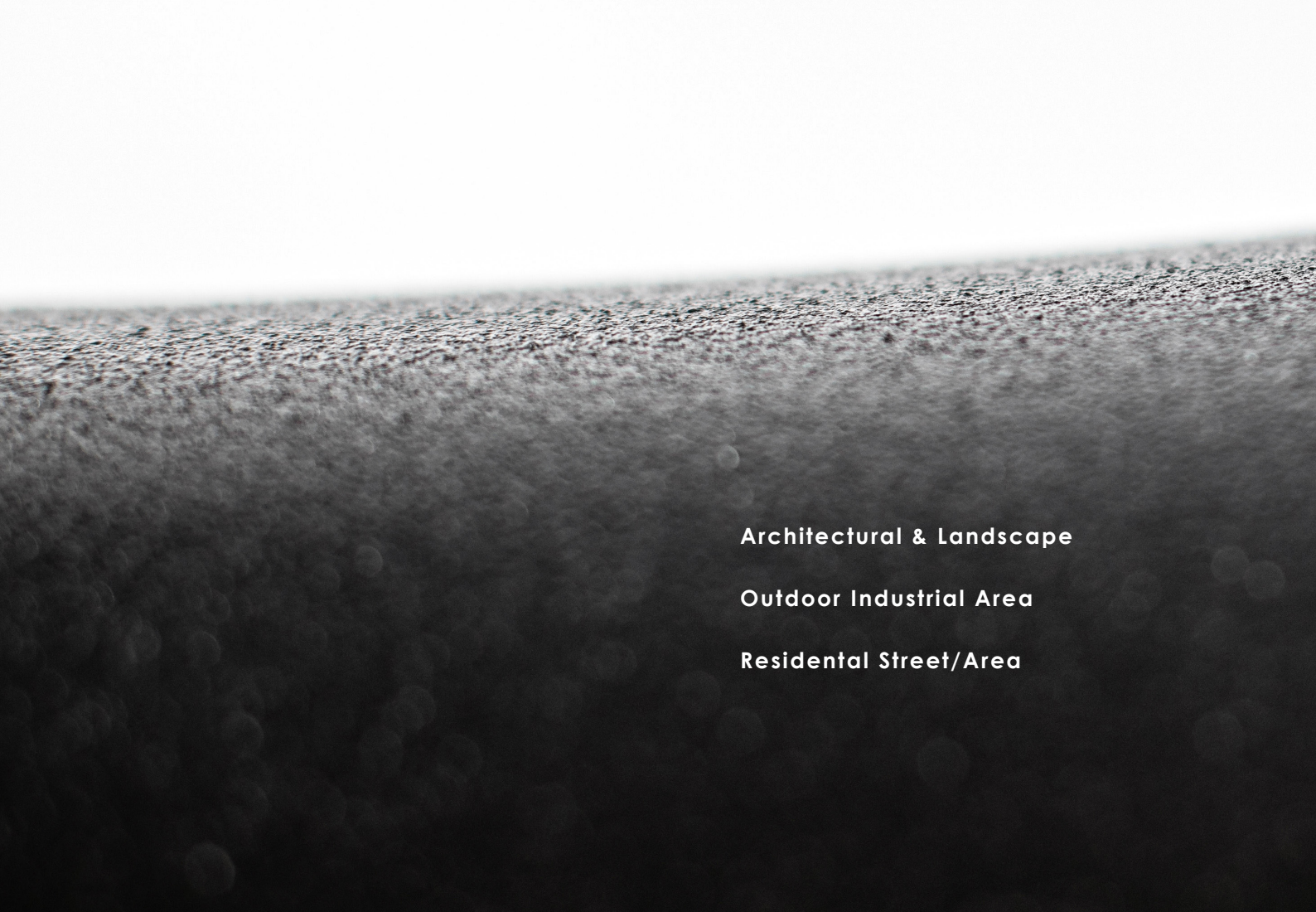


vizulo



Luscinia

SIDE ENTRY



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 screws

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)

Intelligent light control system

Power line or radio frequency

Protection

IP66 for the complete luminaire

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 6 kV till 10 kV

Light regulation

LUSCINIA drivers offer integrated midnight dimming and network-controlled 1 - 10 V and DALI protocols

Impact resistance

IK08 (Vandal protected) for the complete luminaire

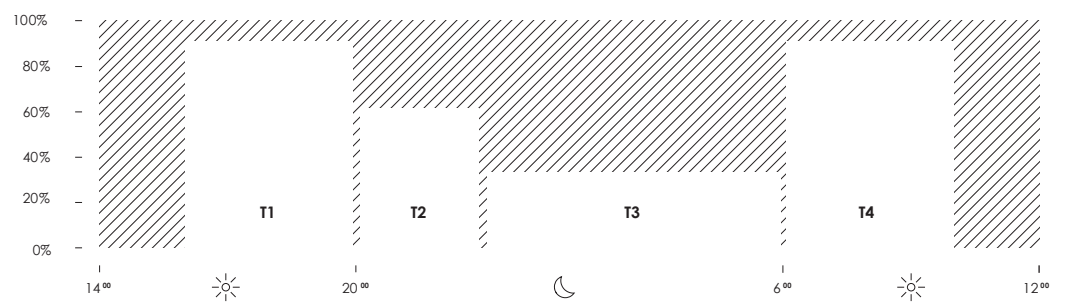
Traffic Roads

Pedestrian Roads

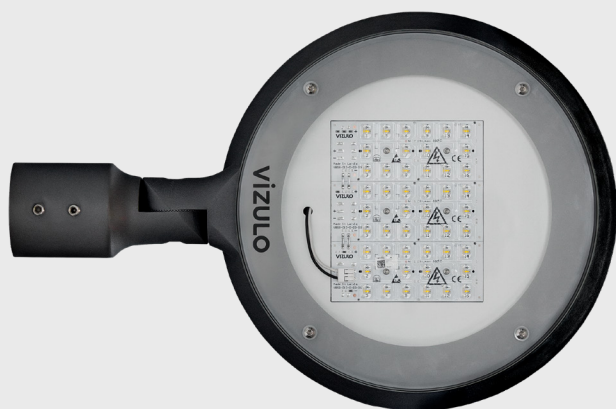
City Centre

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.



Luscinia side entry



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



RAL7035



RAL9006

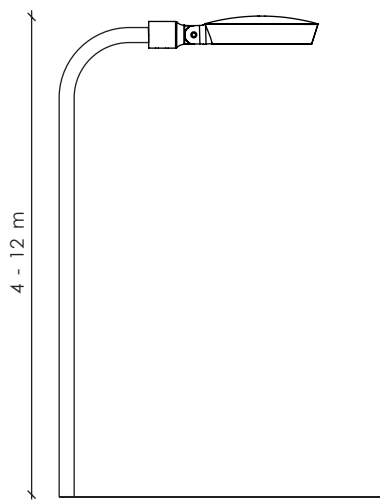
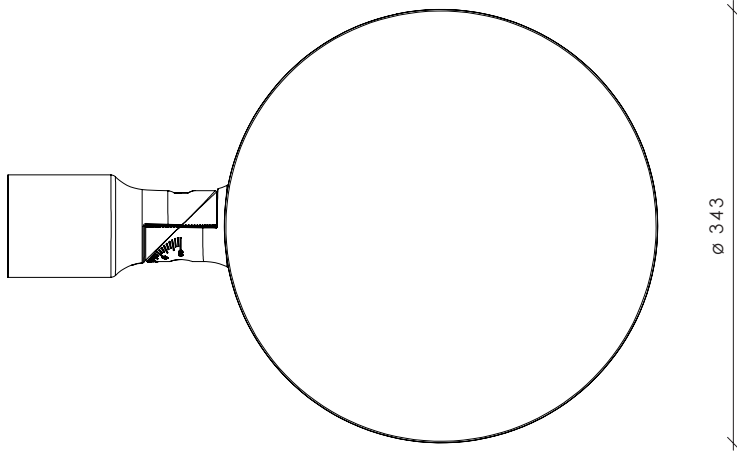
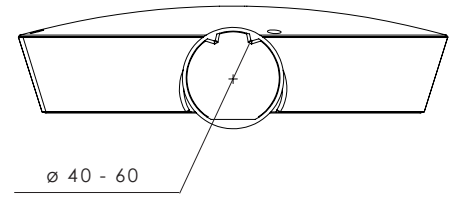
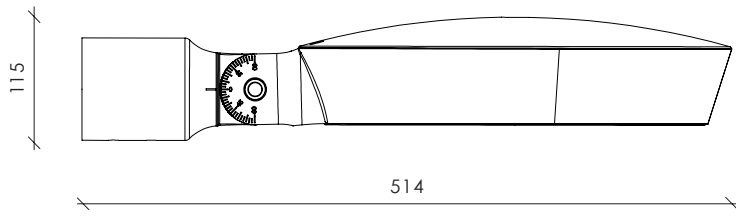


DB703



RAL9005

Other colors
available on request



Technical information



V	198 - 264 / 110 - 277 ¹⁾
Hz	50 - 60
W	5 - 75
lm	490 - 11150 ²⁾
lm/W	95 - 158
K	2700 / 3000 / 4000 ³⁾
°C	-40 to +50 5 - 50 W -40 to +35 50 - 75 W
CRI	>70 / >80 / >90 ³⁾

Body:	Die-cast aluminium
Dimming:	DALI / 1 - 10 V / Midnight dimming / Step dimming / Mains dimming
Initial chromaticity:	MacAdam 5
Lifetime:	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*
Warranty:	5 years
Installation:	Pre-wired cable 30 cm ⁴⁾
Spigot:	32 - 40 mm ⁵⁾ / 40 - 60 mm / 76 mm ⁵⁾
Socket:	NEMA / Top and Bottom Zhaga
Intelligent Control:	Stand-alone / Group / CMS
Sensor:	Motion / Motion + Daylight / Daylight
Surge protection:	4 / 6 / 10 kV ⁶⁾
Corrosion protection:	Up to C5
Neto weight:	Up to 6.5 kg
Max. wind load area, SCd, m²:	0.12

¹⁾ Maximum operating voltage, ENEC certificate voltage 198 - 264 V, UL certificate voltage 110 - 277 V

²⁾ Lumen output indicated at CRI > 70

³⁾ 1800 / 2200 / 3500 / 5000 / 5700 / 6500 K available on request along with other not listed CRI and CCT

⁴⁾ Other lengths available on request

⁵⁾ Achievable with an adapter for 40 - 60 mm spigot

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

⁷⁾ Coming soon

*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	8			16			24		
Nominal current, mA	140	540	700	280	480	770	260	460	700
Power, W	5	15	19	15	25	39	20	35	52
Luminous Flux, lm	555	1980	2480	2150	3575	5305	3000	5150	7290
Efficacy, lm/W	111	132	131	143	143	136	150	147	140
Power factor, PF	Up to 0.94			Up to 0.98			Up to 0.97		

Luminaire efficacy	2700 K	5 - 75 W	476 - 6250 lm	95 - 130 lm/W
	3000 K	5 - 75 W	524 - 6873 lm	105 - 142 lm/W
	5000 K	5 - 75 W	555 - 7290 lm	111 - 150 lm/W
	5700 K	5 - 75 W	555 - 7290 lm	111 - 150 lm/W

High density modules

* Data for V01 optic.

Check VIZULO members section for additional information

4000 K | CRI 70

Number of LED's	8			16			32			48		
Nominal current, mA	140	540	700	280	480	770	280	510	760	270	410	510
Power, W	5	15	19	15	25	39	28	50	75	40	60	75
Luminous Flux, lm	555	1980	2480	2150	3575	5305	4325	7370	10360	6320	9160	11150
Efficacy, lm/W	111	132	131	143	143	136	154	147	138	158	153	149
Power factor, PF	Up to 0.94			Up to 0.98			Up to 0.97			Up to 0.97		

Luminaire efficacy	2700 K	5 - 75 W	476 - 9555 lm	95 - 135 lm/W
	3000 K	5 - 75 W	524 - 10510 lm	105 - 149 lm/W
	5000 K	5 - 75 W	555 - 11150 lm	111 - 158 lm/W
	5700 K	5 - 75 W	555 - 11150 lm	111 - 158 lm/W

ECO

* Data for L01 optic.

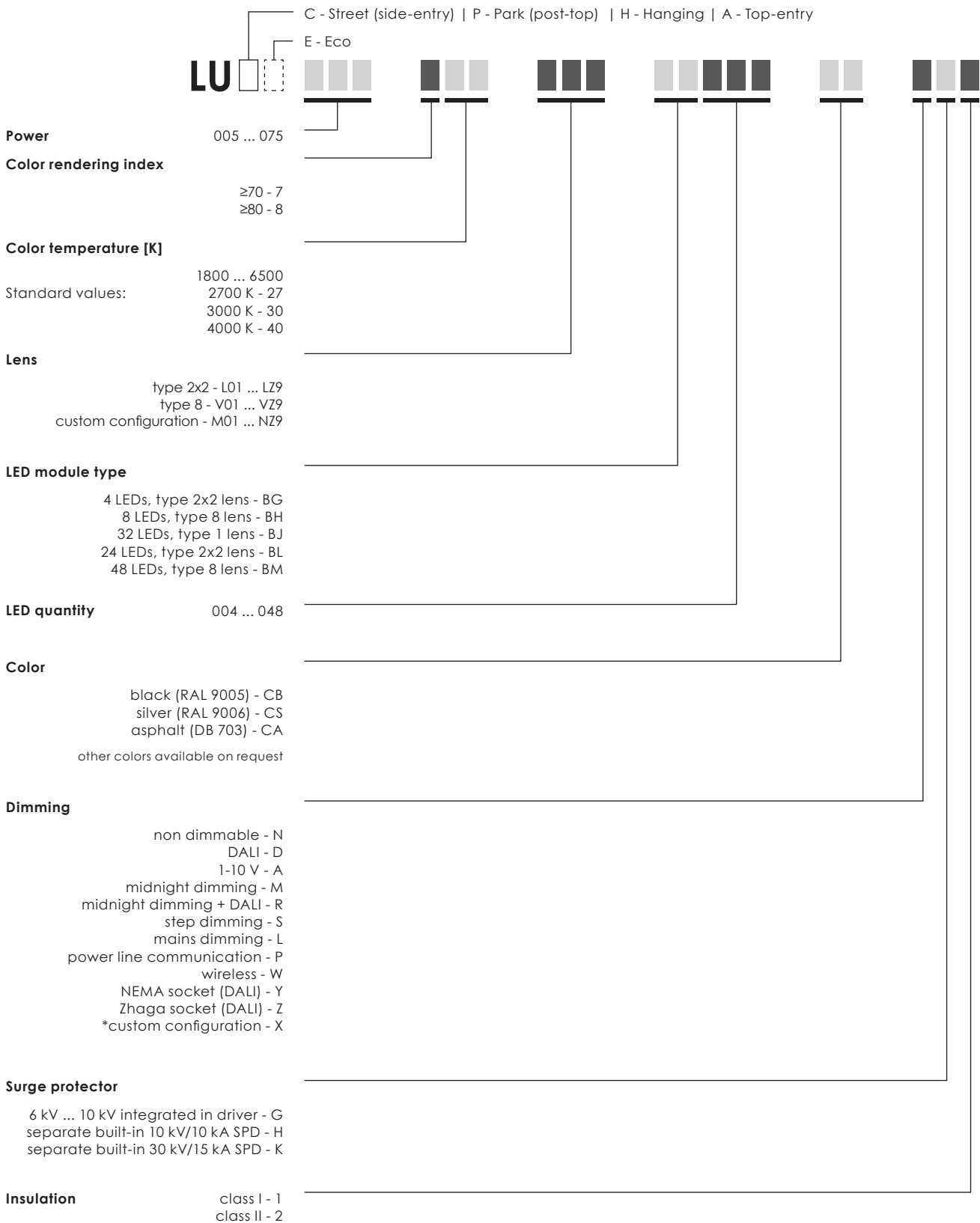
Check VIZULO members section for additional information

4000 K | CRI 70

Number of LED's	8			16			24		
Nominal current, mA	280	490	700	280	490	715	270	400	500
Power, W	15	26	38	28	50	75	40	60	75
Luminous Flux, lm	2120	3470	4710	4215	6840	9260	6140	8620	10300
Efficacy, lm/W	141	133	124	151	137	123	154	144	137
Power factor, PF	Up to 0.98			Up to 0.97			Up to 0.97		

Luminaire efficacy	2700 K	15 - 75 W	1990 - 9610 lm	116 - 144 lm/W
	3000 K	15 - 75 W	2120 - 10300 lm	124 - 154 lm/W
	5000 K	15 - 75 W	2120 - 10300 lm	124 - 154 lm/W
	5700 K	15 - 75 W	2120 - 10300 lm	124 - 154 lm/W

Model name principles

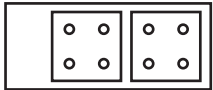
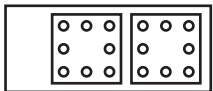
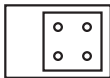
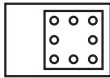
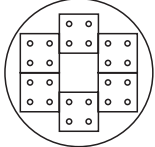
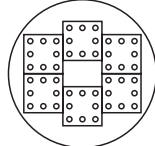
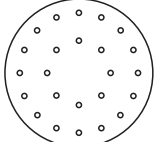


EXAMPLE LUC 075 730 L05 BL024 CS NG1

* 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	 A008
AF	2	8	16	32	4	Standard	type 8 V01...VZ9	 F016
BG	2	4	4	8	-	Standard Eco	type 2x2 L01...LZ9	
BH	2	4	8	16	4	Standard	type 8 V01...VZ9	
BL	1	16	24	24	4	Standard Eco	type 2x2 L01...LZ9	
BM	1	32	48	48	4	Standard	type 8 V01...VZ9	
BJ	1	8	24	24	-	Standard Eco	type 1 Z01...ZZ9	

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 ⁽¹⁾	4 ⁽¹⁾
None	Mains dimming	L	3	2
Zhaga	DALI	Z	3 ⁽²⁾	2 ⁽²⁾
Zhaga	Midnight dimming	X	3	2
Zhaga	Mains dimming	X	3	2
NEMA	DALI	Y	3 / 5 ⁽³⁾	2 / 4 ⁽³⁾
NEMA	Midnight dimming	X	3	2
NEMA	Step dimming	X	5 ⁽¹⁾	4 ⁽¹⁾
NEMA	Mains dimming	X	3	2

⁽¹⁾ 1 core unused

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

⁽³⁾ +2 cores for external DALI connection



Pedestrian crossing optics



V	198 - 264 / 110 - 277 ¹⁾	Body:	Die-cast aluminium
Hz	50 - 60	Dimming:	DALI / 1 - 10 V / Midnight dimming / Step dimming / Mains dimming
W	5 - 52 ²⁾ 15 - 75 ³⁾	Initial chromaticity:	MacAdam 5
lm	Up to 7290 ²⁾ Up to 10300 ³⁾	Lifetime:	Eco 100 000 h (L90B10) at Ta = 25 °C* Standard 100 000 h (L98B10) at Ta = 25 °C*
lm/W	95 - 150 ²⁾ 116 - 154 ³⁾	Warranty:	5 years
K	2700 / 3000 / 4000 ⁴⁾	Installation:	Pre-wired cable 30 cm ⁵⁾
°C	-40 to +50 5 - 50 W -40 to +35 50 - 75 W	Spigot:	32 - 40 mm ⁶⁾ / 40 - 60 mm / 76 mm ⁶⁾
CRI	>70 / >80 / >90 ⁴⁾	Socket:	NEMA / Top and Bottom Zhaga
		Intelligent Control:	Stand-alone / Group / CMS
		Sensor:	Motion / Motion + Daylight / Daylight
		Surge protection:	4 / 6 / 10 kV ⁷⁾
		Corrosion protection:	Up to C5
		Neto weight:	Up to 6.5 kg
		Max. wind load area, SCd, m²:	0.12

¹⁾ Maximum operating voltage, ENEC certificate voltage 198 - 264 V, UL certificate voltage 110 - 277 V

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

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

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

⁵⁾ Other lengths available on request

⁶⁾ Achievable with an adapter for 40 - 60 mm spigot

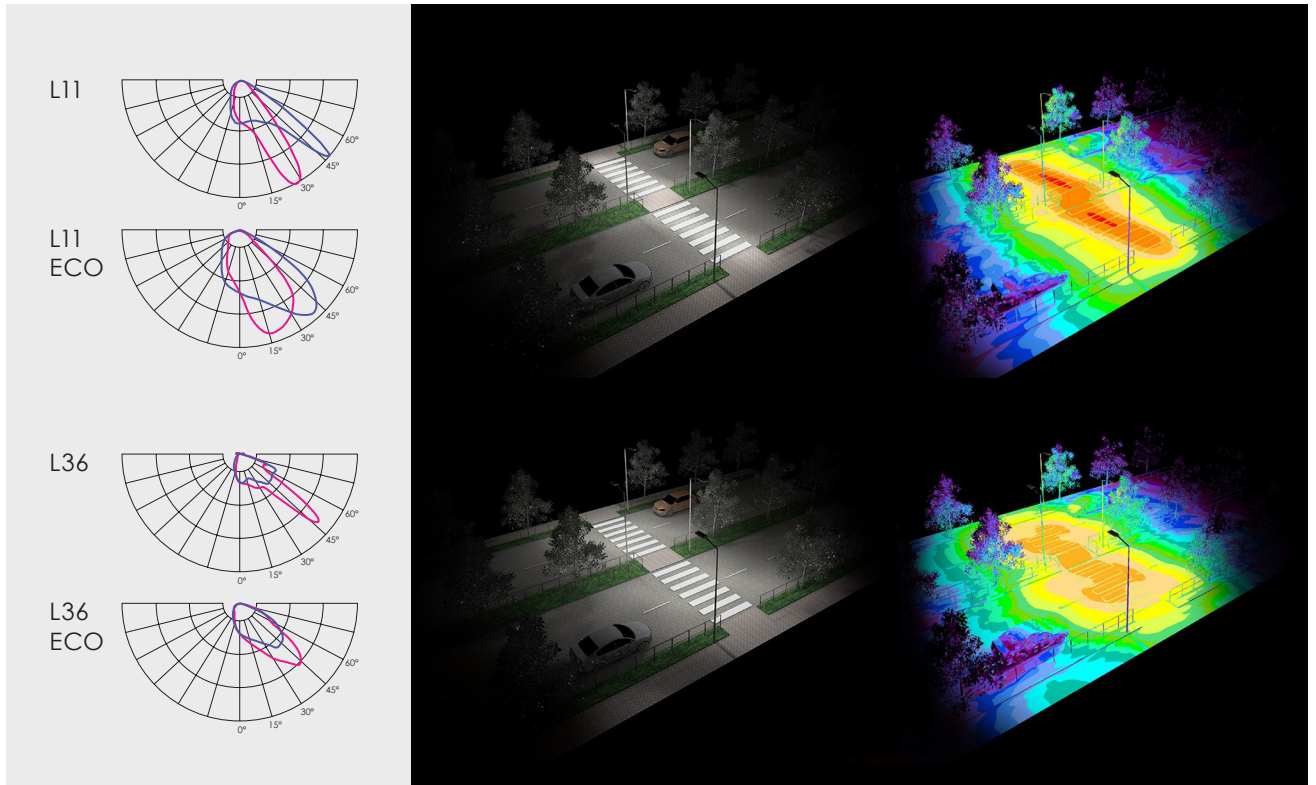
⁷⁾ 10 kV (L-N; L/N-PE) surge protection device available on request

⁸⁾ Coming soon

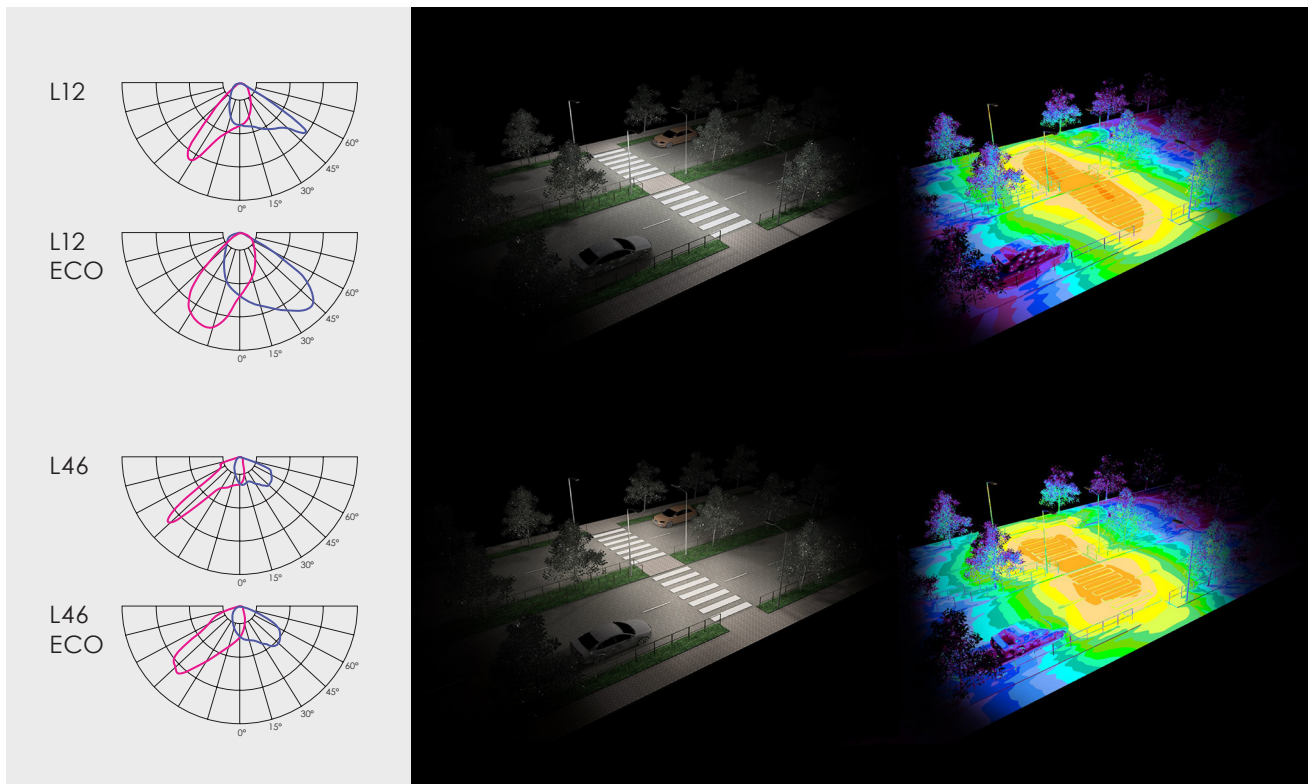
*This value is only informative and may change according to selected article. LED Lifetime is strongly depending from LEDs current and junction temperature – increase in LED current and luminaire power lead to increase of junction temperature and as consequence lifetime decrease. Thus, luminaire models 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



MCB / Inrush current table

Tridonic LED driver

Standard/High density	In-rush current (peak/duration)	B10A	B16A	B20A	B25A	C10A	C16A	C20A	C25A
LUH 8-16 LED, 8-33 W	36 A (195 µs)	10	16	21	28	16	21	35	44
LUH 16-24 LED, 19-60 W	32 A (267 µs)	7	12	15	19	11	20	25	30
LUH 32-40 LED, 28-63 W	37 A (287 µs)	7	12	15	19	11	20	25	30
LUH 40-48 LED, 44-63 W	56 A (280 µs)	5	8	11	14	10	16	22	22

Eco		B10A	B16A	B20A	B25A	C10A	C16A	C20A	C25A
LUHE 4-12 LED, 8-33 W	36 A (195 µs)	10	16	21	28	16	21	35	44
LUHE 6-12 LED, 17-60 W	32 A (267 µs)	7	12	15	19	11	20	25	30
LUHE 12-20 LED, 22-63 W	37 A (287 µs)	7	12	15	19	11	20	25	30
LUHE 20-24 LED, 46-63 W	56 A (280 µs)	5	8	11	14	10	16	22	22

Osram LED driver

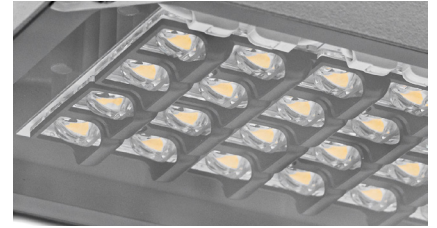
Standard/High density	In-rush current (peak/duration)	B10A	B16A	B20A	B25A	C10A	C16A	C20A	C25A
LUH 8-16 LED, 8-40 W	45 A (180 µs)	10	17	21	28	16	27	33	44
LUH 20-32 LED, 18-63 W	53 A (200 µs)	7	12	15	20	11	19	24	32
LUH 32-48 LED, 28-63 W	57 A (210 µs)	7	12	15	20	11	19	24	32

Eco		B10A	B16A	B20A	B25A	C10A	C16A	C20A	C25A
LUHE 4-8 LED, 11-41 W	45 A (180 µs)	10	17	21	28	16	27	33	44
LUHE 6-16 LED, 16-63 W	53 A (200 µs)	7	12	15	20	11	19	24	32
LUHE 12-24 LED, 28-63 W	57 A (210 µs)	7	12	15	20	11	19	24	32

Backlight cutter

Backlight cutter | black

Art. 70000661



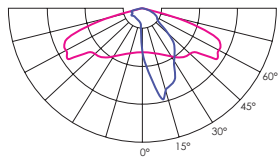
Backlight cutter | white

Art. 70000662

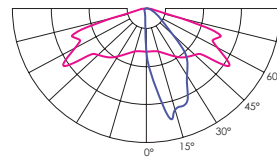


Optical losses from 10% to 31% depending from used optic.

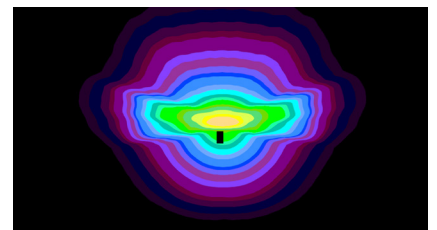
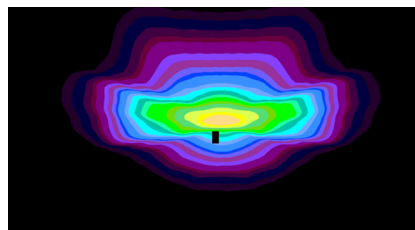
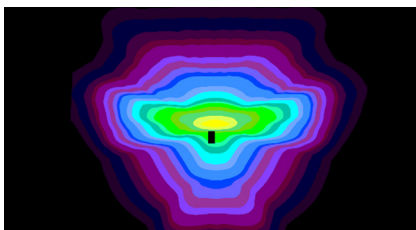
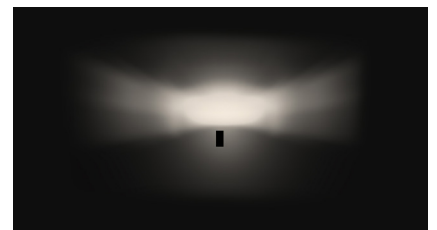
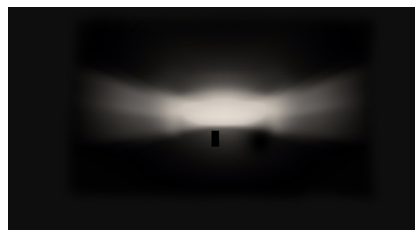
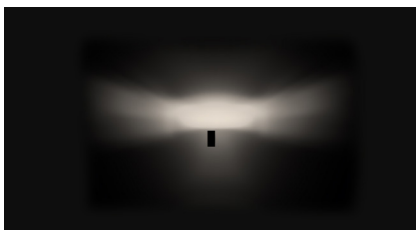
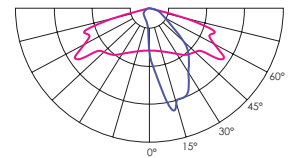
Without backlight cutter



Backlight cutter | black



Backlight cutter | white

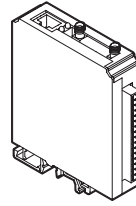


Accessories

Citintelly Segment controller

Art. 70010004

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

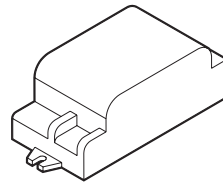


Citintelly Luminaire controller

Art. 70010001 /
LC2M-23-05-R Luminaire
Controller - 2 relays

Luminaire Controller is wireless mesh-networking device that uses 868 MHz for communication with Segment Controller and other Luminaire Controllers. It is delivered in various configurations to meet the needs of your applications.

Art. 70010002 /
LC2M-12-05-R Luminaire
Controller - 1 relay



Citintelly Surge Protection device

Art. 70020001

Surge Protection device offers protection against lighting surges;

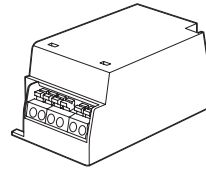
Voltage Protection level up (L-N) $\leq 1,5$ kV

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

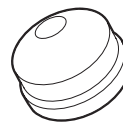
2213362-4, 7 pin NEMA socket 105°C wires

Art. 70000333



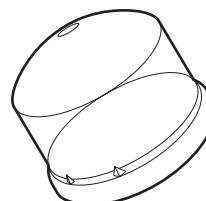
Dummy Link for NEMA Socket

Art. 70000113



MSLC205RGL Luminaire controller, Zhaga, 80 mm

Art. 70010029



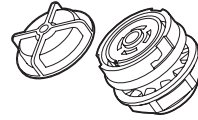
Zhaga socket no cap

Art. 70000612



Zhaga socket with cap

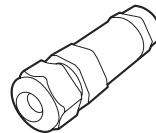
Art. 70000613



Connector

Art. 70000313

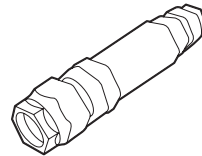
IP66 rated connector offers easy installation of the street luminaires.
3 wire cable connector



Connector

Art. 70000304

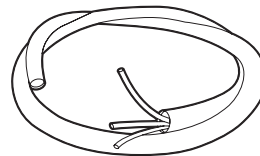
IP66 rated connector offers easy installation of the street luminaires.
5 wire cable connector



Pre-installed cable sets

For internal power supply:

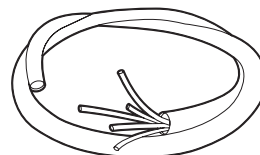
3 x 1,5 mm - 0,5 m long cable.....	Art. 70000319
3 x 1,5 mm - 5 m long cable.....	Art. 70000320
3 x 1,5 mm - 6 m long cable.....	Art. 70000321
3 x 1,5 mm - 8 m long cable.....	Art. 70000322
3 x 1,5 mm - 10 m long cable.....	Art. 70000323
3 x 1,5 mm - 12 m long cable.....	Art. 70000324
3 x 1,5 mm - 18 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



Pre-installed cable sets

For internal power supply:

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

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.



* Coming soon

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.



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.



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

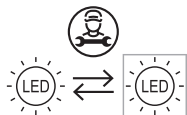
An Environmental Product Declaration (EPD) is a declaration of the materials, energy, transportation and other resources involved in the production, use and end-of life of a specific product. It is based on a Life Cycle Assessment (LCA) study that complies with standards EN ISO 14040 and EN ISO 14044.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



* Coming soon

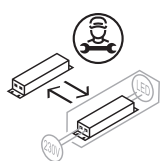
Synergrid approved - compliance with Synergrid requirements for LED lighting

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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