

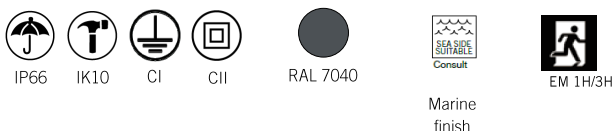
# HFL / HFL-EM

## GEN3



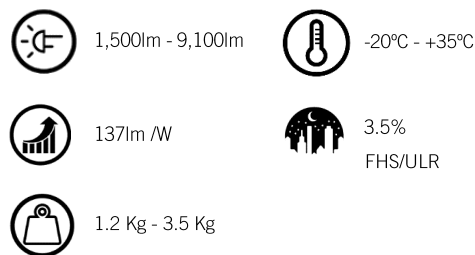
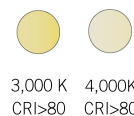
### KEY ADVANTAGES

- Access to the driver and PCB from the side for easy maintenance
- Continuous Emergency Version 1h/3h
- Sturdiness: IP66 + IK10
- Coextruded polycarbonate
- Energy Efficient: 137 lm/W
- Smart Ready: Designed to house indoor communication nodes
- Lifespan L90B10 100,000 (Ta) 25°C



### DESCRIPTION

The HFL Series is a luminaire with latest Generation LED technology designed for urban and industrial environments. Thanks to its functional design and the different versions and accessories it offers, HFL can be perfectly integrated into residential areas, squares, promenades, urban passages, gardens, parks, industrial premises and logistics areas. It has high performance LEDs, which achieve high-quality lighting with excellent uniformity when integrated into the engineered design of the body.



### STANDARDS / CERTIFICATES

- UNE EN 60598-1:2009
- UNE EN 60598-2-3:2003
- UNE EN 62031:2009
- UNE EN 62384:2007
- UNE 61347-2-13:2007
- UNE EN 62471:2009
- IEC/TR 6247-2:2009
- UNE EN 55015:2013
- UNE EN 61000-3-2:2006
- UNE EN 61000-3-3:2013
- UNE EN 61547:2009
- NF P 92-501/507 (M1)

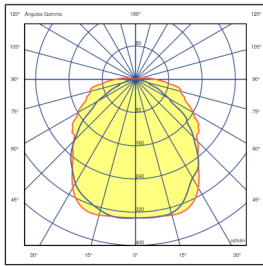
210 - 240V/100-277V  
50-60 Hz  
L70B10 100,000H  
Ta at 25°C

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# INDUSTRIAL | TUNNELS AND INFRASTRUCTURES

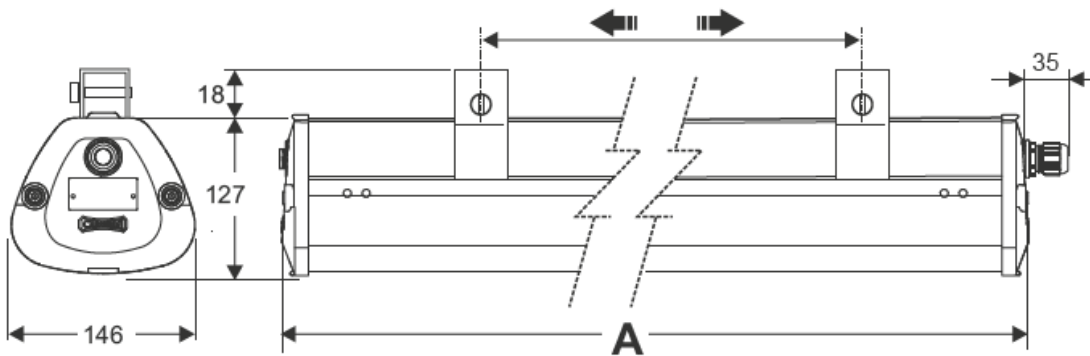
## PHOTOMETRIC CONFIGURATIONS

One symmetric photometric configuration used in the environments where this type of luminaire is installed, meaning it can be adapted to suit all requirements:

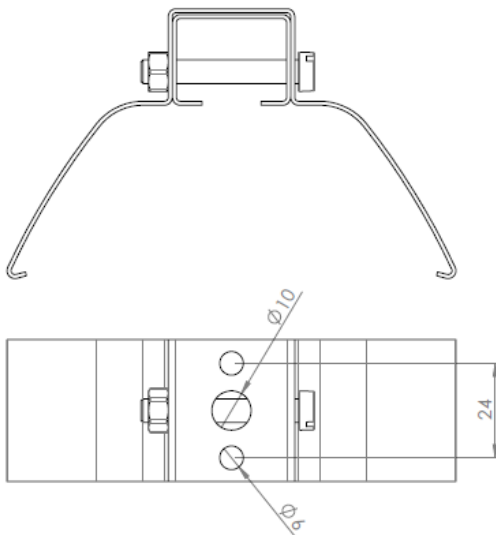


HFL.L023

## DIMENSIONS



## FTS Mounting



Light source	A (mm)
.L013 / .L024 .L013-EM / .L034-EM	330
.L023 / .L024 .L023-EM / .L024-EM .L033 / .L034 .L033-EM / .L034-EM .L043 / .L044 .L043-EM / .L044-EM EM.L053 / .L054 .L053-EM / .L054-EM	677
.L063 / .L064 .L063-EM / .L064-EM .L073 / .L074 .L073-EM / .L074-EM .L083 / .L084 .L083-EM / .L084-EM	1286

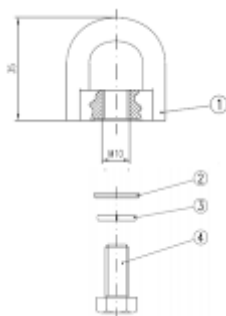
# INDUSTRIAL | TUNNELS AND INFRASTRUCTURES

## MOUNTING ACCESSORIES

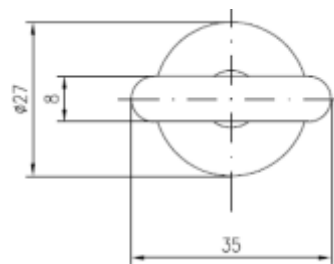
FA: Mounting with ring 2 pcs./ 220 g



Overall elevation:



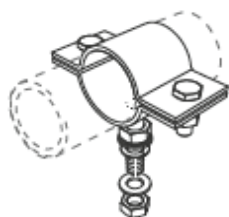
Level:



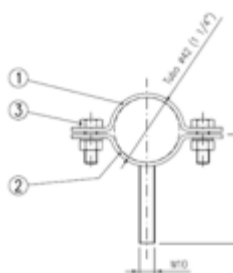
The article is provided with 2 complete sets:

Brand	Name	Material
4	M10x20 hexagonal screw	Stainless steel
3	M10 grower washer	Stainless steel
2	M10 flat washer	Stainless steel
1	Simple ring	Al, Casting

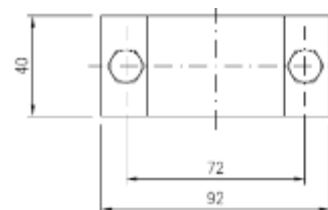
FT42: Mounting to 42mm conduit  
2un./732 g



Elevation:



Level:



The article is provided with 2 complete sets:

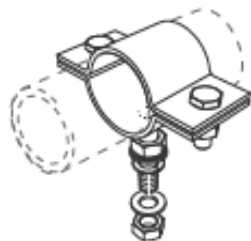
Brand	Name	Material
3	M8 nuts and bolts	Stainless steel
2	Iron bracket with stud	Fe sheet metal, galvanised
1	Iron bracket	Fe sheet metal, galvanised

# INDUSTRIAL | TUNNELS AND INFRASTRUCTURES

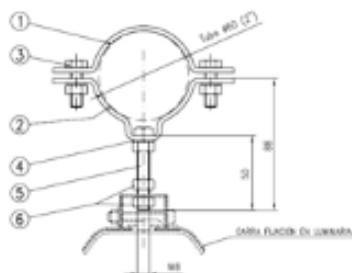
## ACCESSORIES

### FT60: Mounting to 60mm conduit

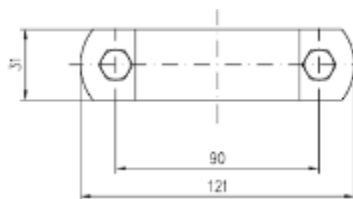
2un./829 g



Elevation:



Level:

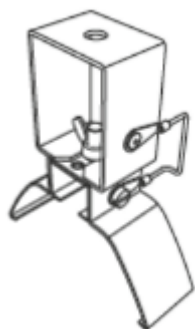


The article is provided with 2 complete sets:

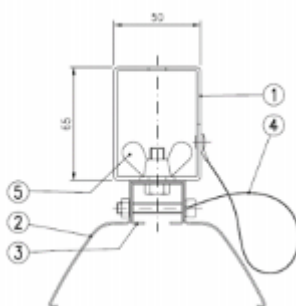
Brand	Name	Material
6	M8 hexagonal screws	Stainless steel
5	M8x50 hexagonal screw	Stainless steel
4	M8 grower washer	Stainless steel
3	M8 nuts and bolts	Stainless steel
2	Iron bracket with screw	Fe sheet metal, galvanised
1	Iron bracket	Fe sheet metal, galvanised

### FAR: Ceiling mount with rapid dismounting 2

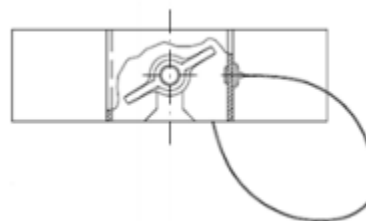
pcs./481 g



Elevation:



Level:



The article is provided with 2 complete sets:

Brand	Name	Material
5	Wing nut	Stainless steel
4	Suspension cable	Stainless steel
3	Screen support	Stainless steel
2	(HF) suspension support	Stainless steel
1	Recessed mounting support	Stainless steel

## INDUSTRIAL | TUNNELS AND INFRASTRUCTURES

### HFL / HFL-EM CHARACTERISTICS

GENERAL INFORMATION	
Sustainability	Recyclability: 94.57% Maximum carbon footprint per use: 0.019039 Kg Kw/h
CE mark	Yes
ENEC Certificate	Yes
RoHS-compliant	Yes
Testing standards	LM 79-80 (all measurements at ISO17025 certified laboratory)

GENERAL CHARACTERISTICS	
Diffuser	Single-piece coextruded polycarbonate with an additive which provides protection against UV rays, significantly increasing its durability. Type of polycarbonate: LAS.LEXAN ML-3021 C/A-703 and A-112 DE GE.
Reflector	Aluminium plate, anodized and sealed.
Finish	Body, grey with external protective additive (similar to RAL-7040). Prismatic longitudinal diffuser. Interior treated with protective varnish specifically designed to provide protection against UV rays, which ensures the specified lifespan of the luminaire.
Entry	HFL => M20 Polyamide Cable Gland HFL-EM => M20 +M16 Polyamide Cable Gland
Exterior nuts and bolts	Stainless steel (AISI304).
General ingress protec-	IP66 (EN 60598-1 and EN 60529)
Level of protection against impacts	IK10 (EN 62262)
Operating temperature	Ta -20°C to +35°C According to luminaire configuration.
Estimated life	L90B10 100,000 h at Ta 25°C. Light maintenance values at 25°C. Calculated by TM-21 based on LM-80 data.

LIGHTING CHARACTERISTICS	
Real luminous flux	HFL => 1,500 lm up to 9,100 lm. (14W - 70W) HFL-EM1=> 586 lm up to 466 lm. HFL-EM3=> 233 lm up to 586 lm. HFL-EMNP (Not permanent), upon request.
LED colour temperature	3,000K (Warm White, ww). 4,000K (Neutral White, nw). Other colour temperatures, upon request.
Colour rendering	CRI>80.
LEDs	Includes 1, 2 or 4 LED strips based on the version (24, 96 or 192 LEDs.)
FHS/ULR	0.25% - 3.5%
Photometric	A => Extensive

MAINTENANCE AND ASSEMBLY	
Installation and maintenance	Pressed polycarbonate side covers with gaskets, which provide a certain degree of protection. Access to the tray with stainless steel screws.
Installation	FTS: Two Stainless Steel anchors are provided to mount on surface.
Mounting Accessories	There are 4 optional mounting methods: FA: Mounting with ring, for mounting with cables (not included) FT42: Mounting to Ø42 mm FT60 conduit: Mounting to Ø60 mm conduit FAR: Ceiling mount with rapid dismounting. Designed so that the luminaire can be installed on sides in limited spaces.
Equipped weight	1.2 Kg—3.5 Kg
Pressure equalisation valve	The luminaire is fitted with a valve that balances the pressure in the luminaire to prevent the build-up of condensation, thereby extending the lifetime of the components.

# INDUSTRIAL I TUNNELS AND INFRASTRUCTURES

## HFL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS	
Electrical class	Class I Class II
Input voltage	220V - 240V / 50Hz - 60Hz Optional 100 V - 277 V
Power factor	> 0.9
Harmonic distortion	< 10% Other voltages upon request.
Overvoltage protection	Overvoltage protection (1.2/50) 10 kV. Maximum current (8/20) 10kA. Maximum voltage (L-N) 320 V. Maximum voltage (L/N-GND) 400 V. Optional overvoltage protection: 20 kA, 20 kV.

MANAGEMENT AND CONTROL	
Devices	HFL:1N: LED 1 level RC: Adjustable LED in head RD: Adjustable LED Protocol DALI AF: Adjustable LED Protocol 1-10 V RL: Pulse adjustable LED
Autonomous dimming	Factory-adjustable dimming: 56: 50% from 00:00 to 06:00 66: 60% from 00:00 to 06:00 76: 70% from 00:00 to 06:00 SC: As requested by the client.
CLO regulation	Percentage of flux during product lifetime: 7: 70% luminous flux during luminaire lifetime. 8: 80% luminous flux during luminaire lifetime. 9: 90% luminous flux during luminaire lifetime.
Node	BS: Controlux Basic

MANAGEMENT AND CONTROL	
Devices	HFL-EM 1 / 3h:1N: LED 1 level RD: Adjustable LED Protocol DALI

### Logistical Information

#### HFL L063 a L084

<b>Box Size:</b>	154 X 132 X 765mm
<b>Box Weight:</b>	2kg
<b>Number of boxes:</b>	63 Unidades
<b>Americian base:</b>	1200 x 800 x 1224mm
<b>Stack Height:</b>	7 Plantas
<b>Area Occupied:</b>	94,7%
<b>Volume Used:</b>	92,8%
<b>Total Gross weight:</b>	146Kg

#### HFL L063 a L084

<b>Box Size:</b>	154 X 132 X 1375mm
<b>Box Weight:</b>	3kg
<b>Number of boxes:</b>	42 Unidades
<b>Americian base:</b>	1375x 800 x 1224mm
<b>Stack Height:</b>	7 Plantas
<b>Area Occupied:</b>	99%
<b>Volume Used:</b>	89%
<b>Total Gross weight:</b>	146Kg