



**09 24**  
DETAILED CATALOGUE

**TrafficLED**  
LIGHTING SOLUTIONS

V0625

# Content

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## TrafficLED

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# Introduction

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Our product line of optical guidance devices is applicable in tunnels, roundabouts or on the road in general. We have detailed information, documentation, certificates for our system MarkLED which we would be appreciate to send if you are interested.

## Why optical guidance systems?

An optical guidance device improves recognition of lanes or obstacles, particularly during times of poor visibility (at night, fog, etc.) as well as vulnerable traffic areas such as tunnels, curves, roundabouts or traffic islands. The signals provide a very high degree of safety for traffic.

The system complies with current regulations (BAST Germany, FEDRO Switzerland e.g.) and are continuous EMC-approved, which means, that the system functions with cables/wires and is non-inductive, so electromagnetic fields are excluded.

The wired systems are installed directly in the road surface. However, it is important that the installation area is not constantly driven over. Our recess-mounted lamps are compatible with all GIFAS systems. They complement each other ideally and require the same system components such as a control unit, feeder cable, etc.

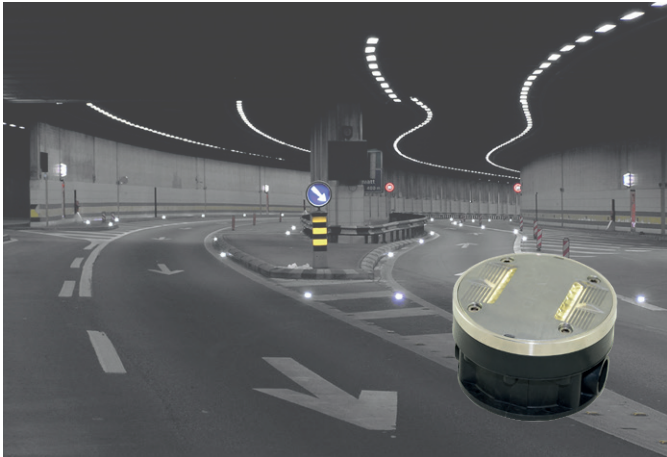
All GIFAS systems can be dimmed across a continuous scale using the control unit or remote control.

## Your advantages with this GIFAS system

- EMC-approved, no inductive interference
- quick and easy installation
- latest LED technology, very low power consumption
- vandal-proof, reinforced synthetic material/V4A Investment casting
- dimmable by control unit
- interoperable with all LED guidance systems
- modular construction, low-maintenance
- often set in systems in different applications
- thereby high product- and application know-how

## Our services

- many years of know-how, experienced Project Managers
- individual advice, also on site
- large standard range, individual solutions possible
- expert advice on installation and bringing into service
- creating CAD documents, voltage drop calculations and tunnel disposals
- own service team with professional equipment and many years of know-how



## The permanent drive-over marker and warning lights with the latest LED technology!

By popular demand and as widely requested, we have developed a completely new light that covers a variety of needs. In particular, the main target during development was the ability to withstand constant traffic on streets, on squares, or in tunnels. It is also often used in the driveways of tunnels for improved visibility of the course of lane and pedestrians for improved active safety. Last, but not least, they can also be used to light roundabouts (also for heavy traffic).

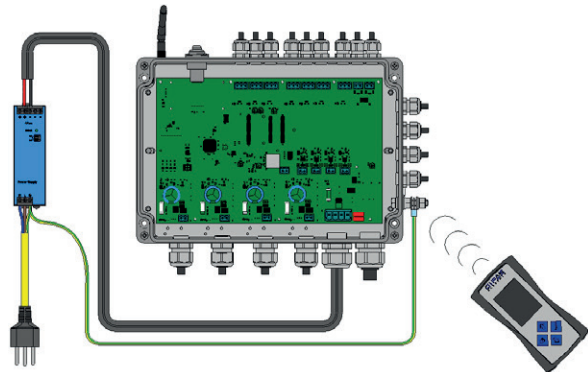
Standard SN 640853 «Underfloor Marker Lights» served as the basis for development with the following specifications and requirements:

- drive-over marker lights that can withstand constant traffic and that cover the entire summer/winter temperature range ( $-30$  to  $+75^{\circ}\text{C}$ ) and that can withstand mechanical stresses (40t truck)
- for safety reasons (slip hazard) matt, circular light
- protrude over road surface level max. 4.0mm
- resistant to sand, snow spikes and chains, street cleaning
- have no protruding corners or edges that could be touched by a snowplough
- surface and light emission areas are designed in such a way that as little dirt as possible is deposited
- waterproof, frostproof, and resistant to UV sunlight/chemicals/oil and road salt
- very good visibility in the dark, wet, and snow
- other applications: such as lane marking

The TrafficLED system complies with current regulations (e.g. BAST in Germany, FEDRO in Switzerland) and is one of the few EMC-tested systems, which means that the system works via wires, not induction.

## Module

The TrafficLED is connected with the system cable. It lights on both sides. Due to its modular structure with an upper and lower part, it is very easy to install. The different modes of the TrafficLED, such as dimmable, blinking, flashing, etc., can be set via the controller.



## Control/Remote control

The 4-channel control unit is used to control the GIFAS control units. It can be integrated into existing control cabinets or also as a stand alone module.

The remote control can be used for programming, operation and fault diagnosis. A single remote control can be used for multiple control units.

## System cable

The system cable is made specifically for the GIFAS recessed lighting systems to meet its demands. The cable is halogen-free, mechanically reinforced and may come briefly into contact with hot substances such as Bitumen.

## Junction box

The junction box is the control interface and the actual «front installation». Usually, the junction boxes are placed at the beginning or at the end of each line of TrafficLED's, easy to assemble with prefabricated mounting tabs. We recommend our own standard junction boxes which meet all system requirements.

## Product documentation

### Installation instructions



### Reference list

High pressure steam-jet

RIKON

Light distribution

Build in alpine area

richt

angeleuchte

in Teilen in Profiligen der Feme

Werk für einen in einem Raum

Das System ist nach dem Prinzip der Lichtverteilung

Das System ist nach dem Prinzip der Lichtverteilung

Das System ist nach dem Prinzip der Lichtverteilung





## Technical data

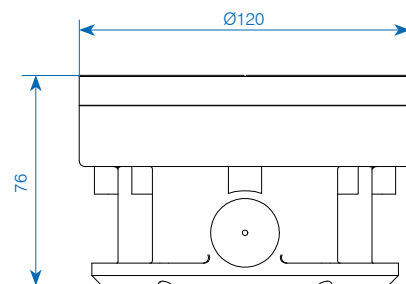
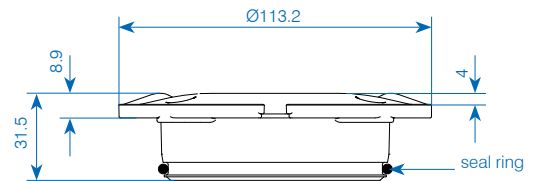
Set up: LED's	single-sided or double-sided with 6 LED's
Light colours:	on each side white (5'600K), orange (600nm), blue (470 nm)
Light intensity:	30 cd
Operating life LED:	50'000 h
Protection category:	IP68/IP69
Protection class:	III
Impact protection rating:	IK10
Operating voltage:	24 VDC (range 18 - 44 VDC)
Power consumption:	140 mA @ 18 - 28 VDC / 85 mA @ 28 - 44 VDC
Diameter:	120 mm
Height:	80 mm
Material upper part:	chrome steel V4A
Material lower section:	IXEF glass fiber reinforced polyarylamide, black
Height over road surface level:	4 mm
Temperature resistance:	-30° C to +75° C
Drive-over resistance:	D400 according to DIN EN124

Certificates, reference list etc. available on request.

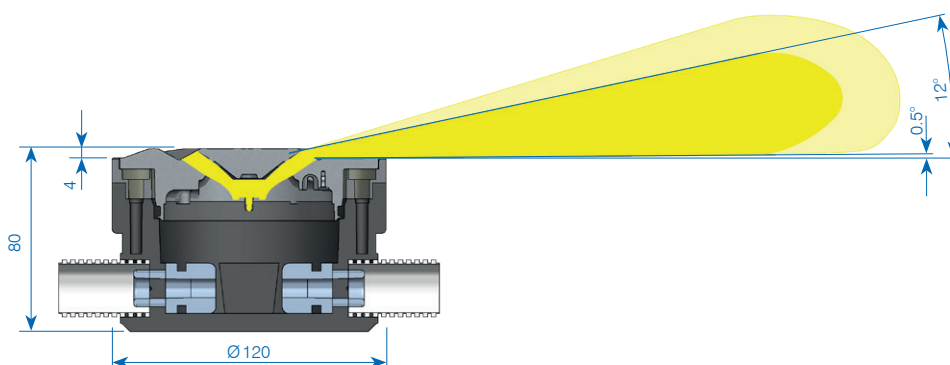
## Product features

- floor pit made out of special IXEF plastic
- stainless steel V4A upper section
- electronics completely encapsulated
- brightness of the lighting modules can be easily adjusted via controller unit and changed from the tunnel control centre via automatic light control or direct control system

## Single components



## Scheme light emission



# Applications





# Assortment

## Assortment

<b>138244</b>	TrafficLED light module V4A, 18-28VDC, 140mA/28-44VDC, 85mA, double-sided 6×LED white, 5'700K
<b>136194</b>	TrafficLED light module V4A, 18-28VDC, 140mA/28-44VDC, 85mA, double-sided 6×LED orange, 600-609nm
<b>139997</b>	TrafficLED light module V4A, 18-28VDC, 140mA/28-44VDC, 85mA, double-sided 6×LED blue, 470nm
<b>213778</b>	TrafficLED light module V4A, 18-28VDC, 40mA/28-44VDC, 85mA, double-sided 6×LED white 5'700K, BAST switchable
<b>146904</b>	TrafficLED light module V4A, 18-28VDC, 80mA/28-44VDC, 50mA, single-sided 6×LED white, 5'700K
<b>145604</b>	TrafficLED light module V4A, 18-28VDC, 80mA/28-44VDC, 50mA, single-sided 6×LED orange, 600-609nm
<b>153147</b>	TrafficLED light module V4A, 18-28VDC, 80mA/28-44VDC, 50mA, single-sided 6×LED blue, 470nm
<b>142301</b>	TrafficLED lower section Ø 120×65mm, 1 CG M16 (Ø 4-9) casing plastic anthracite with adjustment ring
<b>142302</b>	TrafficLED lower section Ø 120×65mm, 2 CG M16 (Ø 4-9) casing plastic anthracite with adjustment ring
<b>148704</b>	TrafficLED lower section Ø 120×65mm, 1 CG M16 (casing plastic anthracite with adjustment ring (for system cable flat)
<b>148705</b>	TrafficLED lower section Ø 120×65mm, 2 CG M16 casing plastic anthracite with adjustment ring (for system cable flat)
<b>167067</b>	TrafficLED lower section Ø 120×65mm plastic IXEF 1521, 1 hose nipple M25
<b>167065</b>	TrafficLED lower section Ø 120×65mm, 2 CG M16 (Ø 4-9) casing plastic anthracite with adjustment ring, 2 hose nipples M25
<b>215065</b>	TrafficLED lower section 1 CG M16 (Ø 4-9) 1 hose nipple - special
<b>212656</b>	TrafficLED lower section Ø 120×65mm, 2 CG M16 (Ø 4-9.5) casing plastic anthracite with adjustment ring, CG mounted in the ground
<b>141481</b>	TrafficLED blind cover V4A, Ø 113.2×27.5mm incl. seal ring and screws
<b>140783</b>	TrafficLED blind cover, Ø 113.8×4.9mm polypropylene natural white (for temporary cover only)
<b>037712</b>	Levelling console V2A, range 85-168mm
<b>173496</b>	System cable TPE black, halogen-free, 2×2.5mm², Ø 8.2mm, strands: red, black

other versions on request

## Installation jig

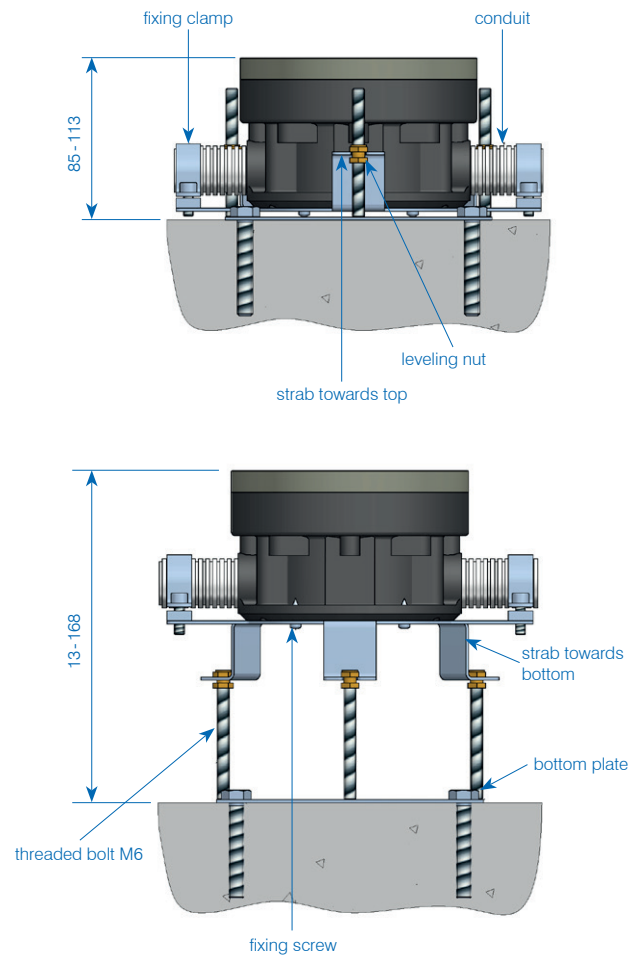
GIFAS provides a suitable installation jig for mounting the TrafficLED module. This makes it possible to adjust to the ground level exactly and to optimise the relocation of the component.



## Assortment

<b>143015</b>	Installation jig TrafficLED (on loan by GIFAS)
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## Leveling support N° art. 037712



N° art. 142302



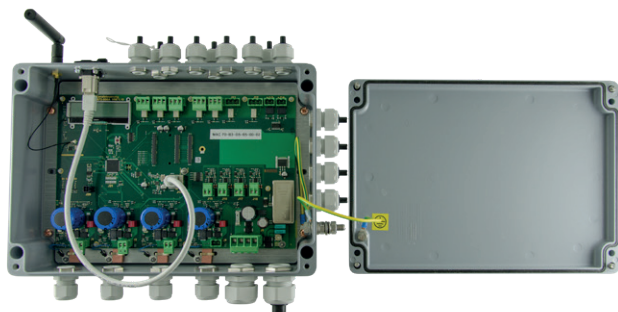
N° art. 140783



N° art. 141481

# System components – Control units

## 4-channel control unit



The control unit for all GIFAS systems is designed for 4 output lines. Each channel can be loaded with up to 10A.

- **Supply:** a 230VAC/24-48VDC power supply device with a nominal output current of 40A is installed upstream from the control unit.
- **Error messages:** each channel has a relay with SPDT (potential free) assigned to the signaling of error messages.
- **External blinking contacts:** by default, two external flashing signals (24-60VDC) can be connected and transferred to the outgoing lines (synchronisation with flashing signal).
- **Operating mode:** the control unit has 8 or 31 different modes of operation.
- **Failure rate:** by failure rate detection, the lights can be tested for their functionality. The control unit measures the total power consumption of the respective channel. If the power consumption drops to a preset value, the fault message can be detected via a changeover contact (potential-free).
- **Functions:** one of the following functions can be assigned to each channel in each mode:
  - continuous lighting: 100%
  - dimming: adjustable from 1-99%
  - flash: adjustable from 0.1-9.9Hz
  - lightning: adjustable from 1-99ms
  - running light: running light direction, dimming 1-99%, light duty cycle 100ms-10sek, delay in lighting 100ms-10sek, switch-on delay 0-999sek, duty cycle 0-999sek
  - off
- **Programming:** the control unit can be optionally parametrised and read out via the web interface or the optionally available radio programming unit.
  - Web interface: if the control unit is connected to the network via RJ45 Cat. 6a, all parameters can be set and read out via a web browser.
  - Radio programming unit: the parameters can also be set by the radio programming unit.

### Technical data

Input voltage:	18-48VDC
Supply current:	40A, 4 channels à 10A
Rated power max.:	1'920VA
Power supply:	external
Protection category:	IP65
Dimensions:	330×230×110mm

### Assortment

<b>860594</b>	4-channel control unit in cast aluminium housing, IP65, 18-48VDC/4×10A, excl. power supply
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## Remote control to 4-channel control unit



Programming device with menu guide for set-up, programming and status recognition of the control unit. Communication with the control unit occurs through radio.

All necessary functions can be set up and assigned through the menu structure. No special knowledge is required to operate it. The connection between the control unit and the programming device is bi-directional, i.e. the current settings can be transferred from one to the other.

The buttons «↑», «↓», «☒» and «✓» are used to navigate the system. The range is approx. 3m.

The menu is available in four languages: German, English, French and Italian..

### Technical data

Operating voltage:	4.5VDC, 3 batteries AAA
Radio frequency:	2.4-2.525GHz
Life of battery:	> 1 year in standby mode
Material:	ABS
Protection category:	IP40
Protection class:	III
Dimensions:	73×140×32mm

### Assortment

<b>860460</b>	Remote control to 4-channel control unit
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# System components – Control units

## Power supply to 4-channel control unit



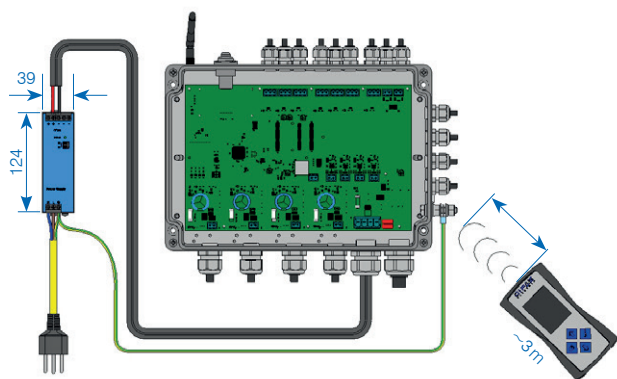
A power supply is installed upstream from the 4-channel control unit. The power supply is equipped with integrated protection against overloading and short-circuiting, with automatic or manual reset.

The power supply conforms to CEE regulations and also has UL and/or CSA approval.

### Technical data

Input voltage:	230VAC (range 100-240VAC)
Output voltage:	24/36VDC
Output current:	6.7/10/13.3/20A
Connections primary:	screw terminals 4mm <sup>2</sup>
Connections secondary:	screw terminals 4mm <sup>2</sup>
Status display:	LED green
Installation:	quick fastening for DIN rail 35mm
Protection category:	IP20 (IP42 with additional cover)
Protection class:	I
Dimensions:	different, see designation below

 A detailed datasheet on the power pack is available on request



### Assortment

<b>163193</b>	Power supply 230VAC/24VDC-10A/240W 39×124×117 mm
<b>136629</b>	Power supply 230VAC/24VDC-20A/480W 65×124×127 mm
<b>192133</b>	Power supply 230VAC/36VDC-6.7A/240W 39×124×117 mm
<b>244126</b>	Power supply 230VAC/36VDC-13.3A/480W 65×124×127 mm

Other versions on request

## Cold conductor monitoring



The cold conductor monitoring is used for detecting defective installations or lights that are not connected. The monitoring is automatically activated as soon as the lights are switched off.

- **Feeding:** a power supply 230VAC/18-48VDC with a rated output current of max. 10A is connected upstream of the cold conductor monitoring. The level of the output voltage of the power pack depends on the marking light used in this case.
- **Fault signal:** the cold conductor monitoring has two relays with change-over contact (potential-free) to signal fault messages for voltage interruption (for example, failure of the power supply unit) and exceeding of the failure rate (for example defect in the control unit installation).
- **Functions:** in every cold conductor monitoring, the threshold for the max. failure rate detection can be set individually in percentage. The adjustment range is 10-70% and can be adjusted in 10% increments.
- **Programming:** programming is done directly via the programming buttons on the control board or via the 4-channel control unit..

### Technical data

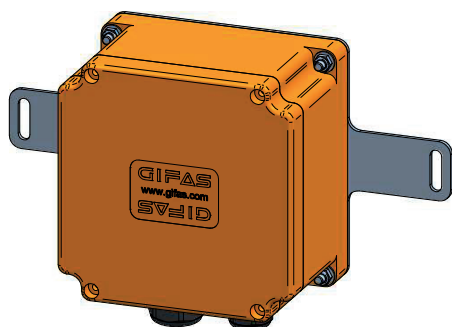
Input voltage:	18-48VDC
Supply current:	10A
Rated power max.:	480VA
Power supply:	external
Protection category:	IP66
Dimensions:	160×100×80mm

### Assortment

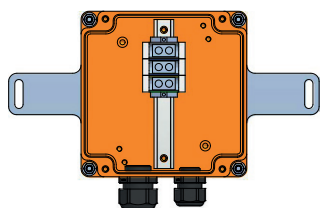
<b>860603</b>	Cold conductor monitoring in cast aluminium housing, IP65, 18-48VDC, 10A, excl. power supply
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# System components – Mounting

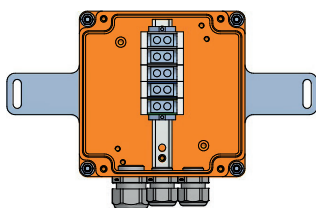
## Junction boxes



The safety cable must be connected from control center to the GIFAS system cable when connecting the signal units to the infrastructure. A special junction box is required for these connections. This can be installed in the cable trunks in the tunnel shoulder or at another suitable point. An E30/E60 junction box is usually required for this application. The size of junction box depends on the feed-in cable used as well as the number of outlets.



N° art. 207643



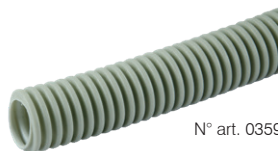
N° art. 208762

### Assortment

**207643** Junction box polyester FE180/E30 type 1616, orange  
160×160×100 mm, 3×6 mm<sup>2</sup>, IP66/68,  
1×M20/1×M25 – 1 outlet system cable

**208762** Junction box polyester FE180/E30 type 1616, orange  
160×160×100 mm, 5×6 mm<sup>2</sup>, IP66/68,  
2×M20/1×M25 – 2 outlets system cable

## Installation material – Protective hose



N° art. 035976



N° art. 128266

Depending on the type of installation, the system cable can also be conducted in an installation tube.

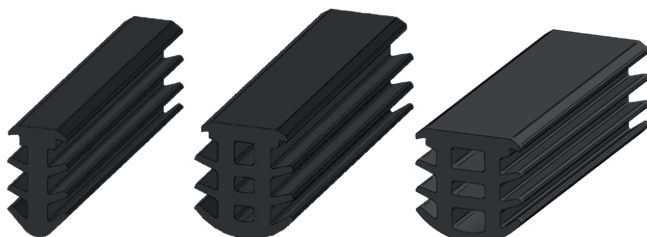
### Assortment

**035976** Installation tube Ø25/19 mm, flexible (selling unit = 100 m)

**128266** Corrugated hose PA6, Ø21.2/16.5 mm, flexible, (selling unit = 50 m), UV resistance, operating range of temperature  
–40 °C to 120 °C, temporarily over 150 °C

# System components – Mounting

## Joint profile



N° art. 116753

N° art. 140862

N° art. 155809

The milled groove of the optical guidance system must be sealed against environmental conditions. A simple and low-cost solution is to use the halogen-free GIFAS joint profile made of EPDM. This is inserted in the slot. It is self-locking and available in three different widths. A stable and smooth slot with slot widths of 6-16mm is the prerequisite for use.

### Technical data

Material properties:	halogen-free, no corrosive and toxic gases
Shore hardness A:	70° ±5%
Special weight:	1.23 kg/l
Elongation at break:	237% DIN 53504
Breaking stress:	11.2 MPa DIN 53504

#### Item no. 116753

Exterior dimensions:	9.3 mm × 17.1 mm
Groove width:	6-8 mm
Nominal section:	89 mm <sup>2</sup>
Weight:	109 kg/km

#### Item no. 140862

Exterior dimensions:	14.5 mm × 17.1 mm
Groove width:	10-12 mm
Nominal section:	146 mm <sup>2</sup>
Weight:	177 kg/km

#### Item no. 155809

Exterior dimensions:	17.35 mm × 17.5 mm
Groove width:	14-16 mm
Nominal section:	171 mm <sup>2</sup>
Weight:	254 kg/km

### Assortment

<b>116753</b>	Joint profile EPDM 70° Shore for groove 6-8 mm, 9.3 × 17.1 mm, black
<b>140862</b>	Joint profile EPDM 70° Shore for groove 10-12 mm, 14.5 × 17.1 mm, black
<b>155809</b>	Joint profile EPDM 70° Shore for groove 14-16 mm, 17.35 × 17.5 mm, black

## Sealing compound



The recommended sealing compound is heated to 160°–180°C while being constantly mixed. The compound is applied using a spouted container or grouting lance. Excess compound must be removed by scraping once it has fully cooled.

### Technical data

Colour:	black
Form of delivery:	1 box with 24 cubes of 700 g each
Sealing temperature:	160°C - 180°C
Weight per unit volume:	1.2 g/cm <sup>3</sup>

### Assortment

<b>208907</b>	Hot/liquid/bitumen sealing compound TOK-Melt N2
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### Mortar

In order to install the lower part of the TrafficLED, you need mortar to fill in. For each lower part you will need approx. 0.7 l (~1.17 kg).

### Two-component mortar

If the luminaire is to be installed in an area of the road with constant heavy traffic, we recommend using a two-component repair and adhesive mortar such as Bücofix or similar.

### Assortment

<b>161035</b>	Mortar PCI Polifix Plus L (bag of 25 kg)
<b>184454</b>	2-component reactive resin Bücofix SRV black (bucket of 5 kg)

### Insulating gel

When not mounted on the wall, the box must be cast with removable sealing compound, e.g. BLUE GEL:



### Assortment

<b>166534</b>	Insulating gel BLUE GEL, solvent-free, bottle of 1 litre; per LED module 0.15 litres are required
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**THE  
SOLUTION  
PARTNER**

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