

vizulo



STORK

LITTLE SISTER



**Architectural & Landscape**

**Outdoor Industrial Area**

**Residential Street/Area**

**Ventilation cable gland**

Combines pressure equalization and cable gland in a single unit. It ensures high air flow rates as well as high water protection capacity

**Glass**

Flat glass. Glass is fixed to die-cast aluminium frame with metal clips and can easily be replaced

**LED module**

High quality LED's with optimal thermal resistance and energy consumption characteristic, for high lumen output and long expected life time. Color temperature available: 2700 K, 3000 K, 4000 K  
*(1800 K, 2200 K, 3500 K, 5000 K, 5700 K, 6500 K available on customer request)*

**Sockets**

Zhaga and NEMA sockets compatible

**Protection**

IP66 for the complete luminaire

**Safety switch**

Safety switch disconnects power on opening

**Module temperature control**

The LED driver will start reducing the light output when the LED's approach critical temperature. The temperature is measured via a sensor placed on the PCB  
*(function available on customer request)*

**Body**

Die-cast aluminium

**Lighting protection**

Built-in surge protection starting from 3 kV till 10 kV

**Light regulation**

STORK LITTLE SISTER drivers offer integrated midnight dimming and network-controlled 1-10 V and DALI protocols

**Opening**

Die-cast aluminium clip for tool-less opening or closing, fixed to the frame with stainless steel spring for easy maintenance

**Impact resistance**

IK10 (Vandal protected) for the complete luminaire



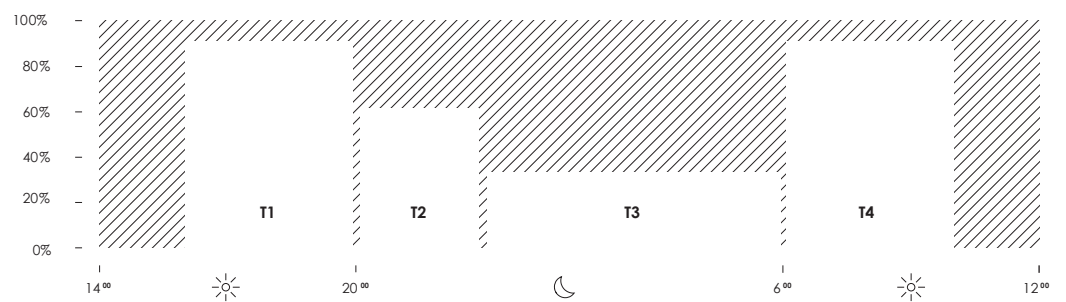
**Traffic Roads**

**Pedestrian Roads**

**City Centre**

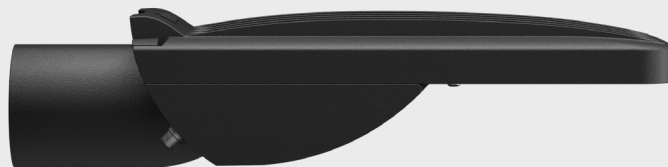
## Midnight dimming

Midnight dimming provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times.



# Stork little sister

with 60 mm console



**Note!** Glass with gray print is standard  
(black print glass on request!)



RAL7035



RAL9006

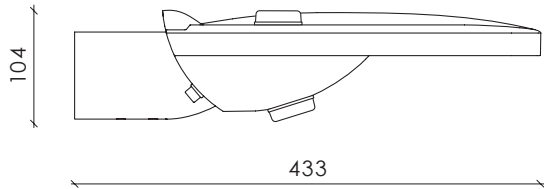
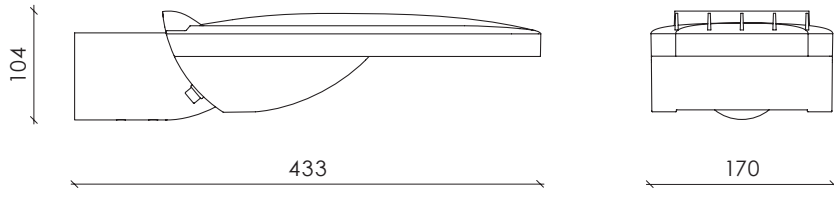


DB703

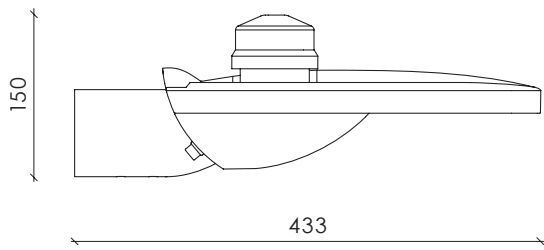


RAL9005

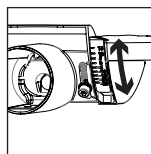
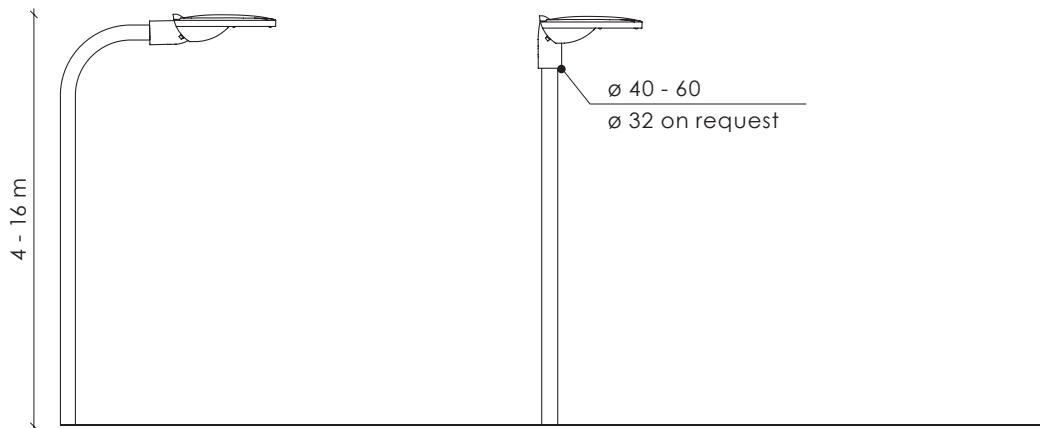
Other colors  
available on request



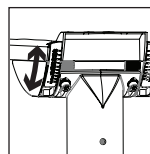
Dimensions with 2 Zhaga connectors



Dimensions with NEMA socket



$\leq -25^\circ \dots 15^\circ$   
Horizontal entry

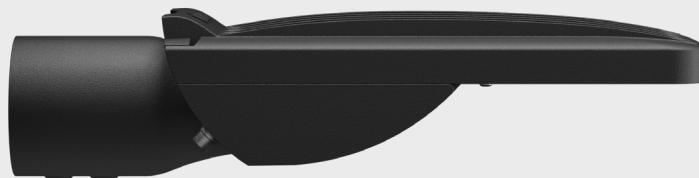


$\leq -5^\circ \dots 40^\circ$   
Vertical entry

**Note!** Only those models with fixed mounting position ( $0^\circ$  relative to the ground) are DarkSky approved!

# Stork little sister

with 76 mm console



**Note!** Glass with gray print is standard  
(black print glass on request!)



RAL7035



RAL9006

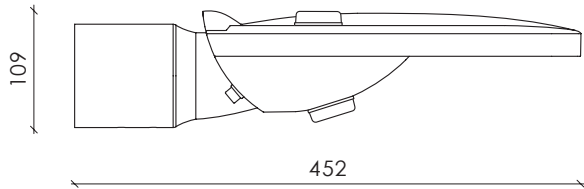
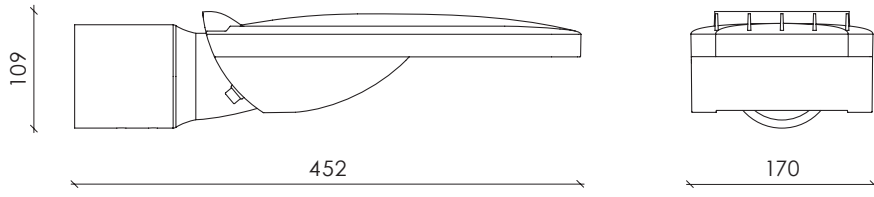


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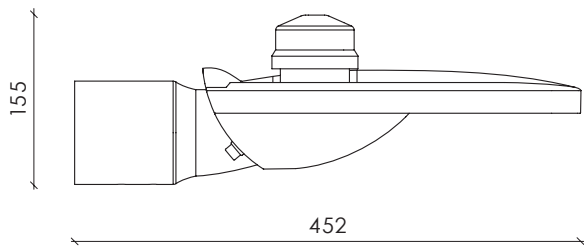


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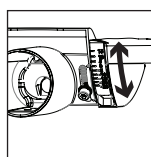
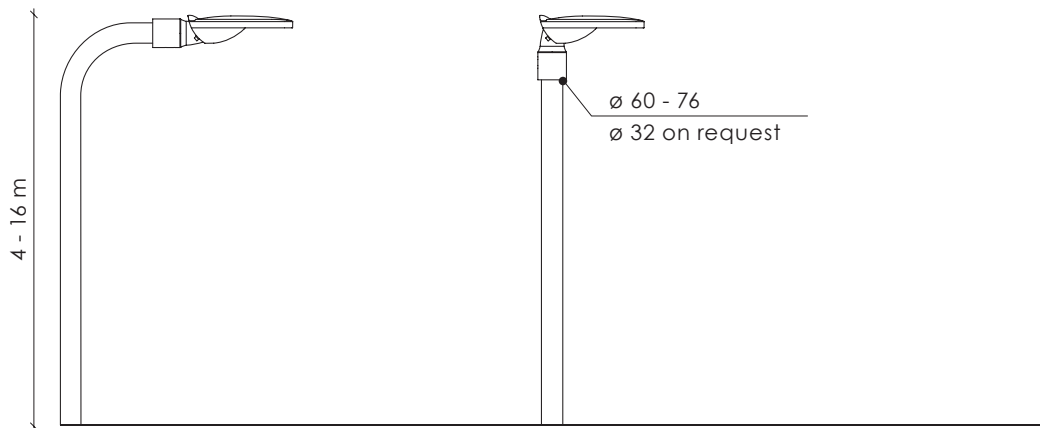
Other colors  
available on request



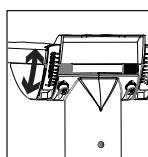
Dimensions with 2 Zhaga connectors



Dimensions with NEMA socket



$\leq -25^\circ \dots 15^\circ$   
Horizontal entry

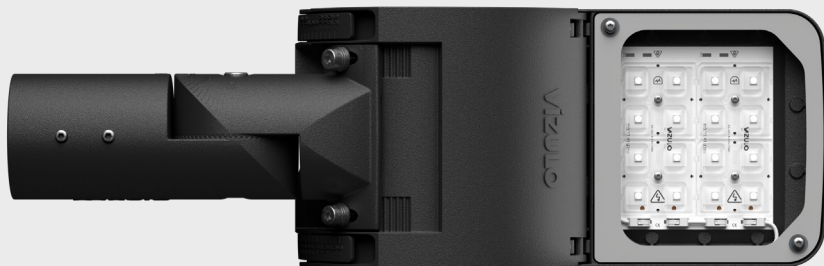
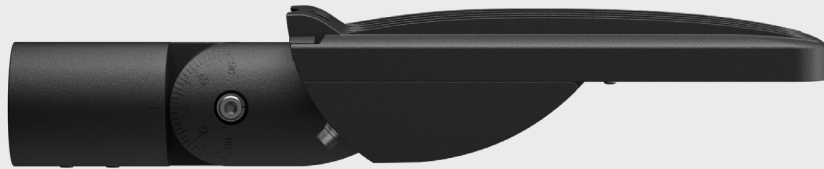


$\leq -5^\circ \dots 40^\circ$   
Vertical entry

**Note!** Only those models with fixed mounting position ( $0^\circ$  relative to the ground) are DarkSky approved!

# Stork little sister

with 60 mm adjustable console



**Note!** Glass with gray print is standard  
(black print glass on request!)



RAL7035



RAL9006



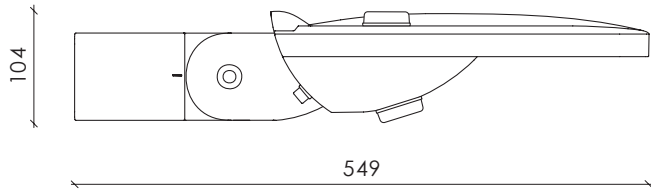
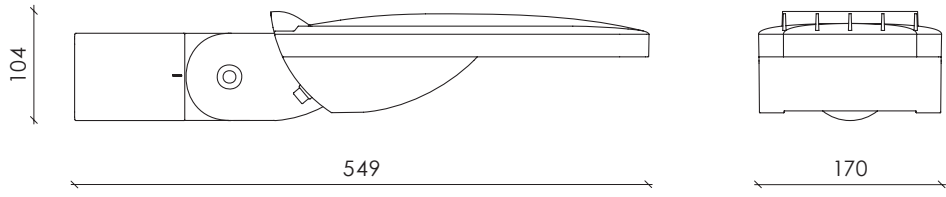
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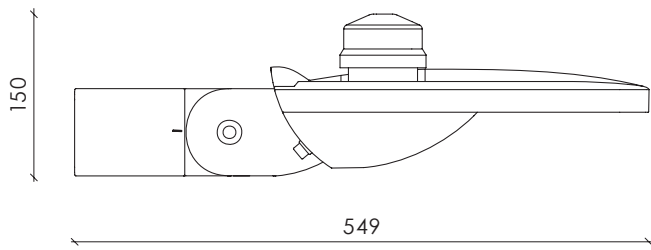
RAL9005

Other colors  
available on request

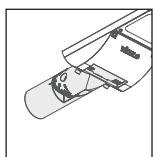
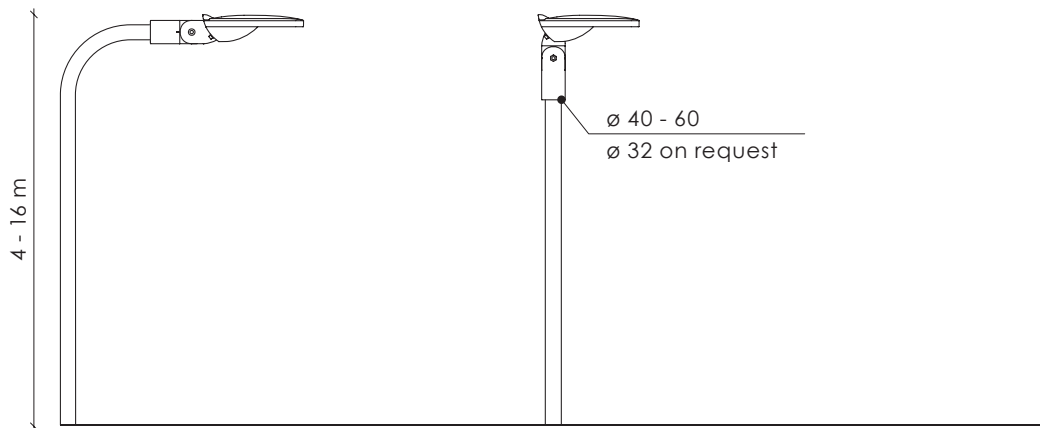




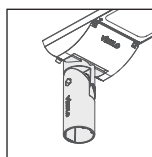
Dimensions with 2 Zhaga connectors



Dimensions with NEMA socket



$\pm 90^\circ$   
Horizontal entry



$\pm 90^\circ$   
Vertical entry

**Note!** Only those models with fixed mounting position ( $0^\circ$  relative to the ground) are DarkSky approved!

# Stork little sister

with 76 mm adjustable console



**Note!** Glass with gray print is standard (black print glass on request!)



RAL7035



RAL9006

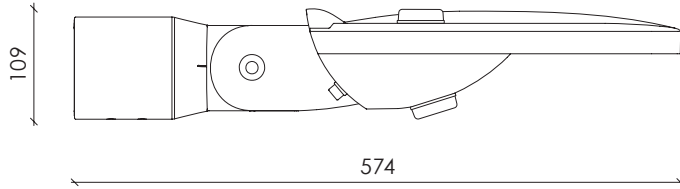
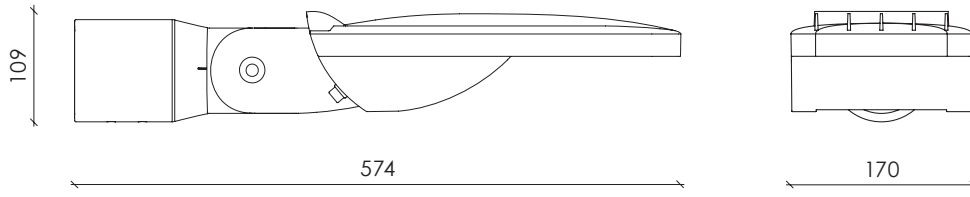


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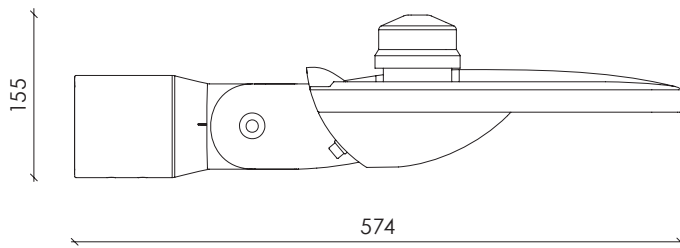


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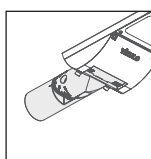
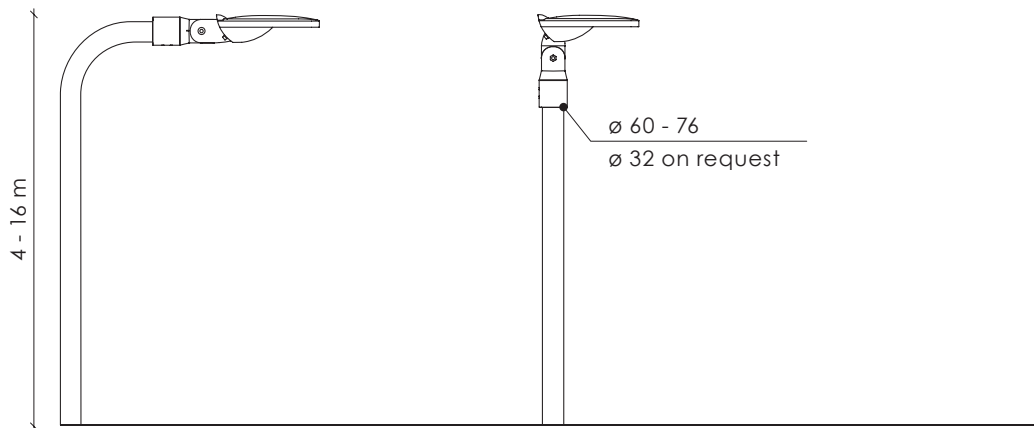
Other colors available on request



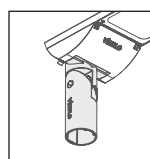
Dimensions with 2 Zhaga connectors



Dimensions with NEMA socket



± 90°  
Horizontal entry



± 90°  
Vertical entry

**Note!** Only those models with fixed mounting position (0° relative to the ground) are DarkSky approved!

## Technical information



<b>V</b>	198 - 264 / 110 - 277 <sup>1)</sup>
<b>Hz</b>	50 - 60
<b>W</b>	5 - 80
<b>lm</b>	430 - 10500 <sup>2)</sup>
<b>lm/W</b>	86 - 181 <sup>3)</sup>
<b>K</b>	2700 / 3000 / 4000 <sup>4)</sup>
<b>°C</b>	-40 to +50
<b>CRI</b>	>70 / >80 / >90 <sup>4)</sup>

<b>Body:</b>	Die-cast aluminium
<b>Dimming:</b>	DALI / 1-10 V / Midnight dimming / Step dimming / Mains dimming
<b>Initial chromaticity:</b>	MacAdam 5
<b>Lifetime:</b>	Eco 100 000 h (L90B10) at Ta = 25 °C* Standard 100 000 h (L98B10) at Ta = 25 °C* High density 100 000 h (L98B10) at Ta = 25 °C*
<b>Warranty:</b>	5 years
<b>Installation:</b>	Tool-less
<b>Spigot:</b>	32 - 40 mm <sup>5)</sup> / 40 - 60 mm / 60 - 76 mm
<b>Socket:</b>	NEMA Top / Zhaga Top and Bottom
<b>Intelligent Control:</b>	Stand-alone / Group / CMS
<b>Sensor:</b>	Motion / Motion + Daylight / Daylight
<b>Surge protection:</b>	4 / 6 / 10 kV <sup>6)</sup>
<b>Nature friendly:</b>	PC Amber / Red / 1800 K
<b>Corrosion protection:</b>	Up to C5
<b>Neto weight:</b>	Up to 4.2 kg
<b>Max. wind load area, SCd:</b>	0.033 m <sup>2</sup>

<sup>1)</sup> Maximum operating voltage, ENEC certificate voltage 198 - 264 V, UL certificate voltage 110 - 277 V

<sup>2)</sup> Lumen output indicated at CRI > 70

<sup>3)</sup> This value depends from configuration and can reach even higher number when max efficient components are combined

<sup>4)</sup> 1800 / 2200 / 3500 / 5000 / 5700 / 6500 K available on request along with other not listed CRI and CCT

**Note!** Only fixtures with CCT of 3000 K or lower are DarkSky approved!

<sup>5)</sup> Achievable with an adapter for 40 - 60 mm spigot

<sup>6)</sup> 10 kV (L-N; L/N-PE) surge protection device available on request

\* This value is only informative and may change according to selected article. LED Lifetime is strongly depending from LEDs current and junction temperature – increase in LED current and luminaire power lead to increase of junction temperature and as consequence lifetime decrease. Thus, luminaire models with lower power, lower current (and lower junction temperature) will have higher lifetime than standard models. And high power and high current luminaire models may have negative lifetime deviation comparing to standard models. To receive precise value please contact VIZULO export representatives.

Technical parameters for final product can differ from typical data by 7% due to special conditions of LED manufacturing processes.

## Standard modules

\* Data for L01 optic.

Check VIZULO members section for additional information

4000 K | CRI 70

Number of LED's	4			8			16		
Nominal current, mA	270	500	730	140	500	700	280	490	770
Power, W	5	8	11	5	15	19	15	25	39
Luminous Flux, lm	500	890	1250	560	1900	2500	2150	3500	5300
Efficacy, lm/W	100	111	114	112	127	132	143	140	136
Power factor, PF	Up to 0.93			Up to 0.94			Up to 0.98		

Luminaire efficacy	2700 K	5 - 39 W	430 - 4400 lm	86 - 119 lm/W
	3000 K	5 - 39 W	470 - 4800 lm	94 - 130 lm/W
	5000 K	5 - 39 W	500 - 5300 lm	100 - 143 lm/W
	5700 K	5 - 39 W	500 - 5300 lm	100 - 143 lm/W

## High density modules

\* Data for V01 optic.

Check VIZULO members section for additional information

4000 K | CRI 70

Number of LED's	16			32		
Nominal current, mA	280	490	770	270	500	810
Power, W	15	25	39	27	50	80
Luminous Flux, lm	2150	3500	5300	4000	7100	10500
Efficacy, lm/W	143	140	136	148	142	131
Power factor, PF	Up to 0.98			Up to 0.97		

Luminaire efficacy	2700 K	15 - 80 W	1820 - 8900 lm	113 - 127 lm/W
	3000 K	15 - 80 W	2000 - 9900 lm	126 - 141 lm/W
	5000 K	15 - 80 W	2150 - 10500 lm	131 - 148 lm/W
	5700 K	15 - 80 W	2150 - 10500 lm	131 - 148 lm/W

## ECO

\* Data for L01 optic.

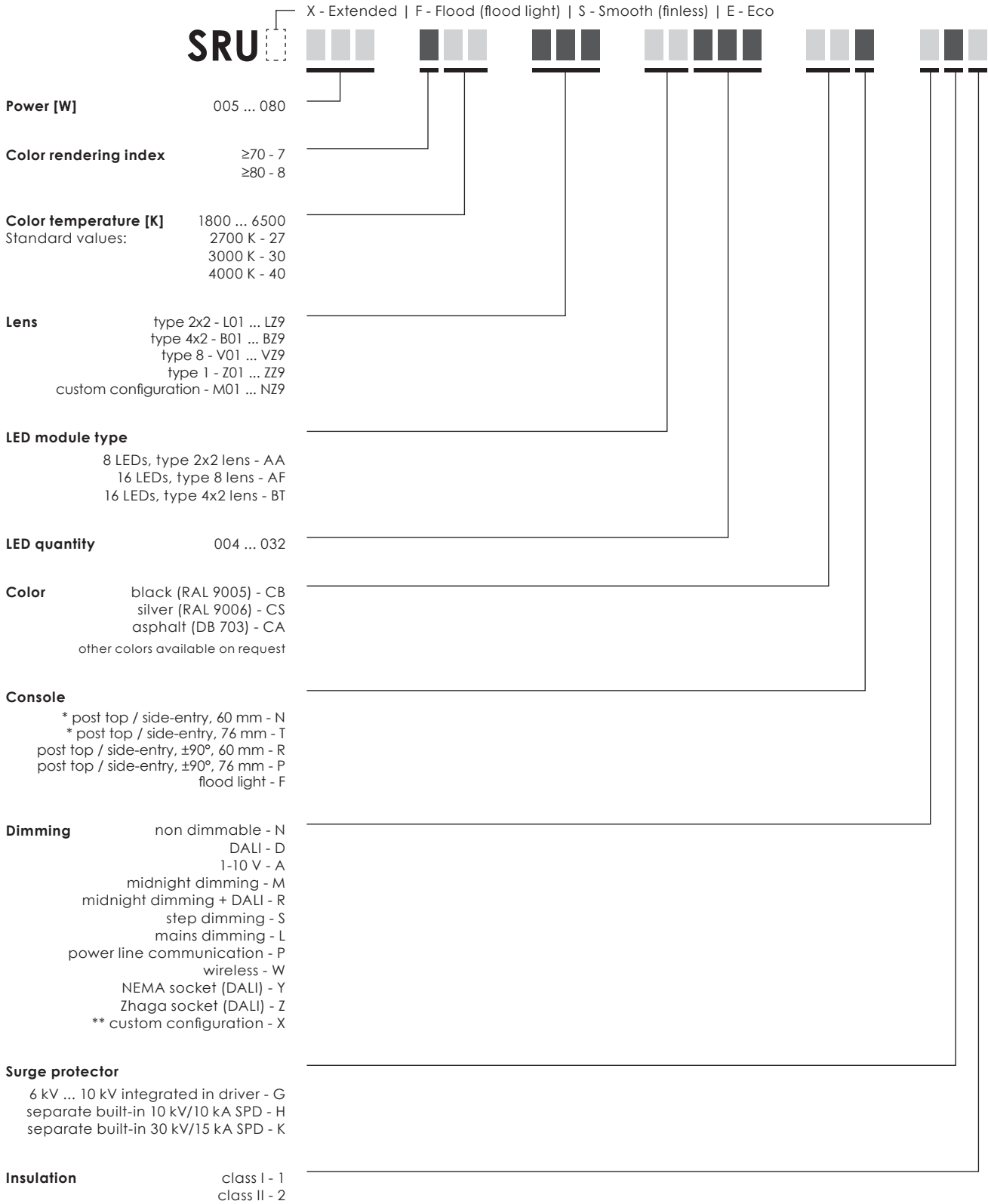
Check VIZULO members section for additional information

4000 K | CRI 70

Number of LED's	4			8			12			16		
Nominal current, mA	140	490	670	280	500	710	280	500	710	280	500	710
Power, W	5	14	19	15	26	38	22	39	56	28	50	74
Luminous Flux, lm	550	1600	2200	2200	3700	5100	3100	5100	6600	4200	7100	9600
Efficacy, lm/W	110	114	116	147	142	134	141	131	118	150	142	130
Power factor, PF	Up to 0.94			Up to 0.98			Up to 0.98			Up to 0.98		

Luminaire efficacy	2700 K	5 - 74 W	500 - 9000 lm	100 - 143 lm/W
	3000 K	5 - 74 W	540 - 9300 lm	108 - 146 lm/W
	5000 K	5 - 74 W	550 - 9600 lm	110 - 150 lm/W
	5700 K	5 - 74 W	550 - 9600 lm	110 - 150 lm/W

# Model name principles

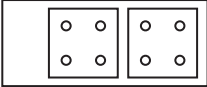
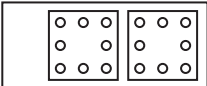
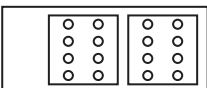


**EXAMPLE** SRU 080 730 L01 AA016 CSN NG1

\* Console regulation range - side entry:  $+15^\circ \dots -25^\circ$  | post top:  $+40^\circ \dots -5^\circ$

\*\* CUSTOM CONFIGURATION EXAMPLE:  
NEMA socket + Zhaga socket; NEMA socket + Zhaga socket + midnight dimming; etc.  
Custom configuration information is available in order confirmation.

# LED modules

Type	Max module quantity	Min LED quantity per module	Max LED quantity per module	Max LED quantity per luminaire	LED step	LED type	Lens type	Layout
AA	2	4	8	16	2	Standard Eco	type 2x2 L01...LZ9	
AF	2	4	16	32	4	Standard	type 8 V01...VZ9	
BT	2	4	16	32	4	Standard	type 4x2 B01...BZ9	

# Cable core count

Socket	Dimming	Model number abbreviation	Input cable core count - Class I	Input cable core count - Class II
None	None	N	3	2
None	DALI	D	5	4
None	Midnight dimming	M	3	2
None	Midnight dimming + DALI	R	5	4
None	Step dimming	S	5 <sup>(1)</sup>	4 <sup>(1)</sup>
None	Mains dimming	L	3	2
Zhaga	DALI	Z	3 <sup>(2)</sup>	2 <sup>(2)</sup>
Zhaga	Midnight dimming	X	3	2
Zhaga	Mains dimming	X	3	2
NEMA	DALI	Y	3 / 5 <sup>(3)</sup>	2 / 4 <sup>(3)</sup>
NEMA	Midnight dimming	X	3	2
NEMA	Step dimming	X	5 <sup>(1)</sup>	4 <sup>(1)</sup>
NEMA	Mains dimming	X	3	2

<sup>1)</sup> 1 core unused

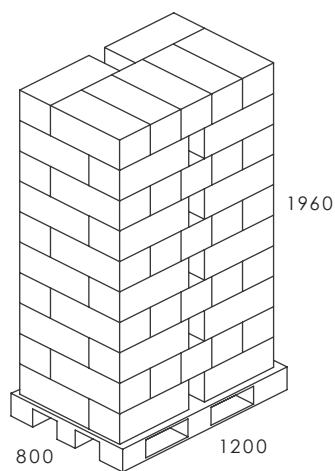
<sup>2)</sup> DALI wires used only for internal connection between driver and Zhaga socket(s)

<sup>3)</sup> +2 cores for external DALI connection

# Logistic information

Carton size/cm L*W*H	Quantity per carton /pcs	Pallet quantity in 20' sea container	Pallet quantity in 40' sea container	QTY per pallet /pcs	Full palette size/cm L*W*H	Number of luminaires per row	Number of rows
44 x 19 x 18	1	11	24	70	120 x 80 x 196	7	10

	NETO WEIGHT / KG		BRUTO WEIGHT / KG	
	Per 1 pcs	Per pallet	Per 1 pcs	Per pallet
STORK LITTLE SISTER side-entry / post top 60 mm luminaires	3,5	245	3,8	290
STORK LITTLE SISTER Eco side-entry / post top 60 mm luminaires	3,5	245	3,8	290
STORK LITTLE SISTER side-entry / post top $\pm 90^\circ$ , 60 mm luminaires	4,1	287	4,4	332
STORK LITTLE SISTER Eco side-entry / post top $\pm 90^\circ$ , 60 mm luminaires	4,1	287	4,4	332
STORK LITTLE SISTER side-entry / post top $\pm 90^\circ$ , 76 mm luminaires	4,2	294	4,5	339
STORK LITTLE SISTER Eco side-entry / post top $\pm 90^\circ$ , 76 mm luminaires	4,2	294	4,5	339

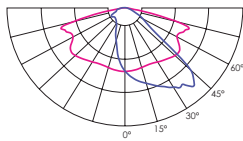




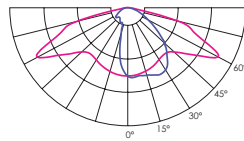
# Optics

## Standard modules

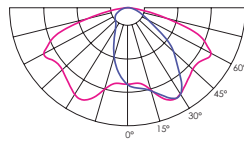
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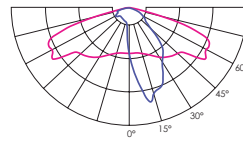
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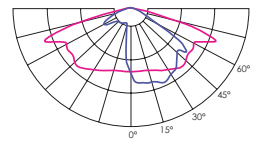
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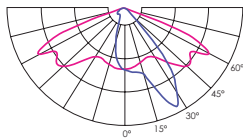
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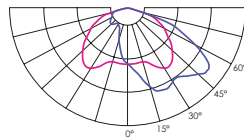
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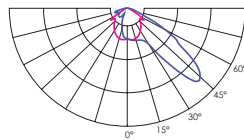
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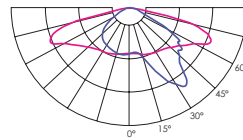
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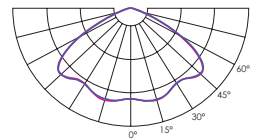
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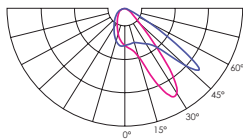
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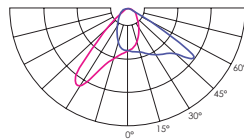
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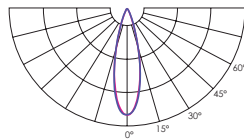
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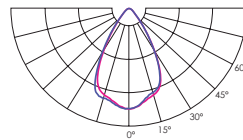
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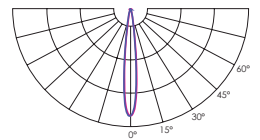
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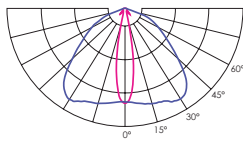
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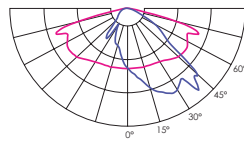
L15



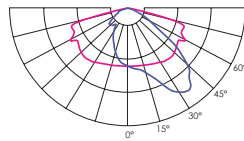
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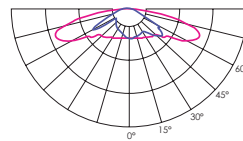
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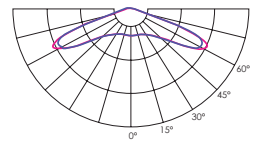
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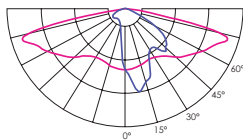
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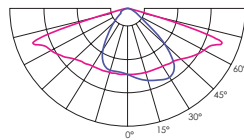
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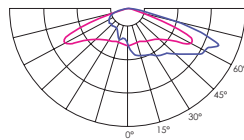
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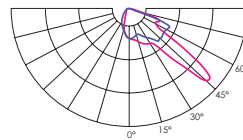
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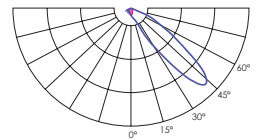
L35



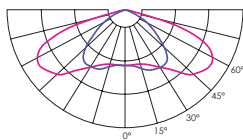
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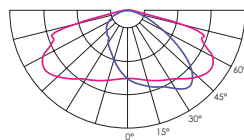
L37



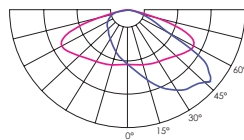
L38



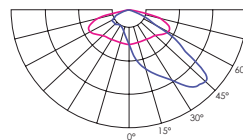
L40



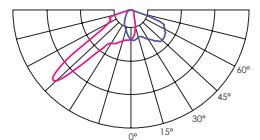
L41

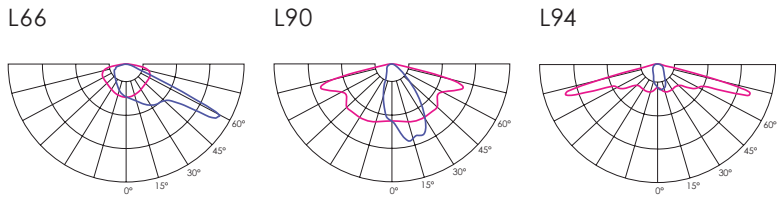
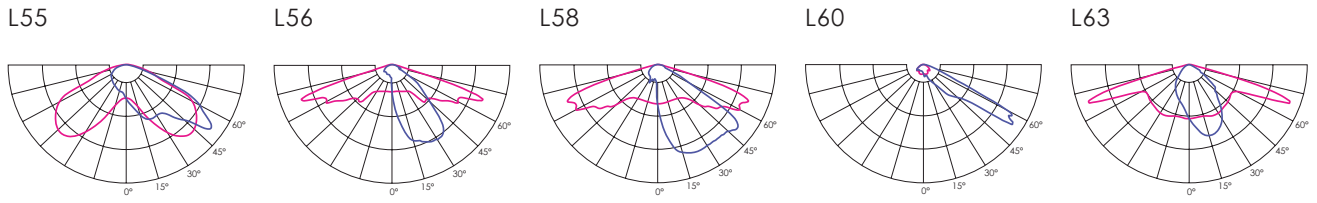


L42

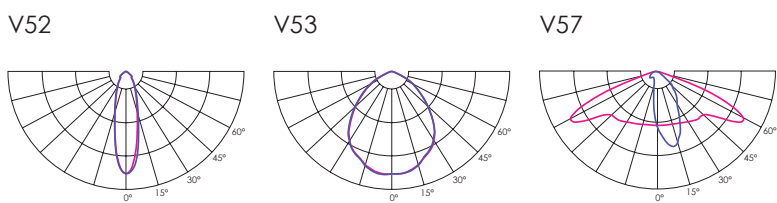
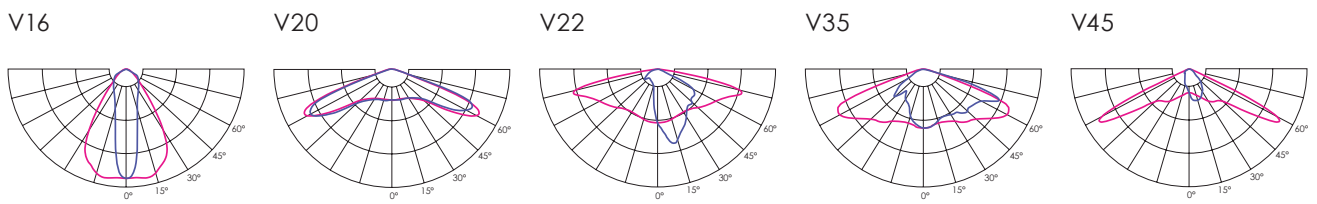
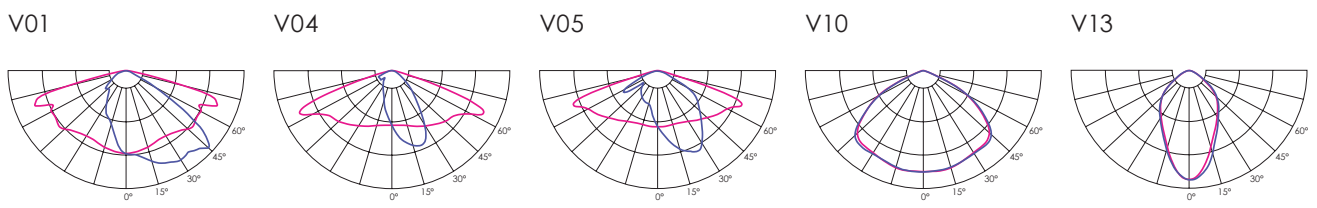


L46





High density modules





# Pedestrian crossing optics



<b>V</b>	198 - 264 / 110 - 277 <sup>(1)</sup>
<b>Hz</b>	50 - 60
<b>W</b>	5 - 39 <sup>(2)</sup> 15 - 74 <sup>(3)</sup>
<b>lm</b>	Up to 5300 <sup>(2)</sup> Up to 9600 <sup>(3)</sup>
<b>lm/W</b>	Up to 181 <sup>(4)</sup>
<b>K</b>	2700 / 3000 / 4000 <sup>(5)</sup>
<b>°C</b>	-40 to +50
<b>CRI</b>	>70 / >80 / >90 <sup>(5)</sup>

<b>Body:</b>	Die-cast aluminium
<b>Dimming:</b>	DALI / 1-10 V / Midnight dimming / Step dimming / Mains dimming
<b>Initial chromaticity:</b>	MacAdam 5
<b>Lifetime:</b>	Eco 100 000 h (L90B10) at Ta = 25 °C* Standard 100 000 h (L98B10) at Ta = 25 °C*
<b>Warranty:</b>	5 years
<b>Installation:</b>	Tool-less
<b>Spigot:</b>	32 - 40 mm <sup>(6)</sup> / 40 - 60 mm / 60 - 76 mm
<b>Socket:</b>	NEMA Top / Zhaga Top and Bottom
<b>Intelligent Control:</b>	Stand-alone / Group / CMS
<b>Sensor:</b>	Motion / Motion + Daylight / Daylight
<b>Surge protection:</b>	4 / 6 / 10 kV <sup>(7)</sup>
<b>Nature friendly:</b>	PC Amber / Red / 1800 K
<b>Corrosion protection:</b>	Up to C5
<b>Neto weight:</b>	Up to 4.2 kg
<b>Max. wind load area, SCD:</b>	0.033 m <sup>2</sup>

<sup>1)</sup> Maximum operating voltage, ENEC certificate voltage 198 - 264 V, UL certificate voltage 110 - 277 V

<sup>2)</sup> Standard modules, lumen output indicated at CRI > 70

<sup>3)</sup> ECO modules, lumen output indicated at CRI > 70

<sup>4)</sup> This value depends from configuration and can reach even higher number when max efficient components are combined

<sup>5)</sup> 1800 / 2200 / 3500 / 5000 / 5700 / 6500 K available on request along with other not listed CRI and CCT

**Note!** Only fixtures with CCT of 3000 K or lower are DarkSky approved!

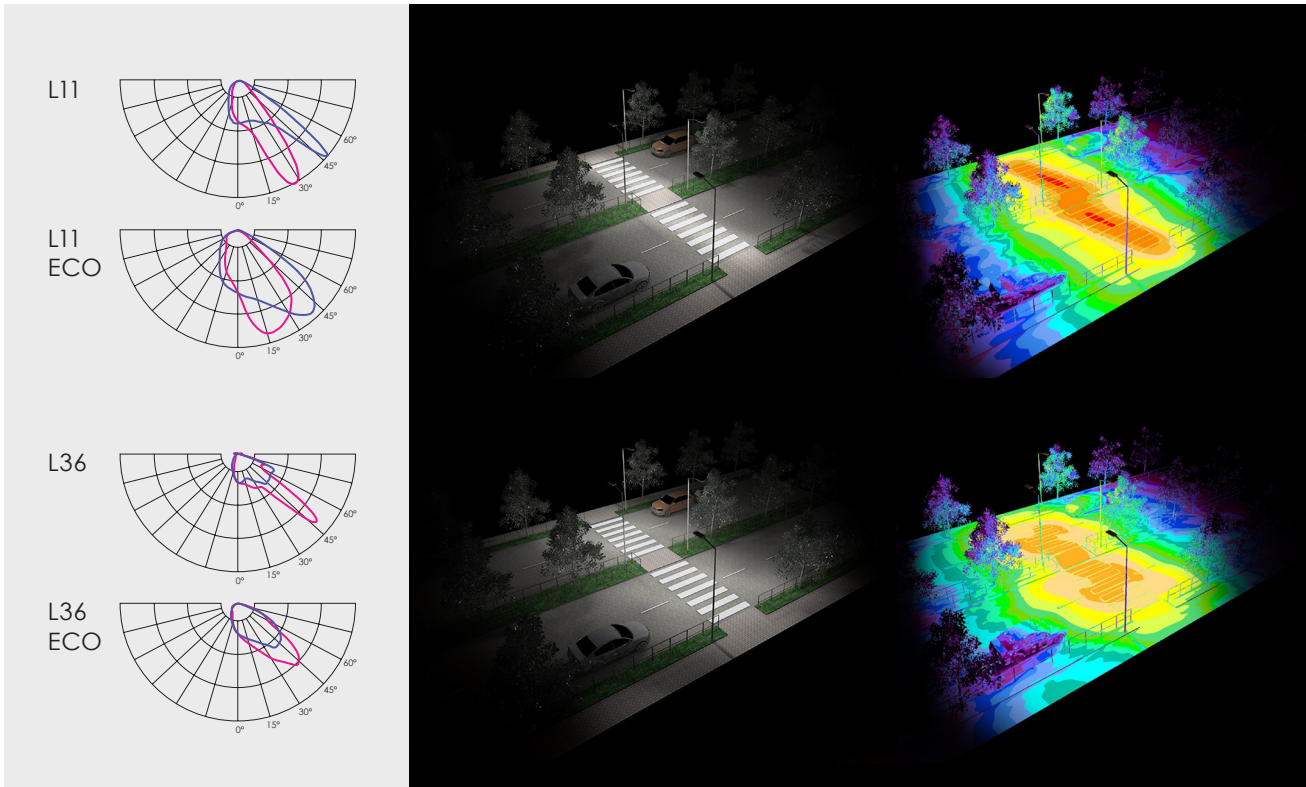
<sup>6)</sup> Achievable with an adapter for 40 - 60 mm spigot

<sup>7)</sup> 10 kV (L-N; L/N-PE) surge protection device available on request

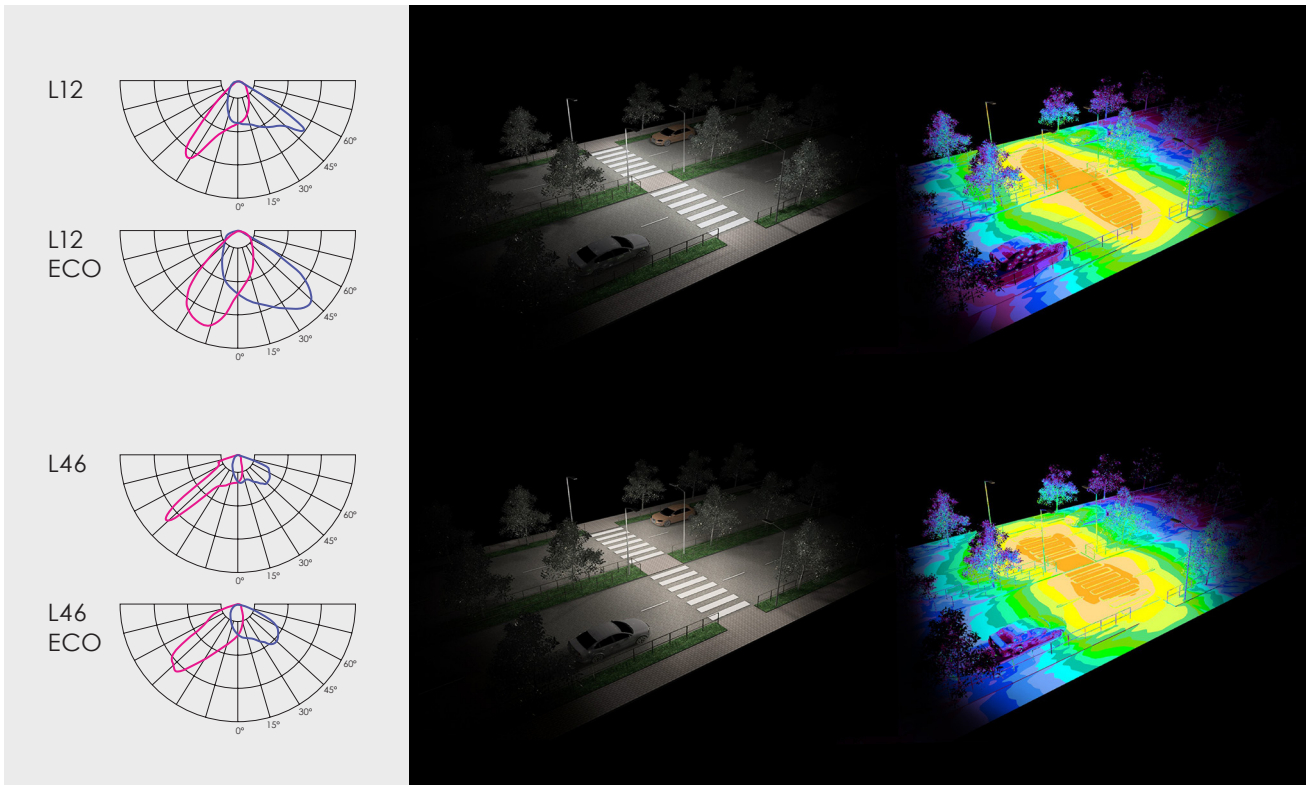
\* This value is only informative and may change according to selected article. LED Lifetime is strongly depending from LEDs current and junction temperature – increase in LED current and luminaire power lead to increase of junction temperature and as consequence lifetime decrease. Thus, luminaire models with lower power, lower current (and lower junction temperature) will have higher lifetime than standard models. And high power and high current luminaire models may have negative lifetime deviation comparing to standard models. To receive precise value please contact VIZULO export representatives.

Technical parameters for final product can differ from typical data by 7% due to special conditions of LED manufacturing processes.

## Right side traffic



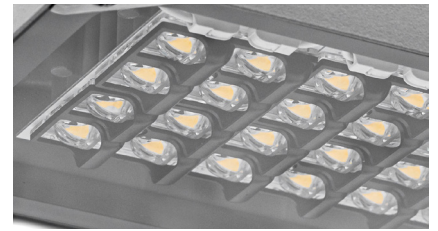
## Left side traffic



# Backlight cutter

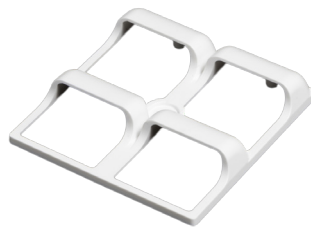
## Backlight cutter | black

Art. 70000661



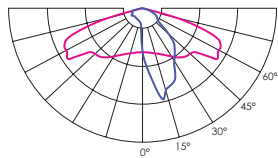
## Backlight cutter | white

Art. 70000662

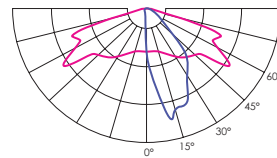


Optical losses from 10% to 31% depending from used optic.

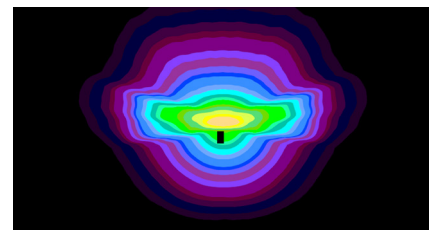
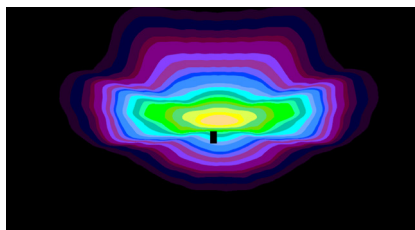
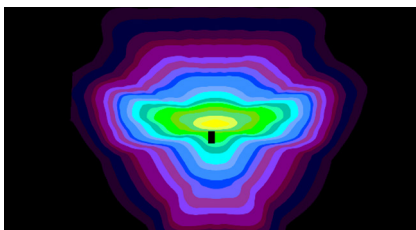
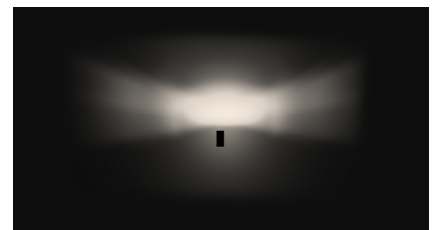
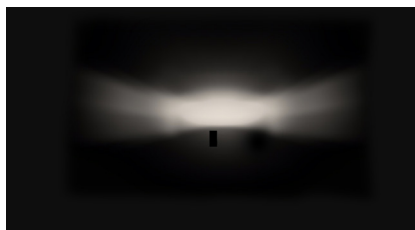
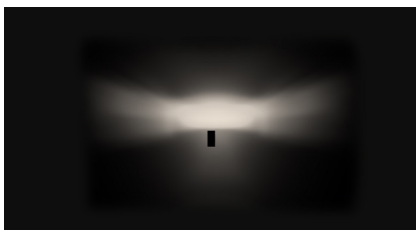
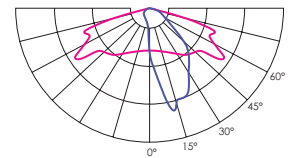
Without backlight cutter



Backlight cutter | black



Backlight cutter | white

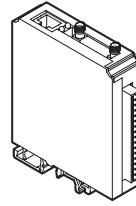


# Accessories

## MAUGLO Segment controller

Art. 70010004

Segment Controller receives commands from MAUGLO server via GSM and transmits tasks to Luminaire Controller via radio frequency communication.



## MAUGLO Surge Protection device

Art. 70020001

Surge Protection device offers protection against lighting surges;

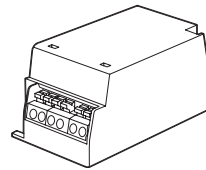
Voltage Protection level up (L-N)  $\leq 1,5$  kV

Voltage Protection level up (L/N-PE)  $\leq 2,0$  kV

$U_{oc} = 10$  kV

$I_{max} = 10$  kA

$I_{nom} = 5$  kA



## Radio Frequency Antenna

Art. 70000108

Heavy duty IP67 enclosure  
Mounted in cabinet or luminaire body  
with 14 mm screw  
SMA connector



## NEMA Socket

2213362-3, 5 pin NEMA socket 105°C wires

Art. 70000362

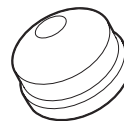
2213362-4, 7 pin NEMA socket 105°C wires

Art. 70000333



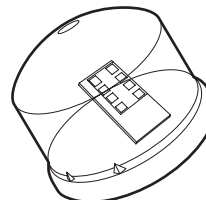
## Dummy Link for NEMA Socket

Art. 70000113



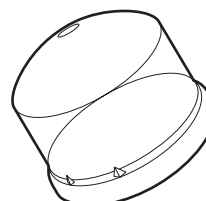
## MSLC205RG Luminaire controller + radar, Zhaga, 80 mm

Art. 70010027



## MSLC205RGL Luminaire controller, Zhaga, 80 mm

Art. 70010029



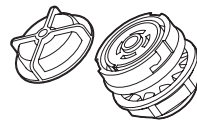
**Zhaga socket no cap**

Art. 70000612



**Zhaga socket with cap**

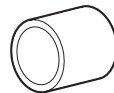
Art. 70000613



**Console adapter**

40 mm to 30 mm

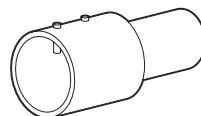
Art. 70055002



**Console adapter**

Spigot size 60 - 76 mm

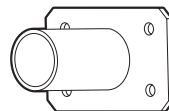
Art. 70044002



**Wall mounting bracket**

Spigot size 40 - 60 mm

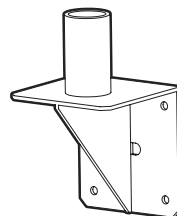
Art. 70044001



**Wall mounting bracket**

Vertical

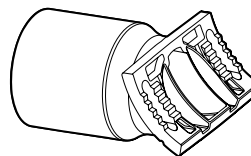
Art. 70044004



**Stork LS console**

60 - 76 mm, RAL 9006

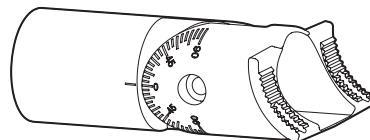
Art. 70044246



**Stork LS adjustable console ±90°**

40 - 60 mm, RAL 9006

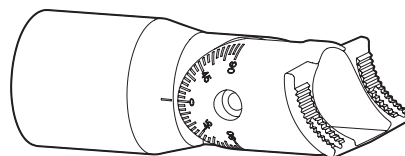
Art. 70044097



**Stork LS adjustable console ±90°**

60 - 76 mm, RAL 9006

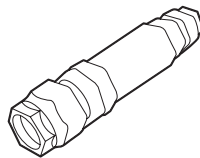
Art. 70044099



**Device connector**

Art. 70000315

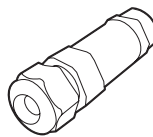
IP66 rated connector offers easy installation of the street luminaires.  
4 wire cable connector without PE connection.



**Connector**

Art. 70000313

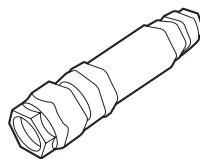
IP66 rated connector offers easy installation of the street luminaires.  
3 wire cable connector



**Connector**

Art. 70000304

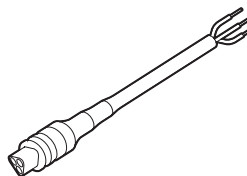
IP66 rated connector offers easy installation of the street luminaires.  
5 wire cable connector



**Connection cable**

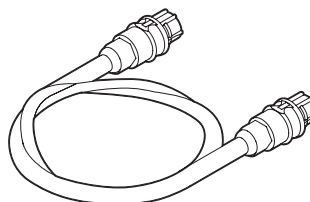
Art. 70000363

Male - free end, length 1 m, RST20i3, 3 pole, 250 V,  
16 A, cable type H05VV, cross section 1,5 mm²



**Pre-installed cable sets  
For external power supply**

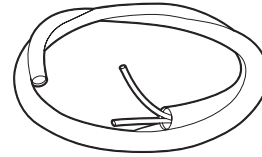
- 0,5 m long cable.....Art. 70000436
- 5 m long cable.....Art. 70000437
- 6 m long cable.....Art. 70000438
- 8 m long cable.....Art. 70000439
- 10 m long cable.....Art. 70000440
- 12 m long cable.....Art. 70000441
- 18 m long cable.....Art. 70000442
- 20 m long cable.....Art. 70000443
- 22 m long cable.....Art. 70000444
- 25 m long cable.....Art. 70000445



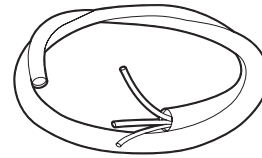


**Pre-installed cable sets  
For internal power supply**

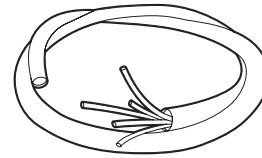
2 x 1,5 mm - 0,5 m long cable.....	Art. 70000418
2 x 1,5 mm - 5 m long cable.....	Art. 70000342
2 x 1,5 mm - 6 m long cable.....	Art. 70000337
2 x 1,5 mm - 8 m long cable.....	Art. 70000344
2 x 1,5 mm - 10 m long cable.....	Art. 70000338
2 x 1,5 mm - 12 m long cable.....	Art. 70000345
2 x 1,5 mm - 18 m long cable.....	Art. 70000419



3 x 1,5 mm - 0,5 m long cable.....	Art. 70000319
3 x 1,5 mm - 5 m long cable.....	Art. 70000320
3 x 1,5 mm - 6 m long cable.....	Art. 70000321
3 x 1,5 mm - 8 m long cable.....	Art. 70000322
3 x 1,5 mm - 10 m long cable.....	Art. 70000323
3 x 1,5 mm - 12 m long cable.....	Art. 70000324
3 x 1,5 mm - 18 m long cable.....	Art. 70000325
3 x 1,5 mm - 20 m long cable.....	Art. 70000425
3 x 1,5 mm - 22 m long cable.....	Art. 70000426
3 x 1,5 mm - 25 m long cable.....	Art. 70000427
3 x 1,5 mm - 32 m long cable.....	Art. 70000430
3 x 1,5 mm - 42 m long cable.....	Art. 70000431
3 x 1,5 mm - 50 m long cable.....	Art. 70000432



5 x 1,5 mm - 0,5 m long cable.....	Art. 70000305
5 x 1,5 mm - 5 m long cable.....	Art. 70000316
5 x 1,5 mm - 6 m long cable.....	Art. 70000317
5 x 1,5 mm - 8 m long cable.....	Art. 70000318
5 x 1,5 mm - 10 m long cable.....	Art. 70000306
5 x 1,5 mm - 12 m long cable.....	Art. 70000307
5 x 1,5 mm - 18 m long cable.....	Art. 70000308
5 x 1,5 mm - 20 m long cable.....	Art. 70000428
5 x 1,5 mm - 22 m long cable.....	Art. 70000429
5 x 1,5 mm - 25 m long cable.....	Art. 70000429
5 x 1,5 mm - 32 m long cable.....	Art. 70000433
5 x 1,5 mm - 42 m long cable.....	Art. 70000434
5 x 1,5 mm - 50 m long cable.....	Art. 70000435



# Certification



**CE** – conformity with European Union's health, safety and environmental protection standards

The CE mark is placed on products to state conformity with the relevant EU health, safety and environmental protection standards. In case of electronic products, the standards are, for example, the Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive, Waste Electrical and Electronic Equipment (WEEE) directive, the Electromagnetic Compatibility (EMC) directive etc. The mark ensures that the product can be sold anywhere in the European Economic Area (EEA).



**UKCA** - conformity with the relevant essential requirements of Great Britain

UKCA is a product mark intended to demonstrate compliance with the directives set by Great Britain (England, Scotland and Wales). It is analogous to the European Union's CE marking, meaning that depending on the type of product the applicable regulations are different. In case of LED lighting, the relevant requirements are compliance with the Electromagnetic Compatibility Regulations, the Electrical Equipment (Safety) Regulations, the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations and the Ecodesign for Energy-Related Products and Energy Information (Lighting Products) Regulations.



**RoHS** – compliance with European Union's RoHS directive

The RoHS (Restriction of Hazardous Substances in Electrical and Electronic Equipment) directive restricts (with exceptions) the use of ten hazardous materials in the manufacture of various types of electronic and electrical equipment. The aim of the directive is to prevent the risks posed to human health and the environment related to the management of electronic and electrical waste.



**Zhaga-D4i** - compliance with the requirements of Zhaga Book 18 or 20 and DALI standard

The Zhaga-D4i Mark represents the fact that a product is certified following the Zhaga-D4i joint certification program – a program established by Zhaga and the DALI Alliance (DiiA). The Zhaga part of the Mark represents that a product meets the requirements of Zhaga Book 18 or 20 – Zhaga standards that describe a smart interface between outdoor luminaires and sensing/ communication nodes. The DALI Alliance part of the Mark signifies that the product conforms with the DALI standard for intelligent, IoT-ready luminaires.



**UL** - compliance with UL standards for LED lighting

UL stands for Underwriter Laboratories, a third-party certification company that's been around for over a century. UL sets industry-wide standards for products and performs testing according to these standards to ensure that the products marked with the UL mark are safe and high quality.



**ENEC** - compliance with European standards for electrical equipment

The ENEC Mark is the high quality European Mark for electrical equipment. It is governed by the European Testing Inspection Certification System which ensures that the testing of products is conducted at ENEC – accredited laboratories, following additional requirements regarding the testing procedures. The ENEC Mark means that the testing procedure was followed scrupulously and that the consumer can be certain of the product's safety and quality.



**ENEC+** - compliance with European standards for LED – based electronic products

The ENEC+ Mark is the high quality European Mark for LED – based electronic products. It demonstrates the product's compliance with the IEC standards for performance of LED modules and LED based luminaires. The ENEC+ Mark can only be granted to a product that has already acquired the ENEC Mark.



**International EPD System** – Environmental Product Declaration available

An Environmental Product Declaration (EPD) is a declaration of the materials, energy, transportation and other resources involved in the production, use and end-of life of a specific product. It is based on a Life Cycle Assessment (LCA) study that complies with standards EN ISO 14040 and EN ISO 14044. A product's EPD can help evaluate its impact on the environment and make sustainable choices.



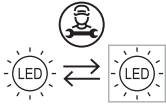
**DarkSky Approved** - a DarkSky program seal of approval

DarkSky Approved certification is granted to outdoor lighting fixtures meeting the criteria outlined by DarkSky, an organization that aims to reduce light pollution, enabling clearer night skies and mitigating the impact on wildlife and human health. DarkSky Approved luminaires are shielded to cut off uplight, utilize energy-efficient light sources, and employ measures to limit glare. This certification reflects a dedication to responsible outdoor lighting, valued by communities, businesses, and individuals striving to protect nocturnal environments.



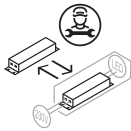
**Synergrid approved** - compliance with Synergrid requirements for LED lighting

Synergrid is a federation of electricity and natural gas network operators in Belgium. The Synergrid approval mark means that the product is compliant with the design, safety and performance requirements set by Synergrid. The approval can be confirmed by checking the official list of Synergrid approved luminaires on the Synergrid website.



**LED module replaceable by a professional**

This pictogram shows that the LED modules included in the luminaire are only replaceable by a professional. This labeling is a requirement following the introduction of European Union's Regulation on energy labelling for light sources (EU) 2019/2015.

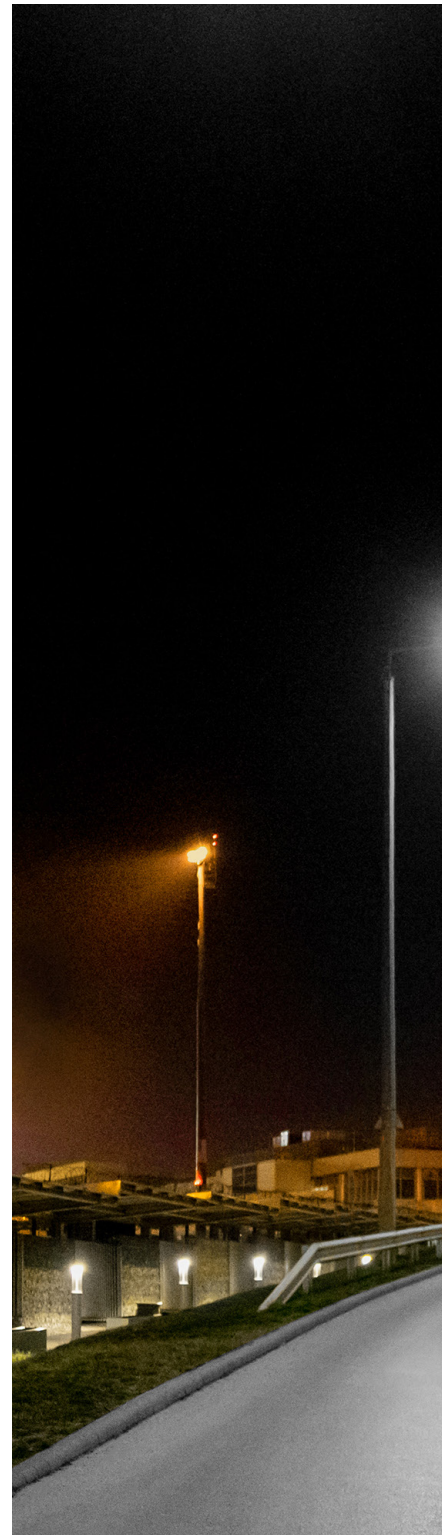


**LED driver replaceable by a professional**

This pictogram shows that the LED driver included in the luminaire is only replaceable by a professional. This labeling is a requirement following the introduction of European Union's Regulation on energy labelling for light sources (EU) 2019/2015.



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