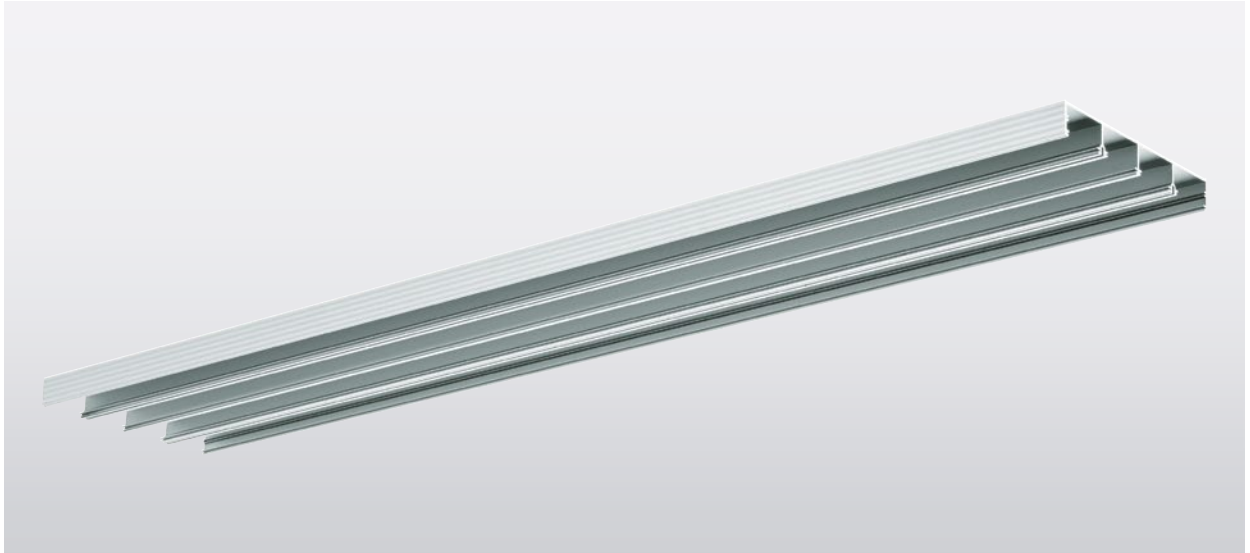
TRUNKING SYSTEM 191 OPTIONS

| Version | Article no. |
|------------|----------------------|
| RAL finish | Available on request |



- > MÜNCHEN LED in colour-coordinated RAL-finish on trunking system 191 with blind cover and speaker housing

TRUNKING SYSTEM 285



| Version | H | Weight | Article no. |
|---|--------------|----------|-------------|
| Trunking system, aluminium, per metre or part thereof | 40 mm ± 5 mm | 4.0 kg/m | 610 100 |
| Trunking system, aluminium, per metre or part thereof | 70 mm ± 5 mm | 5.3 kg/m | 610 150 |

AREAS OF APPLICATION

Trunking system with a module width of 285 mm. Mounting accessories for the luminaires TALON and LONDON LED. Useable in underground and suburban railway stations, pedestrian underpasses and tunnels, passages, swimming pools, transport areas and under canopies.

HOUSING

Anodised silver extruded aluminium profile in customisable lengths with four subdivided cable ducts or the separate laying of cables for various applications and equipment. Cables and wires are fixed using the four enclosed cable holders in the installation grooves, depending on the standard length.

MOUNTING

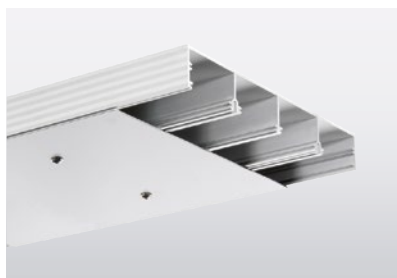
Row mounting. Ceiling installation via rear fixing points, spacing depending on the mounting situation (on site). Suspension system possible (on site).



Subject to technical changes. Please refer to our homepage for current data. Product illustrations similar, project illustrations may contain special equipment.

TRUNKING SYSTEM 285 ACCESSORIES

| Version | Module size | Weight | Article no. |
|---|--------------------|----------|-------------|
| Additional cable holder for trunking system 285 | | | 610 105 |
| Blind cover for trunking system 285, aluminium, height 70 mm, with fixing, pre-cut (max. 2.0 m) | pre-cut max. 2.0 m | 5.3 kg/m | 611 114 |
| Cover plate for trunking system 285, aluminium, 2 mm, per metre or part thereof | pre-cut max. 2.0 m | 1.5 kg/m | 610 102 |
| End cap for trunking system 285, height 40 mm, incl. mounting parts | | | 610 101 |
| End cap for trunking system 285, height 70 mm, incl. mounting parts | | | 611 101 |
| Speaker housing with aluminium shutter for trunking system 285, 300 x 285 x 70 mm, perforated | | 3.9 kg/m | 611 115 |
| Threaded eyebolt M8 x 30, galvanised steel, for on-site suspension system | | | 200 458 |



> Cover plate, aluminium, 2 mm, Article no. 610 102



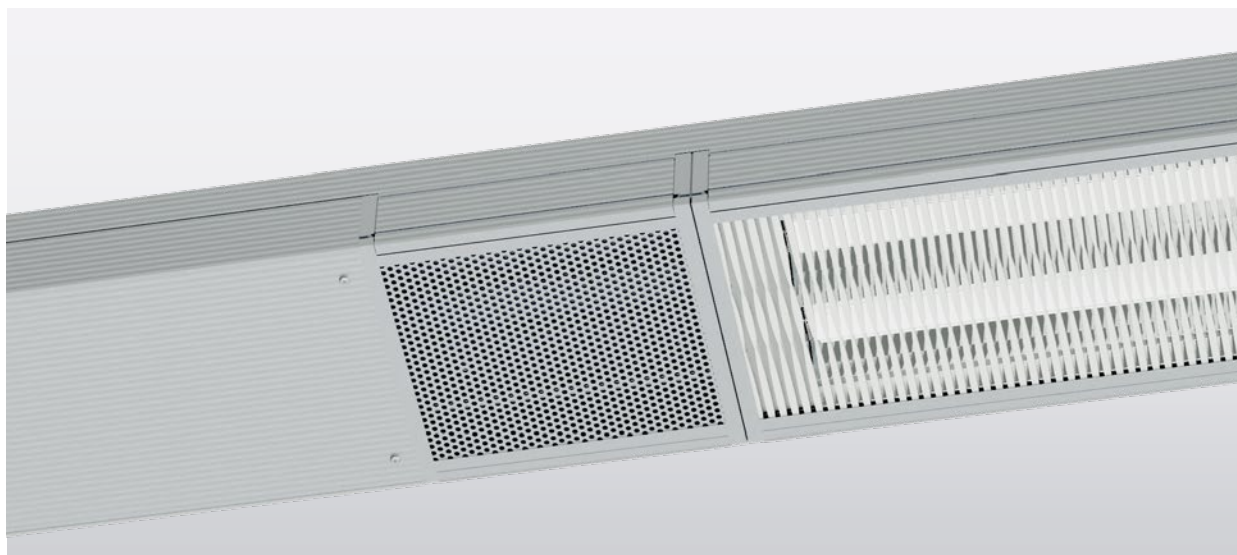
> Speaker housing with aluminium shutter, perforated, Article no. 611 115



> Blind cover aluminium, 70 mm high, Article no. 611 114



> Fixing for blind cover

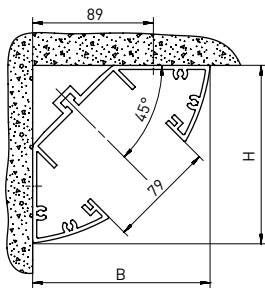


> TRUNKING SYSTEM 285 with LONDON LED, blind cover and speaker housing

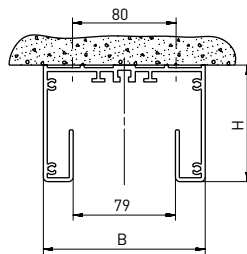
TRUNKING SYSTEM BELFAST



Corner mounting



Ceiling mounting



| Version | L | B | H | Weight | Article no. |
|--|---------------------|--------|--------|----------|-------------|
| Trunking system for corner mounting, aluminium, per metre | max. 4000 mm ± 5 mm | 131 mm | 131 mm | 4.5 kg/m | 650 100 |
| Trunking system for ceiling mounting, aluminium, per metre | max. 4000 mm ± 5 mm | 125 mm | 90 mm | 4.1 kg/m | 650 200 |

AREAS OF APPLICATION

Trunking system for corner or ceiling mounting for luminaire BELFAST with a module width of 131 mm (corner mounting) or 125 mm (ceiling mounting). Useable in prisons, detention cells and all areas at risk of deliberate or negligent destruction, as well as passages and pedestrian tunnels.

HOUSING

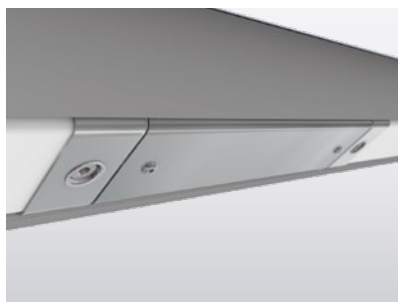
Anodised silver extruded aluminium profile in customisable lengths with two subdivided cable ducts. Cables and wires are fixed using the enclosed cable holders in the installation grooves, depending on the standard length.

MOUNTING

Row mounting. Installation via rear fixing points, spacing depending on the mounting situation. Maximum length 4 m.

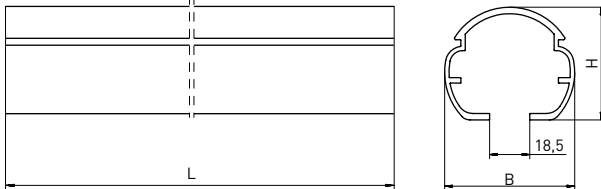
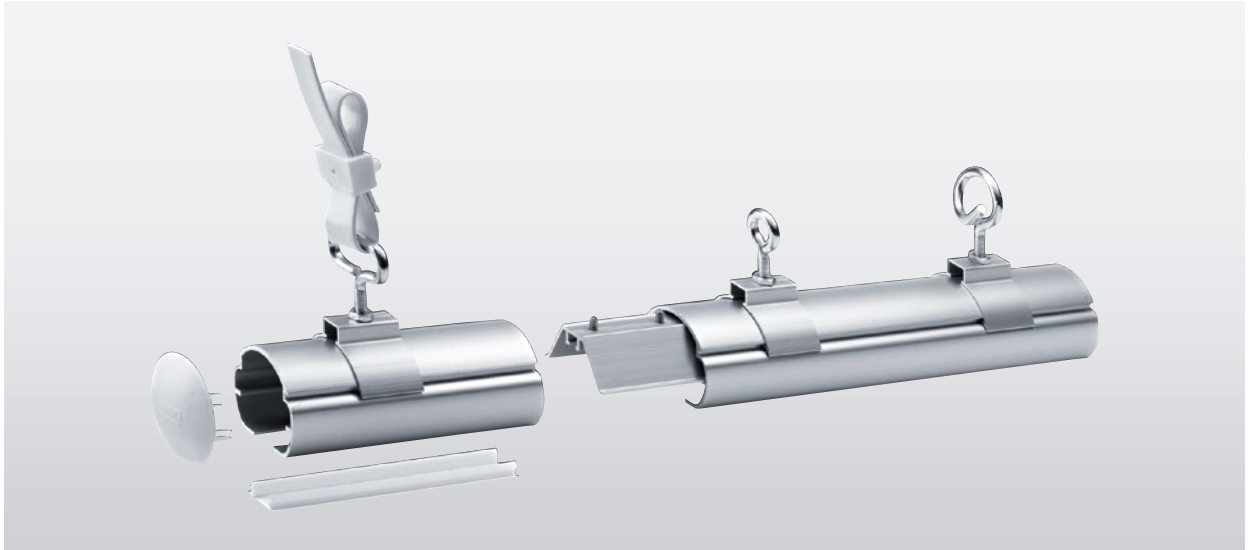
TRUNKING SYSTEM BELFAST ACCESSORIES

| Version | Module size | Weight | Article no. |
|--|---------------------|----------|-------------|
| Blind cover for trunking system BELFAST, stainless steel, height 20 mm, with fixing, pre-cut (max. 2.0 m), per metre or part thereof | pre-cut max. 1.54 m | 4.5 kg/m | 650 114 |
| End cap for trunking system BELFAST for ceiling mounting, incl. mounting parts | | | 650 215 |
| End cap for trunking system BELFAST for corner mouting, incl. mounting parts | | | 650 115 |



> Blind cover made of stainless steel,
Article no. 650 114





| Version | L | B | H | Weight | Article no. |
|---|----------------------|-------|-------|----------|----------------------|
| Mounting rail, aluminium | 3000 mm | 60 mm | 60 mm | 1.2 kg/m | 200 550-3 |
| Mounting rail, aluminium | 6000 mm | 60 mm | 60 mm | 1.2 kg/m | 200 550-6 |
| Mounting rail, aluminium, further lengths | Available on request | 60 mm | 60 mm | 1.2 kg/m | Available on request |

MATERIAL

Aluminium corrosion resistant, available in standard lengths of 3.0 m and 6.0 m. Round cross-section with smooth upper surface: dust repellent, easy cleaning and removal of deposits (hygiene friendly). Ø 60 mm.

MOUNTING

Profile connectors, mounting rail flanges and ceiling flanges. Polymer wide pendant with internal steel wires available on request. Maximum pendant spacing beneath each other 3.0 m, sliding profile nuts (luminaire holders) for attaching the luminaires, option of feeding through cables.



MOUNTING RAIL ALUMINIUM ACCESSORIES

| Version | Article no. |
|---|-------------|
| Cable holder for mounting rail | 200 593 |
| Ceiling flange, polymer white, for wide pendant | 200 290 |
| Cover strip, polymer, 3.0 m | 200 556-3 |
| End cap, polymer, for front sealing of mounting rail | 200 552 |
| Mounting rail flange for pendant installation, stainless steel, with bracket screw, M8 x 30, galvanised, for polymer wide pendant | 200 554 |
| Mounting rail flange for suspension system, stainless steel, with M8 x 30 hook, galvanised, for customary wire or chain pendant | 200 560 |
| Mounting rail flange for suspension system, stainless steel, with threaded M8 x 30 eyelet, galvanised | 200 555 |
| Mounting rail flange, stainless steel, for direct ceiling installation | 200 761 |
| Profile connector, untreated aluminium, for connecting two mounting rail sections | 200 551 |
| Protective earth conductor connection, aluminium, with mark (1 per continuous row) | 200 557 |
| Pendant lock, polymer white, with cable clamps | 200 294 |
| Pendant lock, polymer white, without cable clamps | 200 295 |
| Schuko socket, IP 54, with mounting flange | 200 591 |
| Wide pendant, polymer white, with internal steel cores, by the meter, available in reels of 50 m (0.5 m per pendant required for looping) | 200 280 |
| Wide pendant, polymer white, with internal steel cores, with ceiling and mounting rail flange for 1.0 m suspension, as initial pendant (with cable clamps) | 200 558 |
| Wide pendant, polymer white, with internal steel cores, with ceiling and mounting rail flange for 1.0 m suspension, as intermediate or end pendant (without cable clamps) | 200 559 |



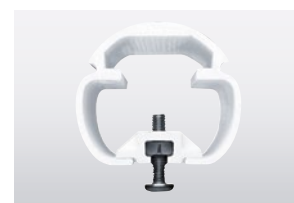
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> Article no. 200 557



> Article no. 200 593



> Article no. 200 753



> Article no. 200 551



> Article no. 200 591



> Article no. 200 761



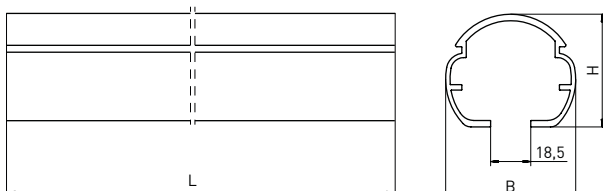
> Article no. 200 554



> Article no. 200 555



> Article no. 200 560



| Version | L | B | H | Weight | Article no. |
|---|----------------------|-------|-------|----------|----------------------|
| Mounting rail, polymer | 4000 mm | 60 mm | 52 mm | 1.1 kg/m | 200 750-4 |
| Mounting rail, polymer | 6000 mm | 60 mm | 52 mm | 1.1 kg/m | 200 750-6 |
| Mounting rail, polymer, further lengths | Available on request | 60 mm | 52 mm | 1.1 kg/m | Available on request |

MATERIAL

Fibreglass-reinforced polyester, white, corrosion resistant, available in standard lengths of 4.0 m and 6.0 m. Round cross-section with smooth upper surface: dust repellent, easy cleaning and removal of deposits, (particularly suitable high level hygiene areas), Ø 60 mm.

MOUNTING

Profile connectors, mounting rail flanges and ceiling flanges. Polymer wide pendant with internal steel wires available on request. Maximum pendant spacing beneath each other 2.0 m, sliding profile nuts (luminaire holders) for attaching the luminaires, option of feeding through cables.



POLYMER MOUNTING RAIL OPTIONS

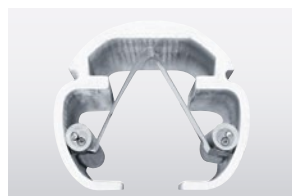
| Version | Article no. |
|-----------------------|----------------------|
| Swimming pool version | Available on request |

POLYMER MOUNTING RAIL ACCESSORIES

| Version | Article no. |
|---|-------------|
| Cable holder for mounting rail | 200 593 |
| Ceiling flange, white polymer, for wide pendant | 200 290 |
| Cover strip, polymer, 3.0 m | 200 556-3 |
| End cap, polymer, for front sealing of mounting rail | 200 552 |
| Mounting flange for equipment, 4 boreholes M4 | 200 595 |
| Mounting rail flange for direct ceiling installation, stainless steel | 200 761 |
| Mounting rail flange for pendant installation, stainless steel, with bracket screw M8 x 30, stainless steel, for polymer wide pendant | 200 754 |
| Mounting rail flange for suspension system, stainless steel, with M8 x 30 hook, stainless steel, for customary wire and cable pendants | 200 760 |
| Mounting rail flange for suspension system, stainless steel, with threaded M8 x 30 eyelet, stainless steel | 200 755 |
| Profile nut (luminaire holder), polymer, for luminaire fixture with M6 screw, stainless steel (two fixtures required per luminaire) | 200 753 |
| Profile connector, stainless steel, for connecting two mounting rail sections | 200 751 |
| Pendant lock, polymer white, with cable clamps | 200 294 |
| Pendant lock, polymer white, without cable clamps | 200 295 |
| Schuko socket, IP 54, with mounting flange | 200 591 |
| Wide pendant, polymer white, with internal steel cores, by the metre, available in reels of 50 m (0.5 m per pendant required for looping). | 200 280 |
| Wide pendant, polymer white, with internal steel cores, with ceiling and mounting rail flange for 1.0 m suspension, as initial pendant (with cable clamps) | 200 758 |
| Wide pendant, polymer white, with internal steel cores, with ceiling and mounting rail flange for 1.0 m suspension, as intermediate or end pendant (without cable clamps) | 200 759 |



> Article no. 200 556



> Article no. 200 593



> Article no. 200 753



> Article no. 200 751



> Article no. 200 591



> Article no. 200 754



> Article no. 200 755



> Article no. 200 760



> Article no. 200 761



Powerful floodlights provide optimum and reliable illumination even from high mounting heights, as in this industrial plant.



INGRESS PROTECTION

As rule, NORKA luminaires are designed for a rated power of 230 V/50 Hz. Versions for other mains voltages and frequencies are available on request.

The ingress protection rating for luminaires is defined in EN 60 598. The products are labelled accordingly with IP codes. The first number indicates the protection against accidental contact and foreign bodies

while the second number refers to protection against water.

When installing the luminaires, the installer has to use all seals and cable entries provided with the luminaire. If these parts are not used or installed improperly, the indicated protection rating is not guaranteed.

Material codes

| | | |
|------|---|---------------------------------------|
| PMMA | = | polymethyl methacrylate |
| PC | = | polycarbonate |
| PBT | = | polyethylene terephthalate |
| PPO | = | polyphenylene oxide (old designation) |
| PPE | = | polyphenylene ether (new designation) |
| GRP | = | fibreglass-reinforced polymer |
| ALU | = | aluminium |

Ingress protection for protection against accidental contact and foreign bodies

| 1st Index | Protection type Designation | Description |
|-----------|--|--|
| 0 | No protection | No special protection against injury from inadvertent contact with live or moving parts. No protection against ingress of foreign bodies. |
| 1 | Protection against large foreign bodies > 50 mm | Protection against inadvertent body contact of live and internal, moving parts (e.g. hand contact) but no protection against intentional contact with such parts. Protection against ingress of solid foreign bodies with a diameter greater than 50 mm. |
| 2 | Protection against medium-sized foreign bodies > 12 mm | Protection against hand contact with live or internal moving parts. Protection against ingress of solid foreign bodies with a diameter greater than 12.5 mm. |
| 3 | Protection against small foreign bodies > 2.5 mm | Protection against contact with live or internal moving parts with tools, wires and similar objects with a diameter greater than 2.5 mm. Protection against ingress of solid foreign bodies with a diameter greater than 2.5 mm. |
| 4 | Protection against granular foreign bodies > 1 mm | Protection against contact with live or internal moving parts with tools, wires and similar objects with a diameter greater than 1 mm. Protection against ingress of solid foreign bodies with a diameter greater than 1 mm. |
| 5 | Protected against dust | Total protection against contact with live or internal, moving parts. Protection against harmful dust deposits. While the ingress of dust is not completely prevented, dust can only enter the device in very small quantities that do not affect its operation. |
| 6 | Dust-proof | Total protection against contact with live or internal moving parts. Protection against dust ingress. |

Ingress protection for water protection

| 2nd Index | Protection type Designation | Description |
|-----------|--|---|
| | No protection | No special protection. |
| 1 | Protection against vertically falling drops of water | Vertically dripping water must have no harmful effect. |
| 2 | Protection against drops of water falling at an angle | Water drops that impact at any angle up to 15° from the vertical must not cause any damage. |
| 3 | Protection against direct water spray | Water that impacts at any angle up to 60° from the vertical must not cause damage. |
| 4 | Protection against water spray | Water impacting on the luminaire from all directions must not cause any damage. |
| 5 | Protection against water jets | Water jets from a nozzle impacting on the luminaire from all directions do not result in water ingress. |
| 6 | Protection against flooding | Water temporarily flooding the luminaire (e.g. high water) must not lead to water ingress. |
| 7 | Protection against immersion in water | The luminaire is protected against water ingress if the device is immersed for a specific time and at specific pressure conditions in water. Observe the manufacturer instructions! |
| 8 | Protection against long periods of immersion under pressure | The luminaire is protected against water ingress if it is immersed at a specific pressure and for an unlimited time in water. Observe the manufacturer instructions! |
| 9K | Protection against water ingress during high-pressure/steam jet cleaning | Hot water (80 °C) impacting from any direction under high pressure (80-100 bar) on the luminaire must not enter. |

TABLE OF RESISTANCE

POLYMERS USED IN LUMINAIRE PRODUCTION

Polymer components have become important and proven functional elements in modern luminaire production. They are chosen, processed and used according to the latest technical knowledge.

However, inadmissible stress and exposure to damaging influences reduce the ageing resistance of these parts, which means that the serial polymer components wear much faster.

This table contains a list of materials that are most commonly used in the production of NORKA luminaires. The chemical resistances indicated are guide values only and apply to an ambient temperature of 25 °C.

If luminaires are installed and used according to the instructions, these polymer components will age normally, ensuring consistent reliability.

Please do not hesitate to contact us if you have any problems.

KEY:

■ resistant
 □ limited resistance
 – not resistant

| Chemical substances, alphabetical | Phenolic resin Moulding material | Acrylic glass PMMA | Polycarbonate PC | Polyester | PBT/ Aluminium |
|-----------------------------------|----------------------------------|--------------------|------------------|-----------|----------------|
| Acetone | ■ | – | – | – | ■ |
| Ether | ■ | – | – | – | ■ |
| Alcohol, max. 30% | ■ | ■ | ■ | ■ | □ |
| Alcohol, concentrated | ■ | – | – | □ | ■ |
| Ammonia | ■ | ■ | – | □ | ■ |
| Aniline | – | – | – | – | ■ |
| Benzol | ■ | – | – | – | □ |
| Chloroform | ■ | – | – | – | ■ |
| Acetic acid, max. 5% | ■ | □ | ■ | ■ | □ |
| Acetic acid, max. 30% | – | – | – | ■ | – |
| Ethylacetate | ■ | – | – | – | ■ |
| Glycerine | ■ | ■ | □ | ■ | ■ |
| NaCl solution | ■ | ■ | ■ | ■ | ■ |
| Hydrocarbons | ■ | □ | – | □ | ■ |
| Synthetic alkaline solutions | ■ | ■ | □ | ■ | □ |
| Sea water | ■ | ■ | ■ | ■ | □ |
| Methyl chloride | ■ | – | – | – | □ |
| Sodium hydroxide 2% | ■ | ■ | – | □ | – |
| Sodium hydroxide 10% | ■ | ■ | – | – | – |
| Normal petrol | ■ | ■ | □ | ■ | ■ |
| Petroleum ether | ■ | ■ | □ | ■ | ■ |
| Phenol | □ | – | – | – | □ |
| Nitric acid, max. 10% | ■ | ■ | ■ | ■ | – |
| Nitric acid, max. 20% | □ | □ | □ | □ | – |
| Hydrochloric acid, max. 15% | ■ | ■ | ■ | ■ | □ |
| Hydrochloric acid, min. 20% | ■ | ■ | – | ■ | – |
| Sulphur dioxide | ■ | – | □ | □ | □ |
| Sulphuric acid, max. 50% | ■ | ■ | ■ | ■ | – |
| Sulphuric acid, max. 70% | ■ | □ | □ | ■ | – |
| Soda | ■ | ■ | ■ | ■ | – |
| Premium petrol | ■ | ■ | – | ■ | ■ |
| Carbon tetrachloride | ■ | – | – | ■ | ■ |
| Oil of turpentine | ■ | □ | □ | ■ | ■ |
| Trichloroethylene | ■ | – | – | – | ■ |
| Hydrogen sulphide | ■ | ■ | ■ | ■ | ■ |

| Damaging influence | Possible cause | Effect |
|-------------------------------|---|--|
| Inadmissibly high temperature | - excessive operating voltage - excessive ambient temperature - improper mounting | - deformation - embrittlement - discolouration |
| Short wave UV radiation | - high pressure mercury lamps with excessive UV radiation component - germicidal lamps | - yellowing - embrittlement |
| Aggressive substances | - softening agents (released from cable insulation etc.) - use of unsuitable cleaning agents and disinfectants | - crack formation - reduced stability - surface damage |

EXPLOSION TEMPERATURE CLASSES

ALLOCATION OF FLAMMABLE GASES AND VAPOURS TO EXPLOSION GROUPS AND TEMPERATURE CLASSES

| Explosion group | Temperature classes | | | | | |
|-----------------|--------------------------|--------------------------------|----------------------------------|--------------------------|----------------|------------------------------|
| | T1 (450 °C) | T2 (300 °C) | T3 (200 °C) | T4 (135 °C) | T5 (100 °C) | T6 (85 °C) |
| IIA | Acetone (540 °C) | 1,2-dichloroethane (440 °C) | Petrol (220–300 °C) | Acetaldehyde (140 °C) | | |
| | Ammonia (630 °C) | Cyclohexanone (430 °C) | Diesel fuel (220–300 °C) | | | |
| | Benzol (555 °C) | i-amylacetate (380 °C) | Aeroplane fuel (220–300 °C) | | | |
| | Ethane (515 °C) | n-butane (365 °C) | Heating oil (220–300 °C) | | | |
| | Ethylacetate (460 °C) | n-butyl alcohol (340 °C) | n-hexane (240 °C) | | | |
| | Acetic acid (485 °C) | | | | | |
| | Carbon oxide (605 °C) | | | | | |
| | Methanol (455 °C) | | | | | |
| | Propane (470 °C) | | | | | |
| | Toluene (535 °C) | | | | | |
| IIB | City gas (560 °C) | Ethanol (425 °C) | Ethyl glycol (235 °C) | Ethyl ether (180 °C) | | |
| | | Ethylene (425 °C) | Hydrogen sulphide (270 °C) | | | |
| | | Ethylene oxide (440 °C) | | | | |
| IIC | Hydrogen (560 °C) | Acetylene (305 °C) | | | | Carbon disulphide (95 °C) |

| Temperature class according to: IEC 60079-4 | Ignition temperature range | Permissible surface temperature of electrical equipment |
|--|----------------------------|--|
| T1 | > 450 °C | 450 °C |
| T2 | > 300 ... ≤ 450 °C | 300 °C |
| T3 | > 200 ... ≤ 300 °C | 200 °C |
| T4 | > 135 ... ≤ 200 °C | 135 °C |
| T5 | > 100 ... ≤ 135 °C | 100 °C |
| T6 | > 85 ... ≤ 100 °C | 85 °C |

Classification of the explosion hazard zones

| | | | |
|-------|--|--|--|
| Gases | Zone 0 is an area where a hazardous explosive atmosphere as a mixture of air and combustible gases, vapours or mists is present continuously, over prolonged periods of time or often. | Zone 1 is an area where during normal operations a hazardous explosive atmosphere as a mixture of air and combustible gases, vapours or mists may form occasionally. | Zone 2 is an area where during normal operations a hazardous explosive atmosphere as a mixture of air and combustible gases, vapours or mists does not normally occur or only briefly. |
| Dusts | Zone 20 is an area where a hazardous explosive atmosphere in the form of a cloud consisting of combustible dust contained in the air is present continuously, over prolonged periods of time or often. | Zone 21 is an area where during normal operations a hazardous explosive atmosphere in the form of a cloud consisting of combustible dust contained in the air is present occasionally. | Zone 22 is an area where during normal operations a hazardous explosive atmosphere in the form of a cloud consisting of combustible dust contained in the air does not normally occur or only briefly. |

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TECHNICAL INFORMATION:

Despite all the care taken in producing and copying these catalogue documents, errors cannot be completely ruled out. We reserve the right to make formal and technical changes. Any measurements, weights and design details are provided without obligation. Figures may vary from the products.

Detailed technical data regarding our products can be obtained from the respective product descriptions/data sheets or requested separately.

DELIVERY TERMS AND CONDITIONS:
















All deliveries shall take place in compliance with our General Conditions of Sale or those of our sales partners. The current version of our General Conditions of Sale can be found on our homepage at <http://norka.com/gtc>.

PRICES:


























For our prices, ask for our current pricing list.

GLOSSARY OF SYMBOLS









LIGHT CHARACTERISTIC

| | |
|---|--|
|  | Bare lamp |
|  | Medium beam |
|  | Medium beam with indirect component |
|  | Asymmetric beam |
|  | Asymmetric beam with indirect component |
|  | Narrow beam |
|  | Narrow beam with indirect component |
|  | Wide beam |
|  | Wide beam with indirect component |
|  | Extreme wide beam |
|  | Extreme wide beam with indirect component |
|  | Concentrated beam |
|  | Concentrated beam with indirect component |
|  | Concentrated wide beam |
|  | Concentrated wide beam with indirect component |

TECHNICAL SYMBOLS

| | | | |
|---|---|---|---|
|  | Luminaire protected against ingress of foreign bodies with a diameter > 12.5 mm |  | European test and certification symbol for luminaires and their electric components. It indicates compliance with European standards governing safety and methods of operation. |
|  | Luminaire protected against ingress of foreign bodies with a diameter > 1 mm |  | German test and certification symbol for luminaires. It indicates compliance with German safety standards. |
|  | Luminaire protected against ingress of foreign bodies with a diameter > 1 mm and splash-proof |  | Protection class I / protective earthing Protection against electric shock is provided by the basic insulation and connection of all touchable metal parts to the protective earth conductor. |
|  | Dust and spray-proof luminaire |  | Optional: Protection class I / protective earthing Protection against electric shock is provided by the basic insulation and connection of all touchable metal parts to the protective earth conductor. |
|  | Dust and splash-proof luminaire |  | Protection class II / double insulation Live parts are equipped with double insulation in addition to the basic insulation. |
|  | Luminaire protected against dust and water jets |  | Optional: Protection class II / double insulation Live parts are equipped with double insulation in addition to the basic insulation. |
|  | Dust-proof luminaire protected against strong water jets |  | Protection class III / Safety extra low voltage SELV Protection against electric shock is based on the use of safety extra low voltage. |
|  | Optional: Dust-proof luminaire protected against strong water jets |  | As standard: luminaires are suitable for premises with a fire hazard due to dust or fibrous particles. |
|  | Luminaire protected against dust and temporary immersion |  | Optional: luminaires are suitable for premises with a fire hazard due to dust or fibrous particles. |
|  | Optional: Luminaire protected against dust and temporary immersion | | |
|  | Luminaire protected against dust and permanent immersion (up to 1 m) | | |
|  | Luminaire protected against dust and permanent immersion (up to 10 m) | | |
|  | Luminaire protected against dust and permanent immersion (up to 20 m) | | |
|  | As standard: dust-proof luminaire protected against hot water used in high pressure cleaning | | |
|  | Optional: dust-proof luminaire protected against hot water used in high pressure cleaning | | |
|  | CE certification indicates the conformity of a product with the applicable EC Directives. | | |

TECHNICAL SYMBOLS

- LUCON®** As standard: luminaires are equipped with the LUCON® luminaire connection system.
- LUCON®** (dashed border) Optional: luminaires are equipped with the LUCON® luminaire connection system.
-  As standard: luminaires have been tested in line with EN 12 193 (or DIN VDE 0710) for ball impact resistance.
-  Optional: luminaires have been tested in line with EN 12 193 (or DIN VDE 0710) for ball impact resistance.
-  As standard: luminaires are designed for harsh operating conditions.
-  Optional: luminaires are designed for harsh operating conditions.
- EL** As standard: emergency lighting with independent power supply, tested in line with IEC 61347-2-13.
- EL** (dashed border) Optional: emergency lighting with independent power supply, tested in line with IEC 61347-2-13.
- NFC** As standard: adjustable luminous flux via NFC programming.
- NFC** (dashed border) Optional: adjustable luminous flux via NFC programming.
-  **XARA®**
The luminaire can be integrated into the lighting control system. The sensor is optional.
-  **FOCUSSED LIGHTING**
Luminaire with optional lumen package.
-  The luminaire is optionally available in further colour temperatures.
-  **easy eXchange**
The luminaire is available with easy eXchange as standard or as optional components.
- ZONE 1** Luminaires are approved for EX zone 1 in line with the ATEX Directive. This covers areas in which an explosive atmosphere may occasionally develop from a mixture of air and combustible gases, vapours or mists. Complies with device protection level Gb.

- ZONE 2** Luminaires are approved for EX zone 2 in line with the ATEX Directive. This covers areas in which an explosive atmosphere usually does not form or may only develop temporarily from a mixture of air and combustible gases, vapours or mists. Complies with device protection level Gc.
- ZONE 21** Luminaires are approved for EX zone 21 in line with the ATEX Directive. This covers areas in which an explosive atmosphere may occasionally develop in the form of a cloud of combustible dust present in the air. Complies with device protection level Db.
- ZONE 22** Luminaires are approved for EX zone 22 in line with the ATEX Directive. This covers areas in which an explosive atmosphere usually does not develop or may only develop temporarily in the form of a cloud of combustible dust present in the air. Complies with device protection level Dc.

IK PROTECTION CLASSES

- IK 02 PMMA** Luminaire with PMMA cover tested with an impact energy of 0.2 joules.
- IK 03 PMMA** Luminaire with PMMA cover tested with an impact energy of 0.35 joules.
- IK 04 ESG** Luminaire with single pane safety glass cover tested with an impact energy of 0.5 joules.
- IK 04 PMMA** Luminaire with PMMA cover tested with an impact energy of 0.5 joules.
- IK 07 ESG** Luminaire with single pane safety glass cover tested with an impact energy of 2 joules.
- IK 07 PC** Luminaire with PC cover tested with an impact energy of 2 joules.

IK PROTECTION CLASSES

- IK 07 PMMA** Luminaire with PMMA cover tested with an impact energy of 2 joules.
- IK 08 ESG** Luminaire with single pane safety glass cover tested with an impact energy of 5 joules.
- IK 08 PC** Luminaire with PC cover tested with an impact energy of 5 joules.
- IK 08 PMMA** Luminaire with PC cover tested with an impact energy of 5 joules.
- IK 09 ESG** Luminaire with single pane safety glass cover tested with an impact energy of 10 joules.
- IK 09 PC** Luminaire with PC cover tested with an impact energy of 10 joules.
- IK 09 PMMA** Luminaire with PMMA cover tested with an impact energy of 10 joules.
- IK 10 ESG** Luminaire with single pane safety glass cover tested with an impact energy of 20 joules.
- IK 10 ESG** (dashed border) Optional: Luminaire with single pane safety glass cover tested with an impact energy of 20 joules.
- IK 10 PC** Luminaire with PC cover tested with an impact energy of 20 joules.
- IK 10 PC** (dashed border) Optional: Luminaire with PC cover tested with an impact energy of 20 joules.
- IK 10 PMMA** Luminaire with PMMA cover tested with an impact energy of 20 joules.
- IK 11 PC** Luminaire with PC cover tested with an impact energy of 50 joules.
- IK 11+ PC** Luminaire with PC cover tested with an impact energy of 150 joules.

ORDERING PROCESS

- > Placeholder letters are integrated into the product overview tables to provide a clear overview of the versatility of the product range.
- > These placeholders always have to be replaced with the corresponding number when ordering.
- > Depending on the luminaire version, up to three of these placeholders (A, B, C or D) have to be replaced. The respective allocation of the version and the different variants are shown below the tables.

EXAMPLE FOR DETERMINING THE ARTICLE NUMBER:

Aim: luminaire CENTAURUS 650, wide beam, 830/3000 K, clear safety glass cover screen, with swivel bracket.

CENTAURUS

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. |
|------------|------------------|----------------|-------------------------|---------------------------------|
| 270 | 27020 | 159 | -35 °C to +50 °C | 915 270 AB CD -H1 |
| 400 | 39900 | 235 | -35 °C to +40 °C | 915 400 AB CD -H1 |
| 520 | 52250 | 305 | -35 °C to +40 °C | 915 520 AB CD -H1 |
| 650 | 65360 | 385 | -35 °C to +35 °C | 915 650 AB CD -H1 |

LIDC characteristic / A

- 2 = narrow beam (with individual reflectors)
- 3 = medium beam (without)
- 4 = wide beam (DDP prism screen)
- 8 = concentrated beam (DDP prism screen + individual reflectors)

Colour temperature / B

- 3 = 830/3000 K
- 4 = 840/4000 K
- 5 = 850/5000 K

Cover screen / C

- 4 = PC (fracture proof) clear
- 6 = single pane safety glass, clear

Installation type / D

- 2 = swivel bracket
- 6 = prepared for suspension system

Please enter the following article number when ordering: **915 650 43 62 -H1**

- > Please specify any additional options.

NOTE: Not all options are combinable. Please contact our Sales Department, which is happy to advise you in regard to options and accessories at any time.

ORDERING PROCESS FOR LED LUMINARIES WITH FOCUSED LIGHTING

- > The item selection tables for the luminaires show the guide values for the available luminous fluxes. The standard luminous flux for the direct replacement of luminaire lengths of a T8 fluorescent lamp is shaded in grey.
- > On the right you can find further guide values for the available luminous fluxes. When ordering, the corresponding guide value is added to the article number.
- > For optimised planning according to "Focussed lighting", please find the current luminous flux and system power values from the luminous flux table on the following pages or on our homepage.
- > Luminaire length and lumen package can be selected according to your energy optimised lighting design.

EXAMPLE FOR DETERMINING THE ARTICLE NUMBER:

Aim: luminaire ERFURT LED m1500 - MC 3, single lamp, medium beam, reflector tube PMMA Transopal® (impact strengthened)

ERFURT LED, SINGLE LAMP

| Version | Luminous flux/lm | System power/W | Ambient temperature | Article no. + MC |
|--|---------------------------|---------------------|-------------------------|------------------------------------|
| m600 <input type="checkbox"/> 840/4000 K | 1300 - 1710 - 2930 | 9 - 11 - 17 | -25 °C to +40 °C | 445 280 A4 B4 -F- ... |
| m1200 <input type="checkbox"/> 840/4000 K | 2600 - 3420 - 6270 | 15 - 19 - 34 | -25 °C to +40 °C | 445 480 A4 B4 -F- ... |
| m1500 <input type="checkbox"/> 840/4000 K | 4270 - 5280 - 7830 | 23 - 28 - 41 | -25 °C to +40 °C | 445 680 A4 B4-F- ... |

LIDC characteristic / A

- 2 = narrow beam
- 3 = medium beam
- 4 = wide beam

Reflector tube / B

- 2 = PMMA Transopal® (impact strengthened)
- 8 = PC Tropol® (fracture proof)

Lumen package / + MC

- MC 1
- MC 3
- MC 5
- MC 7
- MC 9

Please enter the following article number when ordering: **445 680 34 21 - E - MC 3**

- > The luminaire is set to the selected lumen package (here: MC 3) at the factory.
- > Please specify any additional options.
NOTE: Not all options are combinable. Please contact our Sales Department, which is happy to advise you in regard to options and accessories at any time.





High light quality and chlorine resistance are important requirements for luminaires in swimming pools.

SPARE PARTS


APPENDIX A

| Luminaire family | Version | Article no. | | |
|---|---|--|---|---|
| General | Access cover GD 372 x 54 x 14 mm, with gasket and screws | 200 971 |  |  |
| | Access cover MD 132 x 54 mm, with gasket and screws | 200 973 | | |
| | Access cover SD 189 x 31 mm, with gasket and screws | 200 977 | Article no. 200 222 | Article no. 200 226 |
| | Stainless steel mounting clamp (pair) | 200 222 | | |
| | Polymer mounting clamp for chlorine atmosphere, acid-resistant, white (pair) | 200 226 | | |
| | Polymer stirrup clamp, black (pair) | 200 211 |  |  |
| | Polymer stirrup clamp, white (pair) | 200 427 | | |
| | Polymer cable gland with strain relief, M20, white (pair) | 201 427 | Article no. 200 318 | Article no. 967 909 |
| | Polymer cable gland with strain relief, M20, black (pair) | 200 423 | | |
| | Cable entry M20, white (pair) | 200 352 |  |  |
| | Silicone gasket 38 mm (pair) | 200 351 | | |
| | Silicone gasket 50 mm (pair) | Available on request | Article no. 770 212 | Article no. 537 010 |
| | BASEL LED | Polymer pressure cap, white, with mounting screw | 200 220 | |
| BEBRA LED | Polymer pressure cap, white, with mounting screw | 200 119 |  |  |
| | Polymer stirrup clamp, black (pair) | 200 211 | | |
| BERLIN LED | Lamp diffuser PC Tropol [®] , sloping side panels | 421 040 | Article no. 200 211 | Article no. 200 214 |
| BERN LED | End cap, black, with cable gland M20, 2-pole | 536 971 | | |
| | Mounting clamp, stainless steel / black/ transparent polymer (pair) | 534 220 |  |  |
| BITBURG LED, BITBURG LED EXTREME, BITBURG LED INDUSTRY | Polymer pressure cap, white, with stainless steel clamps | 200 238 | Article no. 200 352 | Article no. 200 423 |
| | Stainless steel mounting clamp (pair) | 200 222 | | |
| BRIG | Housing cover with membrane seal | 539 924 |  |  |
| | Access cover with pressure balancing system | 539 925 | | |
| BRÜNN LED | Polymer pressure cap, white, with mounting screws | 485 020 | Article no. 200 220 | Article no. 485 020 |
| | Access cover 366 x 42 x 18 mm, with gasket and screws | 200 241 | | |
| COBURG LED | Pressure cap with borehole for LED | 835 970 | | |
| | Spare battery 1 h, 6.0 V/2.0 Ah, including battery cable | 100 420 | | |
| | Spare battery 3 h, 6.0 V/4.0 Ah, including battery cable | 100 430 | | |
| | Stainless steel mounting clamp (pair) | 200 222 | | |
| COESFELD | Polymer pressure cap, white, with mounting screw | 200 220 | | |
| | Polymer mounting clamp for chlorine atmosphere, acid-resistant, white (pair) | 200 226 | | |
| COESFELD PLUS | Polymer pressure cap, white, with stainless steel clamps | 200 238 | | |
| | Polymer mounting clamp for chlorine atmospheres, acid-resistant, white (pair) | 200 226 | | |
| ERFURT LED, ERFURT LED EXTREME, ERFURT LED HIGH OUTPUT, ERFURT LED INDUSTRY | Polymer pressure cap, white, with mounting screw | 200 220 | | |
| | Stainless steel mounting clamp (pair) | 200 222 | | |
| FULDA LED | Pressure cap, right, polymer, white | 545 970 | | |
| | Pressure cap, left, polymer, white | 545 971 | | |
| | Stainless steel mounting plate with mounting materials (pair) | 530 001 | | |











| Luminaire family | Version | Article no. |
|-------------------------|---|--------------------|
| GENF | Polymer pressure cap, white, with mounting screws | 335 970 |
| | Polymer mounting clamp for chlorine atmospheres, acid-resistant, white (pair) | 200 226 |
| GERA LED | Pressure cap with panel end piece, lengthwise (pair) | 784 970 |
| | Pressure cap with panel end piece, crosswise (pair) | 784 971 |
| | Stainless steel mounting clamp (pair) | 200 222 |
| HAMBURG LED | Screw ring, 38 mm, white (pair) | 200 318 |
| | Polymer stirrup clamp, white (pair) | 200 214 |
| JENA LED | Pressure cap with panel end piece, lengthwise (pair) | 783 970 |
| | Stainless steel mounting clamp (pair) | 200 222 |
| KIEL LED | Polymer screw cap, black, including mounting materials | 375 970 |
| | Polymer folding stirrup clamp, white (pair) | 200 214 |
| LUZERN 38 LED | Mounting clamps, stainless steel/polymer transparent (pair) | 537 010 |
| TRUNKING SYSTEM 185 | End cap for trunking system 185, height 40 mm Including mounting materials | 580 101 |
| | End cap for trunking system 185, height 70 mm Including mounting materials | 583 101 |
| TRUNKING SYSTEM 191 | End cap for trunking system 191, height 40 mm Including mounting materials | 466 101 |
| TRUNKING SYSTEM 285 | End cap for trunking system 285, height 40 mm Including mounting materials | 610 101 |
| | End cap for trunking system 285, height 70 mm Including mounting materials | 611 101 |
| TRUNKING SYSTEM BELFAST | End cap with fixing for trunking system BELFAST | 650 115 |
| MÜNCHEN LED | Polymer pressure cap, white, Including mounting materials | 455 970 |
| | Access cover 366 x 42 x 18 mm with gasket and screws | 200 241 |
| URANUS | Lateral housing cover including membrane seal | 967 970 |
| | Locking slide | 14 177 |
| | Aluminium mounting clamp | 967 909 |
| URANUS PF | Lateral housing cover including membrane seal | 967 970 |
| | Locking slide | 14 177 |
| | Aluminium mounting clamp | 967 909 |
| ZUG LED | End cap, black, with cable gland M20, 4-pole | 775 971 |
| | Mounting clamps, stainless steel/polymer transparent (pair) | 770 212 |

K COLOUR TEMPERATURES

APPENDIX B

LED luminaires with FOCUSED LIGHTING  and additional selected luminaires are available in the colour temperatures listed here. Please additionally enter the article number of the desired colour temperature when ordering. The standard colour temperature is 4000 K.

FURTHER COLOUR TEMPERATURES

| Version | Article no. |
|---|----------------------|
| HCL (Human Centric Lighting) | Available on request |
| For single lamp version, m600 | |
|  2700K | 122 700 |
|  3000K | 123 000 |
|  5000K | 125 000 |
|  6500K | 126 500 |
| For single lamp version, m1200 | |
|  2700K | 142 700 |
|  3000K | 143 000 |
|  5000K | 145 000 |
|  6500K | 146 500 |
| For single lamp version, m1500 | |
|  2700K | 162 700 |
|  3000K | 163 000 |
|  5000K | 165 000 |
|  6500K | 166 500 |
| For twin lamp version, m600 | |
|  2700K | 222 700 |
|  3000K | 223 000 |
|  5000K | 225 000 |
|  6500K | 226 500 |
| For twin lamp version, m1200 | |
|  2700K | 242 700 |
|  3000K | 243 000 |
|  5000K | 245 000 |
|  6500K | 246 500 |
| For twin lamp version, m1500 | |
|  2700K | 262 700 |
|  3000K | 263 000 |
|  5000K | 265 000 |
|  6500K | 266 500 |

LUMINOUS FLUX TABLES FOR LED LUMINAIRES WITH FOCUSED LIGHTING

APPENDIX C

LUMEN PACKAGES OF LAMPS FOR M600

SINGLE LAMP

BERN LED, BRIG, ERFURT LED, MÜNCHEN LED, LUZERN 38 LED, ZUG LED

| Article number of the lumen package | System power/W | Lamp luminous flux/lm |
|-------------------------------------|----------------|-----------------------|
| MC 1 | 9 | 1300 |
| MC 3 (± 18 W, T8) | 11 | 1710 |
| MC 5 | 13 | 2110 |
| MC 7 | 16 | 2730 |
| MC 9 | 17 | 2930 |

TWIN LAMP

ERFURT LED

| Article number of the lumen package | System power/W | Lamp luminous flux/lm |
|-------------------------------------|----------------|-----------------------|
| MC 1 | 15 | 2600 |
| MC 3 (± 2 x 18 W, T8) | 19 | 3420 |
| MC 5 | 23 | 4220 |
| MC 7 | 29 | 5460 |
| MC 9 | 31 | 5860 |

LUMEN PACKAGES OF LAMPS FOR M1200

SINGLE LAMP

BERN LED, BITBURG LED, BRIG, BRÜNN LED, COBURG LED*, ERFURT LED, FULDA LED, GERA LED, JENA LED, MÜNCHEN LED, LUZERN 38 LED, ZUG LED, ZUG LED AL

| Article number of the lumen package | System power/W | Lamp luminous flux/lm |
|-------------------------------------|----------------|-----------------------|
| MC 1 | 15 | 2600 |
| MC 3 (± 36 W, T8) | 19 | 3420 |
| MC 5 | 25 | 4640 |
| MC 7 | 32 | 5860 |
| MC 9 | 34 | 6270 |

TWIN LAMP

ERFURT LED, GENF LED

| Article number of the lumen package | System power/W | Lamp luminous flux/lm |
|-------------------------------------|----------------|-----------------------|
| MC 1 | 30 | 5200 |
| MC 3 (± 2 x 36 W, T8) | 38 | 6840 |
| MC 5 | 50 | 9280 |
| MC 7 | 64 | 11720 |
| MC 9 | 68 | 12540 |

LUMEN PACKAGES OF LAMPS FOR M1500

SINGLE LAMP

BERN LED, BITBURG LED, BRÜNN LED, COBURG LED*, ERFURT LED, FULDA LED, GERA LED, JENA LED, MÜNCHEN LED, NIGHTLINE, ZUG LED, ZUG LED AL

| Article number of the lumen package | System power/W | Lamp luminous flux/lm |
|-------------------------------------|----------------|-----------------------|
| MC 1 | 23 | 4270 |
| MC 3 (± 58 W, T8) | 28 | 5280 |
| MC 5 | 33 | 6300 |
| MC 7 | 39 | 7320 |
| MC 9 | 41 | 7830 |

TWIN LAMP

ERFURT LED, GENF LED

| Article number of the lumen package | System power/W | Lamp luminous flux/lm |
|-------------------------------------|----------------|-----------------------|
| MC 1 | 46 | 8540 |
| MC 3 (± 2 x 58 W, T8) | 56 | 10560 |
| MC 5 | 66 | 12600 |
| MC 7 | 78 | 14640 |
| MC 9 | 82 | 15660 |

NOTE:

NORKA LED products mainly have a service life of **L80 B10 > 60,000 h at the specified ambient temperature**. Divergent service lives are specified separately.

* COBURG LED: plus 2 W system power

Standard luminous flux, corresponds to the luminous flux of a luminaire with T8 of the same length

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