GIFAS
ELECTRIC

LaneLED WALL ECO

LIGHTING SOLUTIONS

V0925

Introduction

Continuous evacuation lighting system for road tunnels

LaneLED WALL ECO evacuation lighting system is a continuous lighting system that can be mounted on concrete walls, concrete barriers, in rock tunnels and around emergency exit doors. When switched on it provides a bright LED line all along the tunnel wall, helping the people to evacuate from the tunnel in case of an incident (fire, smoke etc.).

The evacuation lighting system is following the demands of «Nordiskt Möte för Förbättrad vägutrustning» (Nordic cooperation group in the field of road equipment) as specified in the specification «NMF01:2021 LED luminaires».

Main focus of LaneLED WALL ECO is on the easy and quick installation without tools (plug-and play) as well as the cost-optimized components. The lighting system comes with a static, continuous white LED strip which is switched on in case of an incident (normally off). One segment is equipped with 125 m LED strip which is fed from both ends (48 VDC), providing an average luminous flux of 200 lumen/m.

The same lighting system can also be used to mark exit doors with a green LED strip (always on).

LaneLED WALL ECO is complementing our LED guidance/evacuation LED point lights where we are Swiss market leader since more than 20 years. This product is also in line with our LaneLED GFK self-rescue handrail lighting system for railway tunnels where GIFAS was among the first who have provided a complete and integrated continuous lighting solution.

concrete wall (smooth surface)
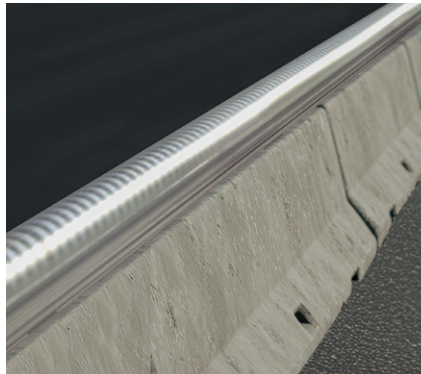
top mounted on concrete barrier
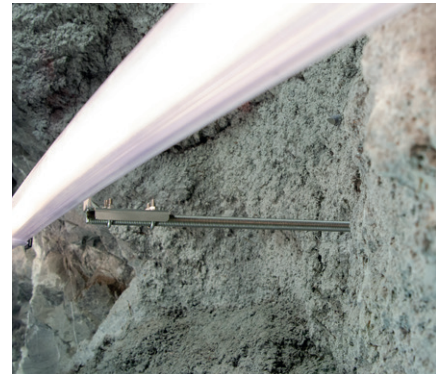
rock tunnel (rough surface)

Toolless concept

LaneLED WALL ECO comes with a LED strip and the modular housing where the LED strip is clicked in. The LED strip has a standard length of 62.5 m (2×62.5 m = max. 125 m) and is equipped with plugs / sockets on each end.

The housing consists of a LED strip carrier profile (6 m or 3 m standard length), which comes with 4 longitudinal sealings. Connection of the carrier profiles is done with a profile connector which is placed every 6 m or 3 m.

Once the LED strip is clicked into the carrier profile, the cover profile (3 m or 6 m standard length) is snapped on and sealed with a cuff which is plugged and locked on the profile connector. The locking is done with 2 sliders.
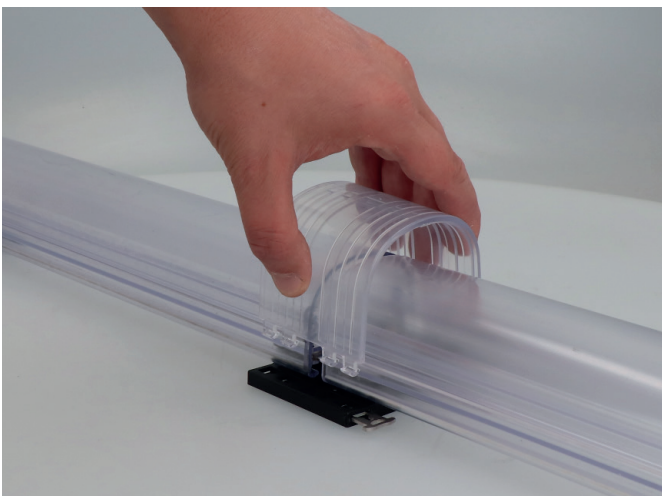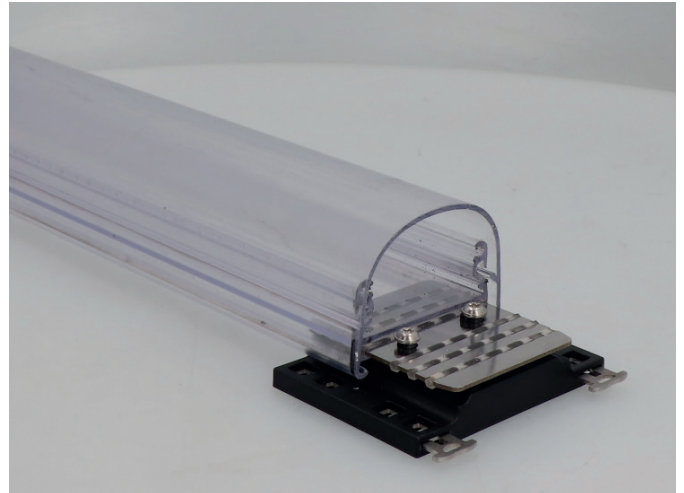
Benefits

– robust and long lasting design
– different mounting methods (direct on wall or with rockbolts)
– quick installation (easy to cut, plug-and-play)
– few components
– halogen free
– no soldering
– segment length up to 130 m (48 VDC power supply on both ends)
– safe also in case of an accident due to extra low voltage (48 VDC)
– easy to maintain and repair in case of damage (e.g. due to accidents)
– resistant to cleaning agents and rotating brushes
– support from GIFAS during design, installation and operation

Technical data

Mechanical

Protection category:	IP66 / 69 K (LED strip IP67)	
Impact resistance:	IK08	
Materials:	Cover front / back:	Polycarbonate
	Endcaps:	Polycarbonate
	Profile connector:	PA66 / stainless steel (back)
		PC / TPE 2 K (cuff)
Mounting brackets:	stainless steel 1.4404 (AISI 316)	
Profile length:	6'000 mm / 3'000 mm	
Max. bending radius:	see page 10	
UV resistant:	yes	
Chemical resistant:	yes, to common cleaning agents	
Flammability:	UL94-V0	
Halogen-free:	yes	

Electrical

Voltage:	Input: 230 VAC / Output: 48 VDC
Protection class:	III
Segment length:	max. 130 m (feeding from both ends)
Power / m:	3W / m

Lighting data

White (along tunnel):

Colour temperature:	white, 4'000 K (+/- 200 K)
Light output LED:	120°
Luminous flux @48VDC:	200 - 250 lm (min 180 lm), depending on segment length
Lifetime:	100'000 h L80
Function:	on / off (no dimming)

Green (exit door frame):

Colour temperature:	green, 520 nm
Light output LED:	120°
Luminous flux @48VDC:	470 lm
Lifetime:	100'000 h L80
Dimming:	yes (PWM), feeding from one side only
Function:	– normal situation: constantly lit, 235 lm
	– in case of incident: blinking with 0.5 Hz, 470 lm

Standards

In compliance with:	– NMF01
	– Svv HB 500 / 601
	– EN 60598-2-22
	– EN 55015
	– EN 61547
	– EN 55032

Mounting options – overview

Wall mounting on smooth surface (details on page 6)
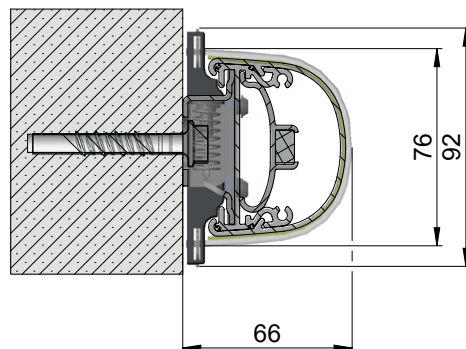
Top mounting on smooth surface (details on page 7)
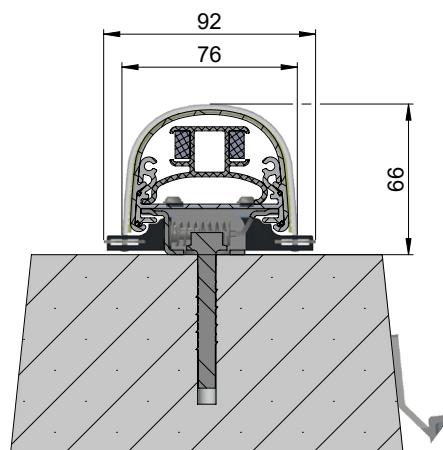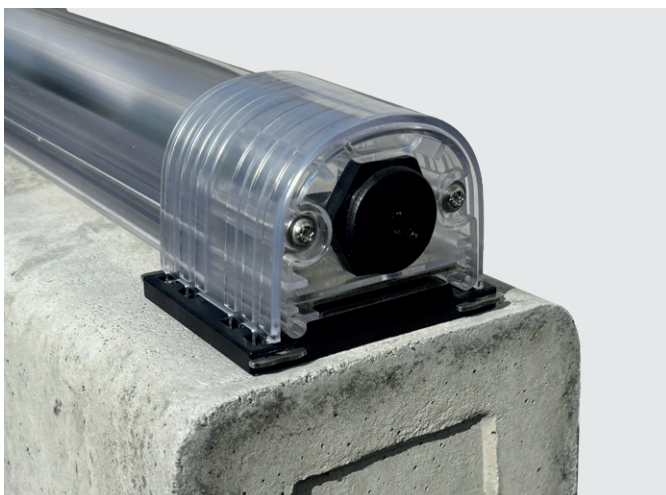
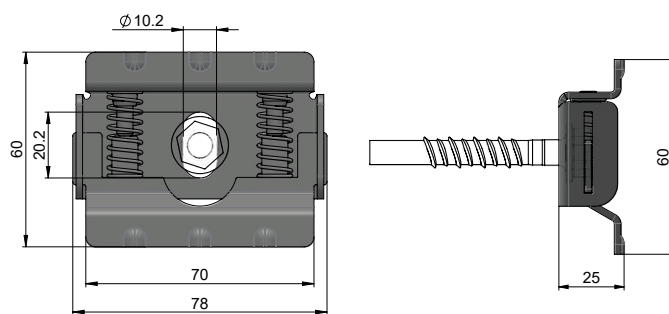## Mounting with rockbolts (details on page 8)
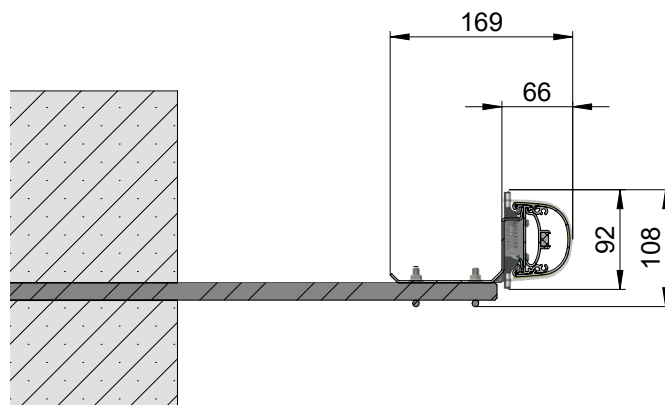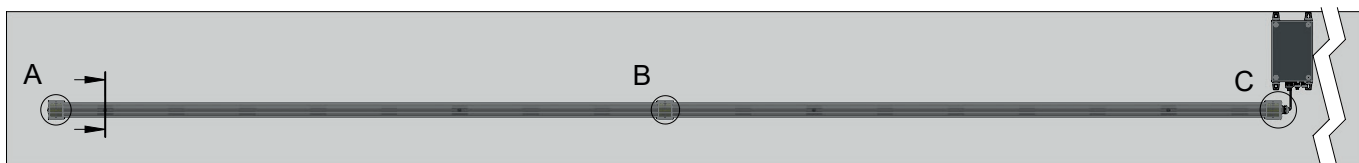
Wall mounting on smooth surface

Mounting situation
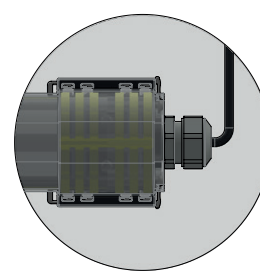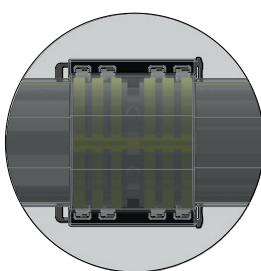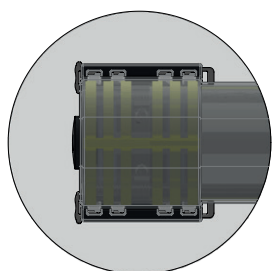

Mounting bracket (distance: max. 1'750 mm)

System structure

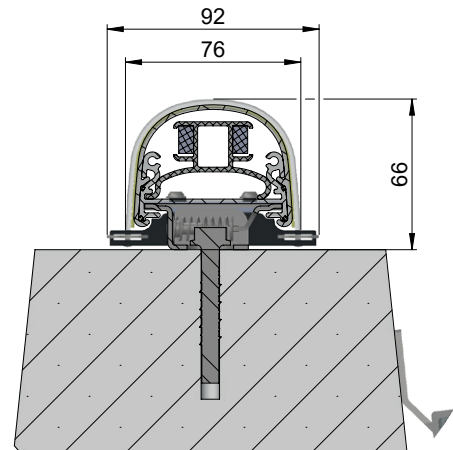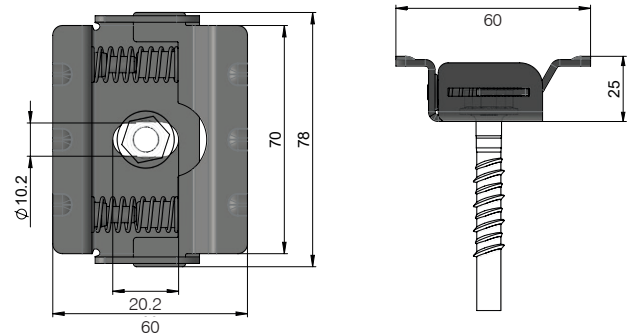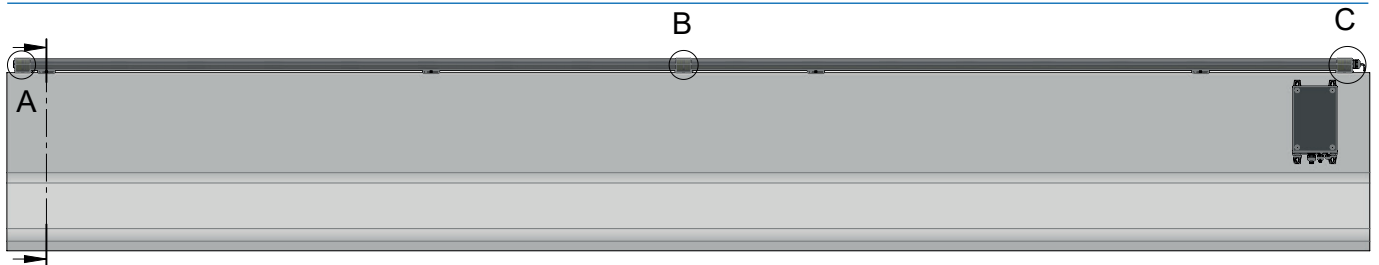

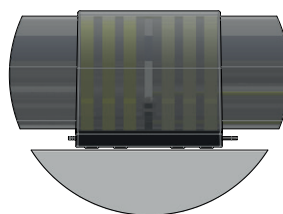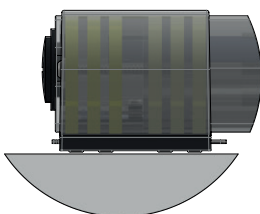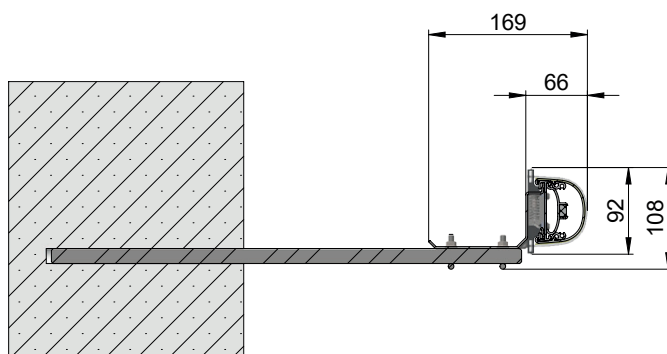A   B   C
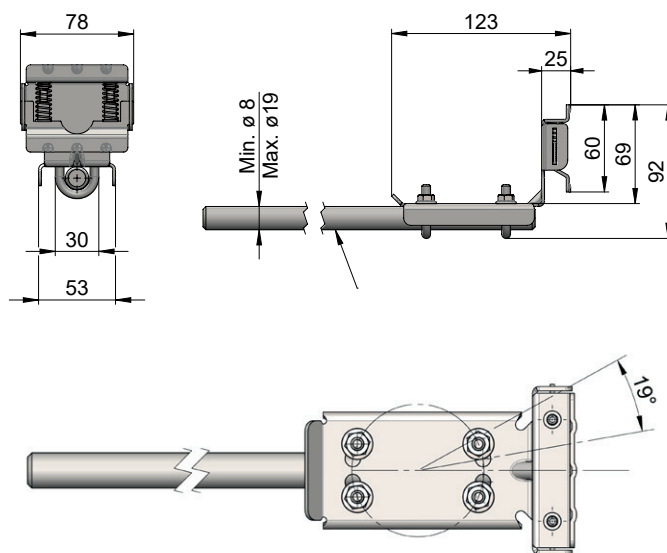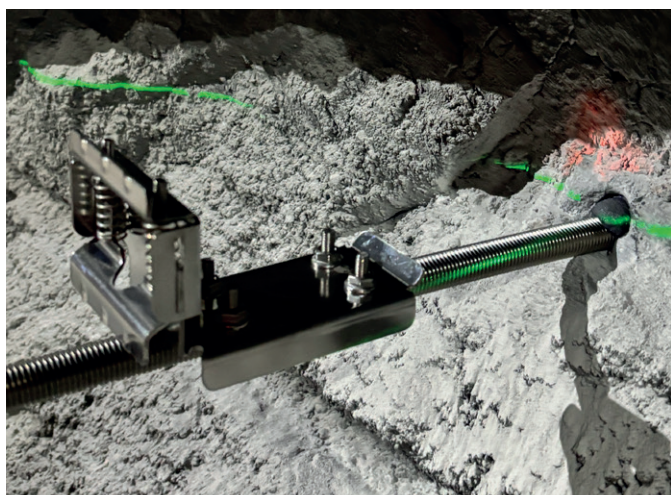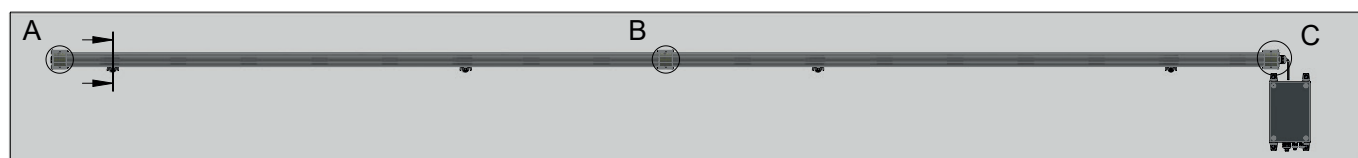
Endcap (A)	Profile connector (B)	Cable entry (C)

Top mounting on smooth surface

Mounting situation

92
76
66

Mounting bracket (distance: max. 1'750 mm)

Ø 10.2
70
78
20.2
60

60
25

System structure

A   B   C

Endcap (A)   Profile connector (B)   Cable entry (C)
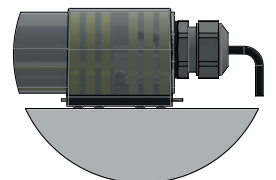
Rock bolt mounting (rough surface)

Wall mounting with rockbolts

169
66
92
108

Mounting bracket (distance: max. 1'750 mm)

78
30
53

123
25
Min. ø 8
Max. ø19
60
69
92

19°

System structure

A   B   C

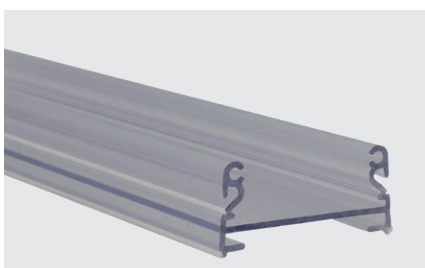Endcap (A)

Profile connector (B)
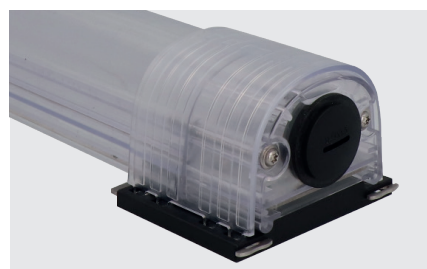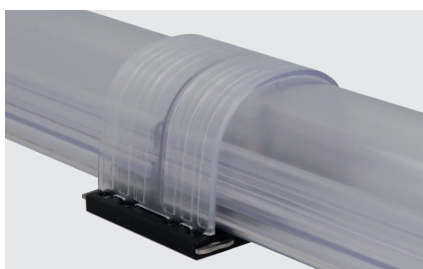
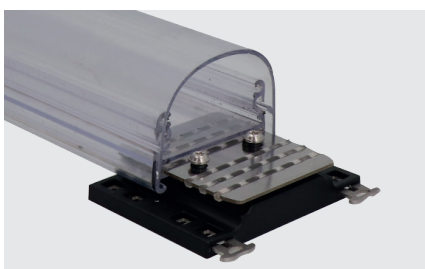Cable entry (C)

33
60

Components – overview

LaneLED WALL ECO consists of the LED strip (total length max. 130 m), the modular housing (3 m or 6 m), the stainless steel mounting brackets as well as the power supplies.
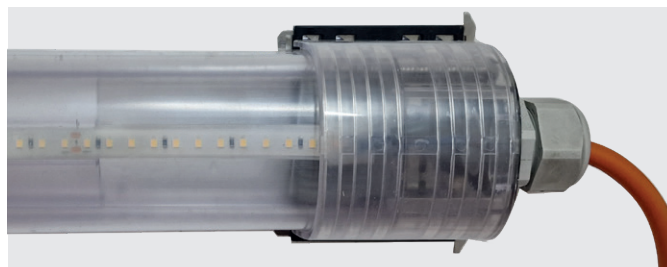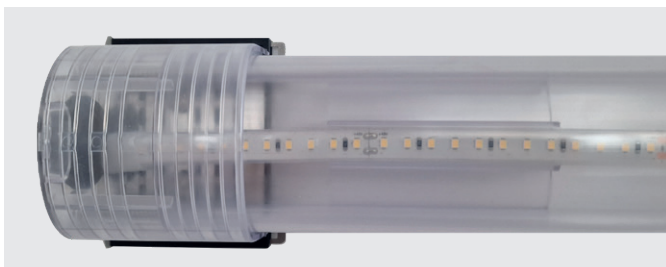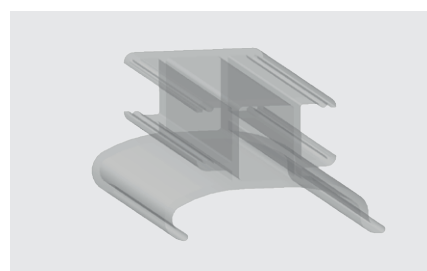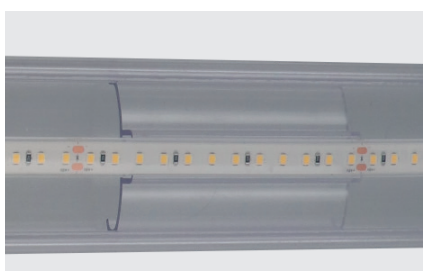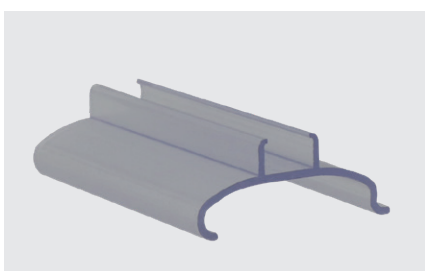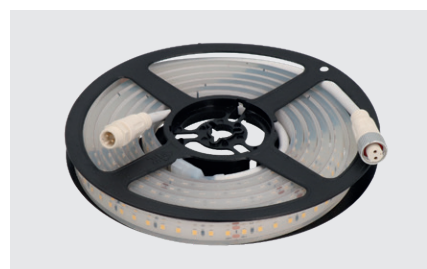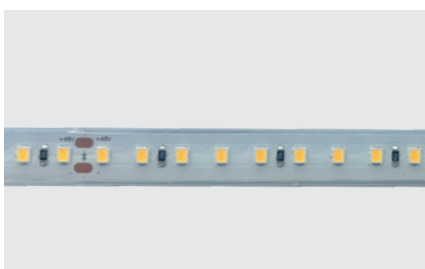

Modular housing (3 m / 6 m)
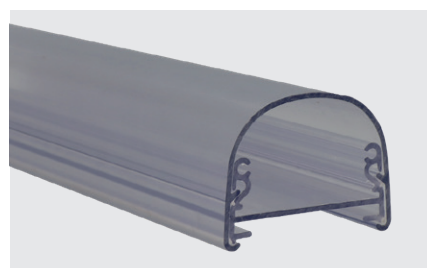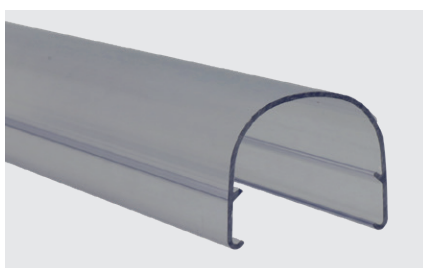
Profile connector

Holder LED strip
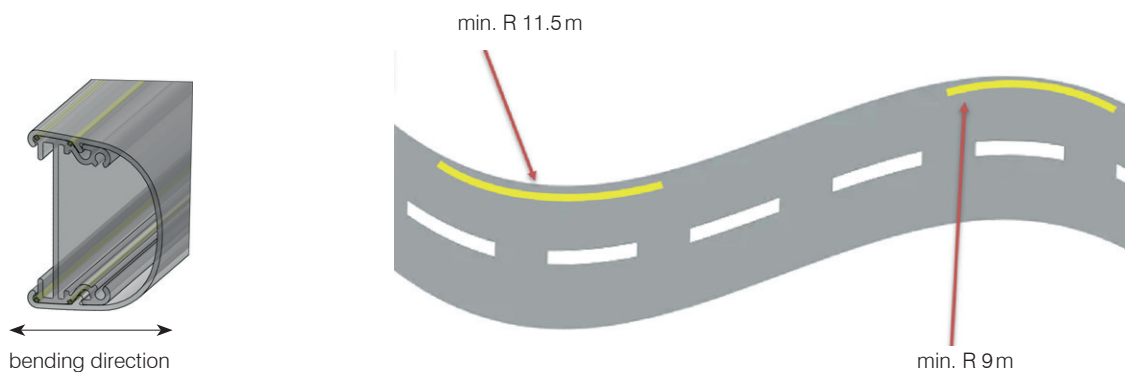
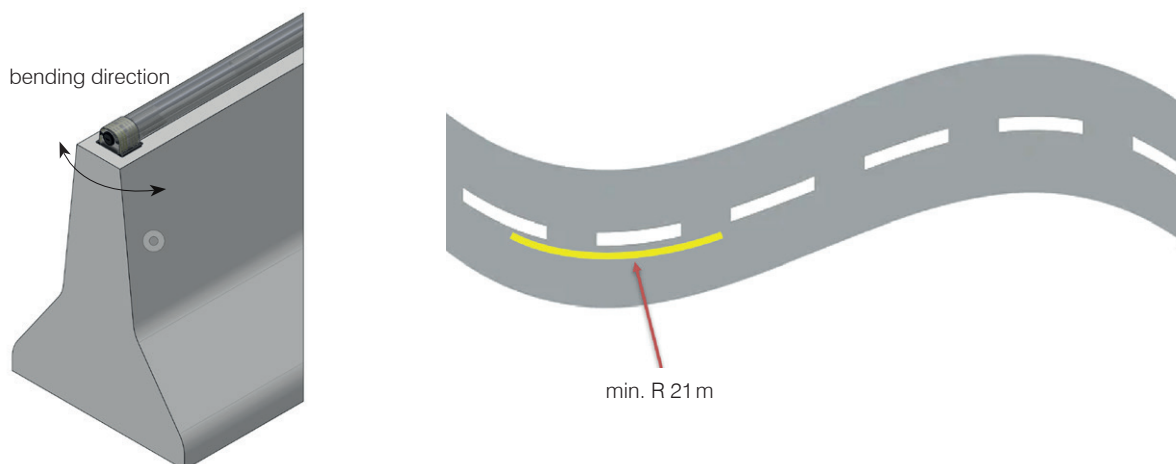

LED strip – (various length)

Curves – bending radius

Following bending radius can be realised:

Wallmounting (on smooth and rough surface)

bending direction

min. R 11.5 m

min. R 9 m

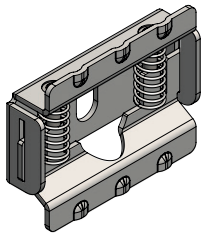## Topmounting

bending direction

min. R 21 m

In case more bending is necessary (e.g. 90° corners), there is a flexible "corner kit" available (constisting of 2 endcaps, 2 fixing brackets and a transparent, flexible hose):
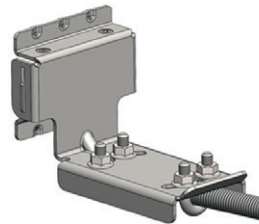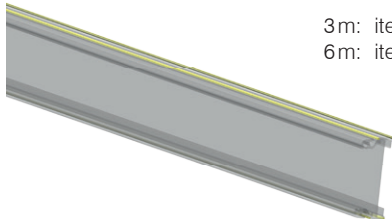
Article overview

Mounting bracket «smooth surface», item no. 861920

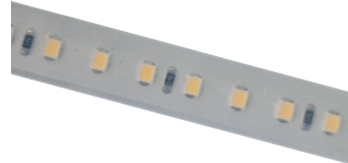## Mounting bracket «rockbolt», item no. 861924
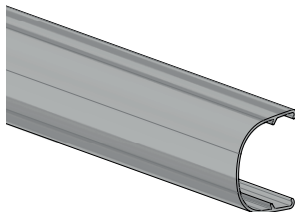
Carrier profile
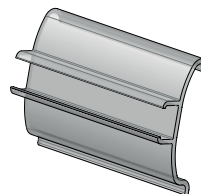
3 m: item no. 861951
6 m: item no. 861257

LED strip

62.5 m: item no. 861949
25 m: item no. 861956
3 m: item no. 861957
1 m: item no. 861964
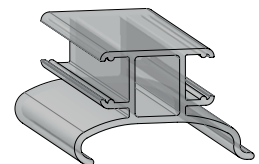
Cover profile

3 m: item no. 861952
6 m: item no. 861258

Holder LED strip

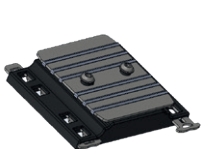Item no. 861259   Item no. 861914

Connector with cuff
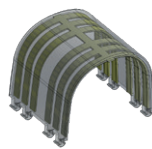
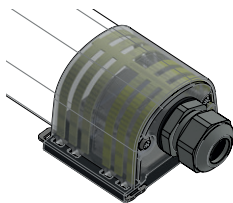Item no. 861959   Item no. 861912   assembled
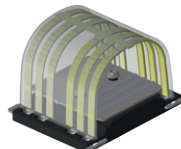
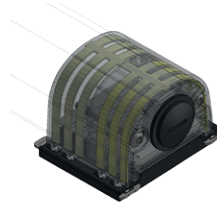## Endcap set «cable gland M25», item no. 861960

feed-in: M25   gel box   2×connector (4 mm²)
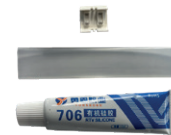
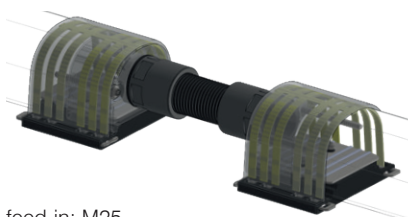## Endcap set «blind cover», item no. 861961
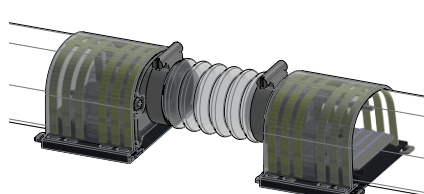
feed-in: M25   LED strip connection set

Corner-Set «Agro conduit», item no. 861963

feed-in: M25
length tube: 170 mm

## Corner-Set «transparent», item no. 861962

feed-in: M25
length tube: 75 mm

LED strip

The 48 VDC LED strip comes in 4 standard length: 62.5 m, 25 m, 3 m and 1 m. Each LED strip is equipped with IP67 connectors on both ends. The LED strip can be cut every 100 mm and be reconnected with the LED strip connection set.

Voltage:	Input: 230 VAC / Output: 48 VDC
Segment length:	125 m (2×62.5 m), max. 130 m
Colour temperature:	4'000 K
Protection category:	IP67
Protection class:	III
Length:	62.5 m (item no. 861949), 25 m (item no. 861956), 3 m (item no. 861957), 1 m (item no. 861964)
Width:	12 mm
Cable length:	150 mm + connector
Power/m:	3 W/m
Distance of LED's:	8 mm
Cuttable segments:	every 100 mm

LED strip – (various length)
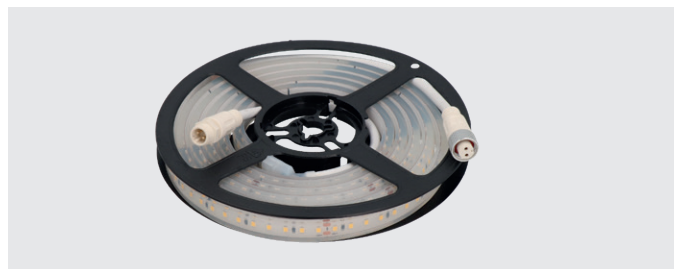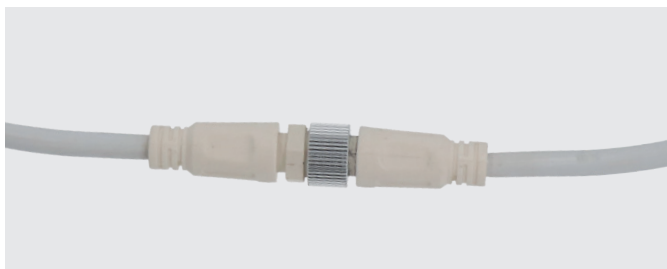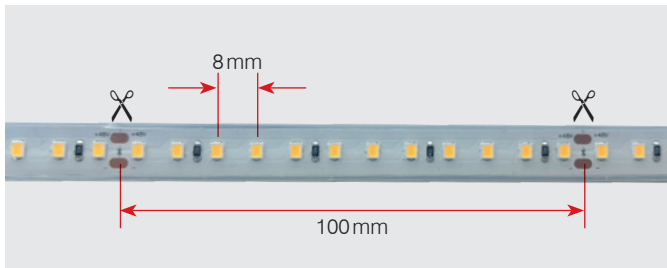
LED strip connection set, item no. 265152

LED strips can be cut to adjust the lenght. After cutting, LED strips can be reconnected with the LED strip connection set.
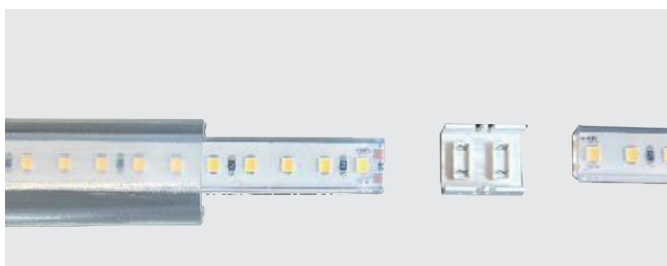
Power supply

The LED strip is connected to the power supply on both ends. Max. segment length is 130 m. In case of failure of one power supply, the segment will still be lit, but on a reduced level.

Function: on/off
Luminous flux @48VDC: 200-250 lm (min 180 lm), depending on segment length
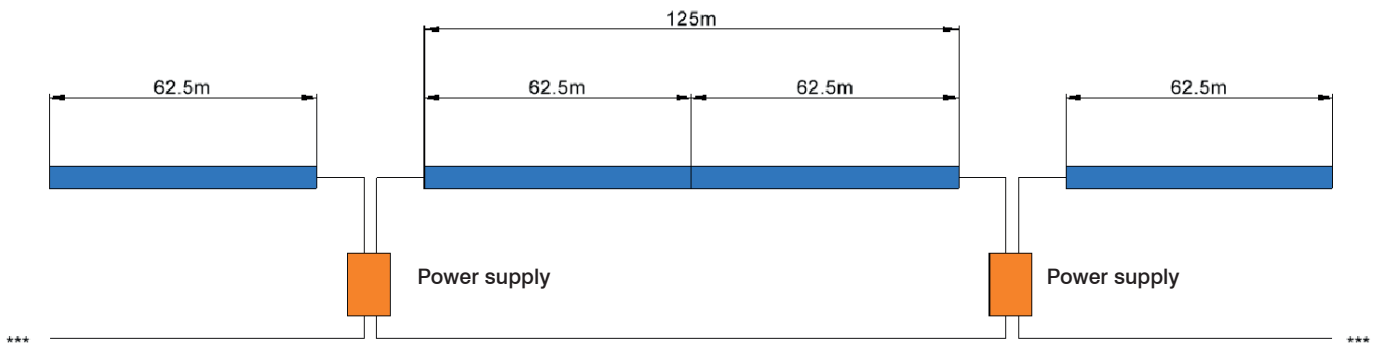Segment length: max. 130 m (feeding from both sides)

LED driver, item no. 262391

– LED driver for integration in existing cabinets
– input voltage 230 VAC / 48 VDC
– power 240 W
– for DIN rail mounting
– suitable for redundant operation
– dimensions 116×125.2×40 mm

Power supply cabinet, item no. 861945

– housing made of stainless steel (AISI 316)
– 4 brackets for wall mounting
– 2×LED driver 240 W (item no. 262391)
– degree of protection: IP66
– impact resistance: IK08
– cable glands:
  3×M20 (cable ø 6-12 mm),
  2×M25 (cable ø 13-18 mm)
– dimensions 200×300×135 mm
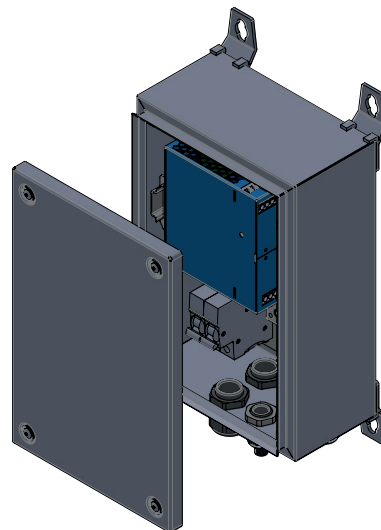
For more details ask for the technical data sheets and electrical diagram.

Exit door marking
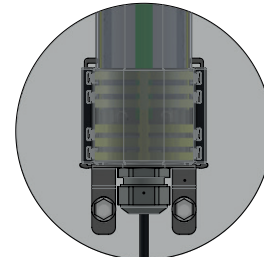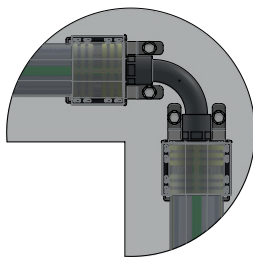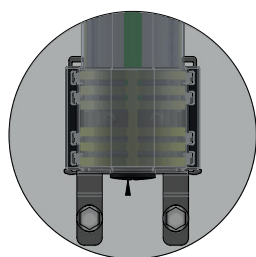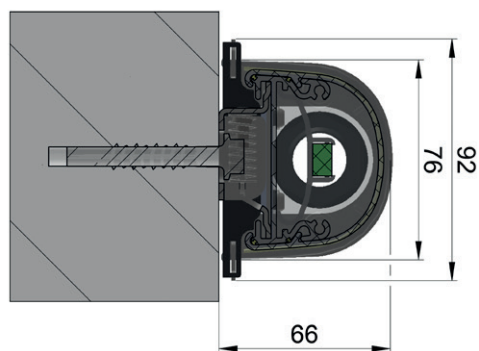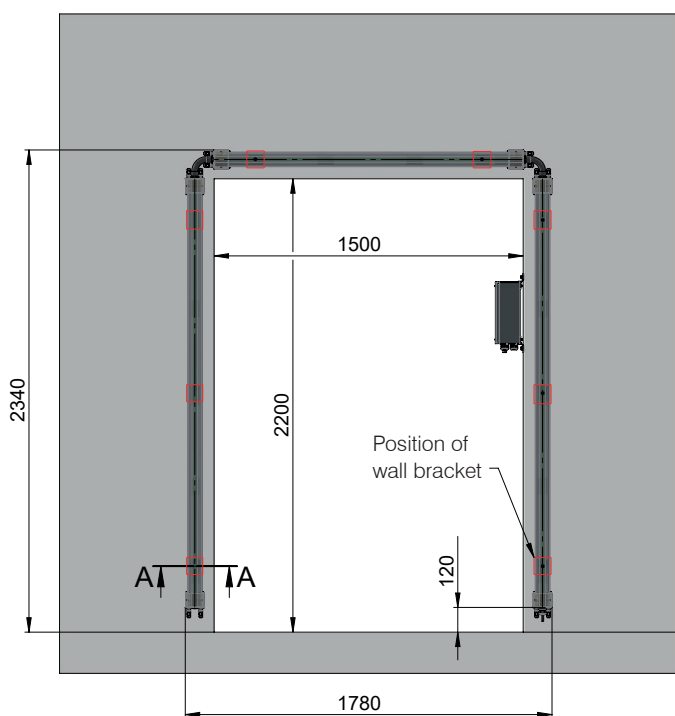
Door marking kits are produced tailormade for the specific project.

Exit door marking, item no. 265271

Position of wall bracket

1500

2200

2340

1780

120

A — A

92

76

66

Tailormade proposals are available on request.

Exit door marking

Electrical

Voltage:	Input: 230 VAC / Output: 48 VDC
Protection class:	III
Power / m:	3 W / m

Lighting data

Green (exit door frame):

Colour temperature:	green, 520 nm
Light output LED:	120°
Luminous flux @48VDC:	max. 470 lm
Lifetime:	100'000 h L80
Dimming:	yes (PWM), feeding from one side only
Function:	– normal situation: constantly lit, 235 lm
	– in case of incident: blinking with 0.5 z, 470 lm

Control unit «Digital Input», item no. 861948

Stainless steel cabinet (AISI 316), with:
- LED driver 240 V
- blinking relay 0.5 Hz
- degree of protection: IP66
- impact resistance: IK08
- dimensions: 200×300×135 mm
- cable glands: 4×M20 (cable Ø 6-12 mm)
                         2×M25 (cable Ø 13-18 mm)

Function:
- normal situation: constantly lit, 235 lm
- in case of incident: blinking with 0.5 Hz, 470 lm

Control unit «DALI2», item no. 861946

Stainless steel cabinet (AISI 316), with:
- LED driver 240 V DALI2
- blinking relay 0.5 Hz
- degree of protection: IP66
- impact resistance: IK08
-
- dimensions: 200×300×135 mm
- cable glands: 4×M20 (cable Ø 6-12 mm)
                         2×M25 (cable Ø 13-18 mm)

Function:
- normal situation: constantly lit, 235 lm
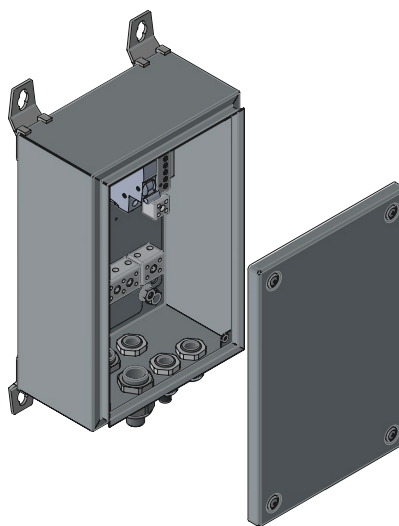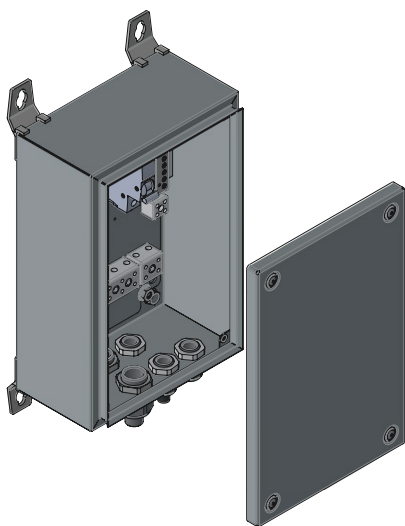- in case of incident: blinking with 0.5 Hz, 470 lm

For more details ask for the technical data sheets and electrical diagram.

GIFAS
ELECTRIC

THE
SOLUTION
PARTNER