VIZULO



MICRO MARTIN



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 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.
Available color temperature: 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

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

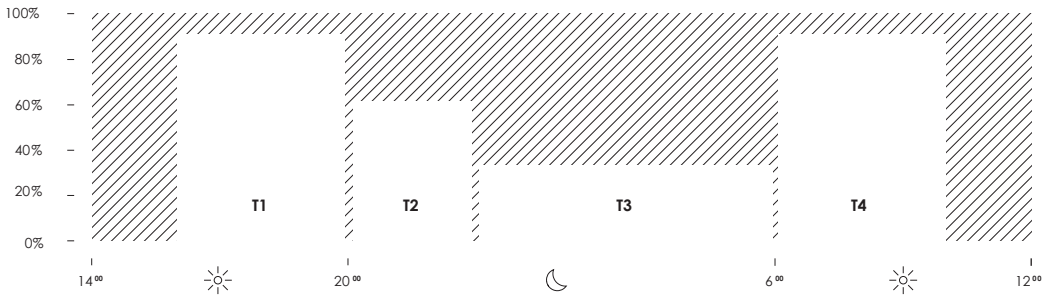
Light regulation
MICRO MARTIN drivers offer integrated midnight dimming and network-controlled 1-10 V and DALI protocols

Impact resistance
Up to IK10 (Vandal protected) for the complete luminaire



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.



Micro martin

with fins



standard

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

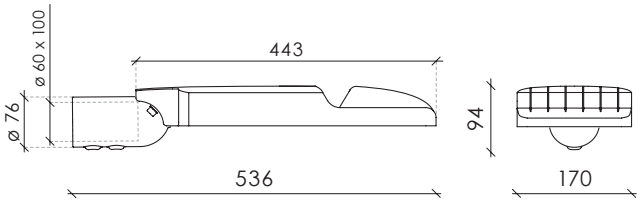


tool-less

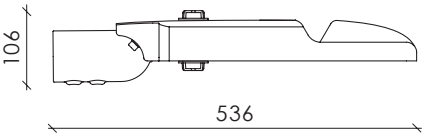
Note!
Glass with gray print is standard
(black print glass on request!)

RAL7035 RAL9006 DB703 RAL9005

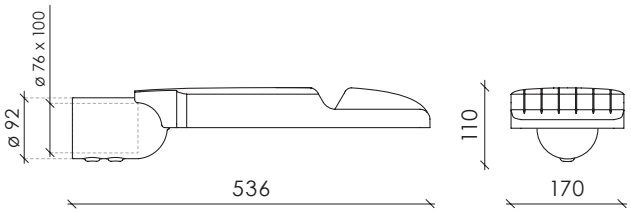
Other colors
available on request



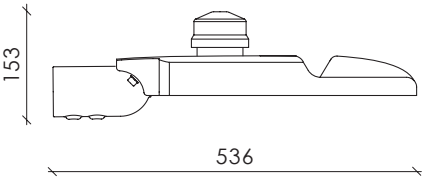
Dimensions with **60 mm console**



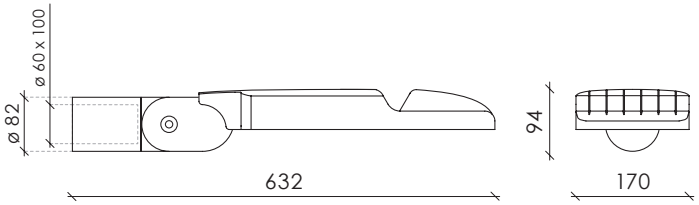
Dimensions with **2 Zhaga connectors**



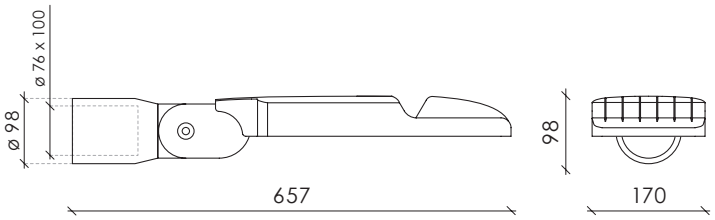
Dimensions with **76 mm console**



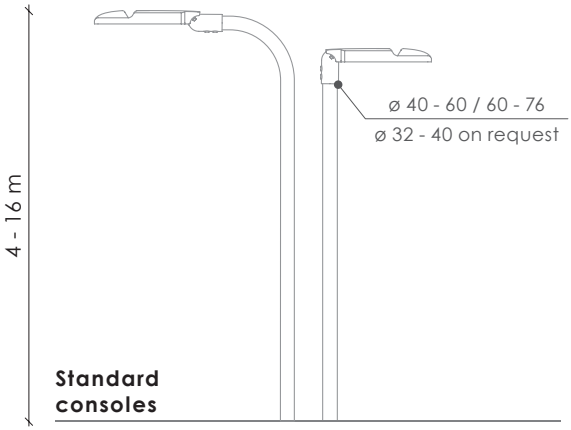
Dimensions with **NEMA socket**

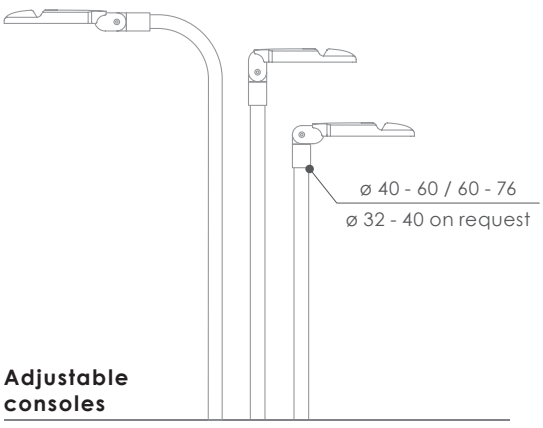


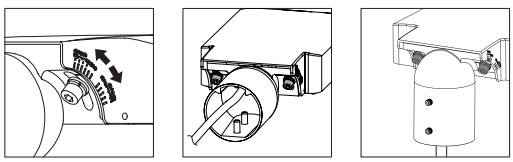
Dimensions with **60 mm ±90° adjustable console**



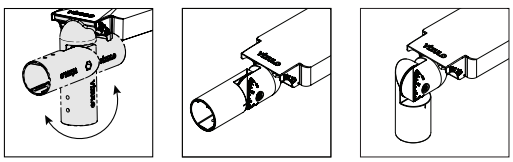
Dimensions with **76 mm ±90° adjustable console**







Console angle regulation | Horizontal entry ≤ -20° ... 5° | Vertical entry ≤ 0° ... 20°



Console angle regulation | Horizontal entry ± 90° | Vertical entry ± 90°

Micro martin

smooth



standard

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

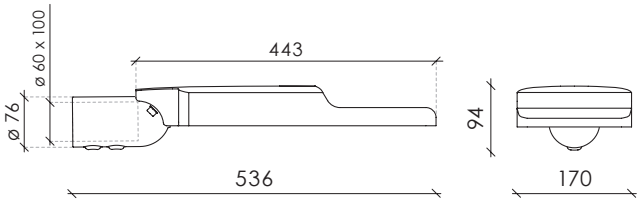


tool-less

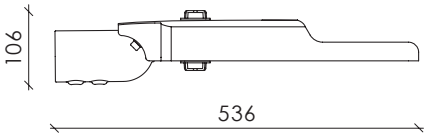
Note!
Glass with gray print is standard
(black print glass on request!)

RAL7035 RAL9006 DB703 RAL9005

Other colors
available on request



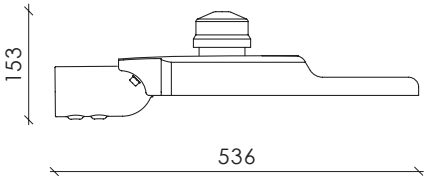
Dimensions with **60 mm console**



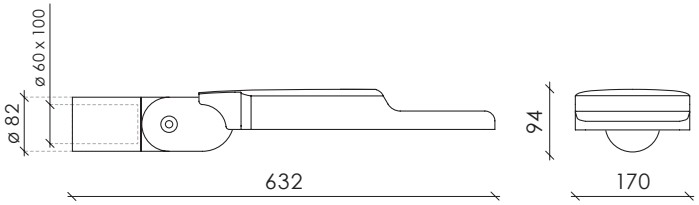
Dimensions with **2 Zhaga connectors**



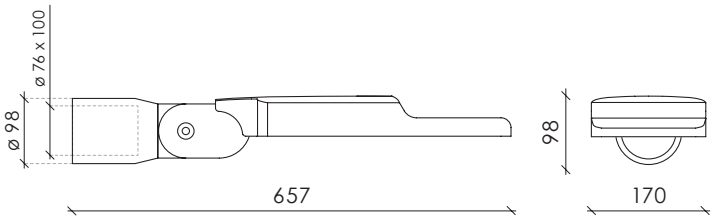
Dimensions with **76 mm console**



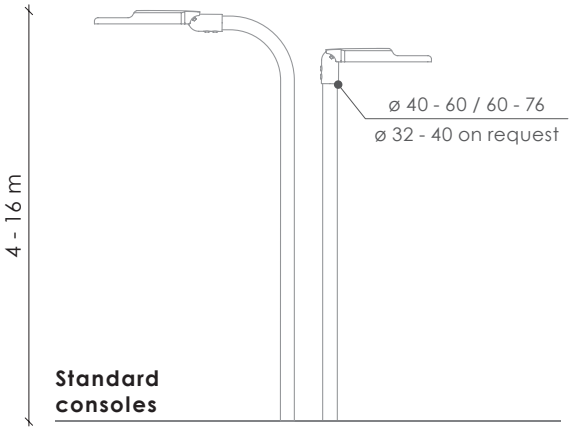
Dimensions with **NEMA socket**

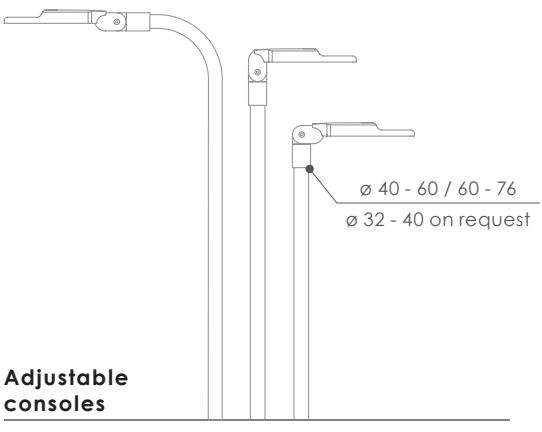


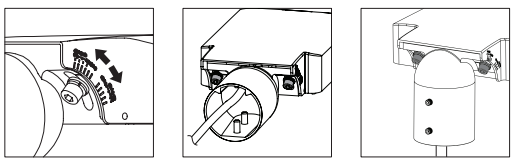
Dimensions with **60 mm ±90° adjustable console**



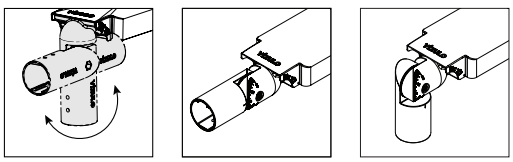
Dimensions with **76 mm ±90° adjustable console**







Console angle regulation | Horizontal entry ≤ -20° ... 5° | Vertical entry ≤ 0° ... 20°



Console angle regulation | Horizontal entry ± 90° | Vertical entry ± 90°

Features

↘ WHITE OR BLACK PCB - PERFORMANCE MEETS AESTHETICS

Choose **white PCB** for brighter illumination,
or the **black PCB** for a sleek, modern look.

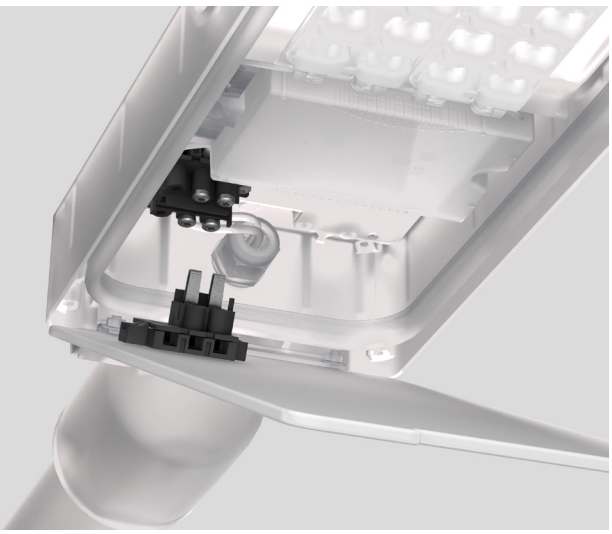
While white PCB offer **~11%** more lumens,
black PCB deliver just **2.5%** less light on the road -
an impressive result given their design appeal.

Note! Black PCB available on request



↘ SAFETY SWITCH

Safety first!
Quick and safe maintenance of the opened
luminaire by automatic disconnecting
the mains supply



↘ 4 CONSOLE OPTIONS

Choose from four versatile console options to
suit various pole types and installation angles:

- **ø 60 mm** standard or adjustable console
  for poles with **ø 40 - 60 mm**
- **ø 76 mm** standard or adjustable console
  for poles with **ø 60 - 76 mm**



↘ REFLECTOR

MICRO MARTIN reflector provides **4 to 7%** increase in luminous flux depending on optics

Note! Reflector available on request



↘ ZHAGA TOP AND BOTTOM

Connect up to 2 Zhaga Book 18 devices for motion detection and luminaire control



Technical information

V	198 - 264
Hz	50 - 60
W	5 - 115 | with fins
	5 - 95 | smooth
lm	446 - 15 030 [1] | with fins
	446 - 13 070 [1] | smooth
lm/W	90 - 179 [2]
K	2700 / 3000 / 4000 [3]
°C	-40 up to +50 [4]
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:	Tool-less / Pre-wired cable 30 cm [5]
Spigot:	32 - 40 mm [6] / 40 - 60 mm / 60 - 76 mm
Socket:	NEMA Top / Zhaga Top and Bottom
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 3.9 kg
Max. wind load area, SCd:	Up to 0.04 m^2

1) Lumen output indicated at CRI > 70

2) This value depends from configuration and can reach even higher number when max efficient components are combined

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

4) Operating temperature differs depending on chosen output wattage

5) Other lengths available on request

6) Achievable with pole adapter from luminaire with ø 60 mm console to pole with ø 32 - 40 mm (on request)

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

8) Depending on the configuration. Please contact VIZULO export representatives for additional information

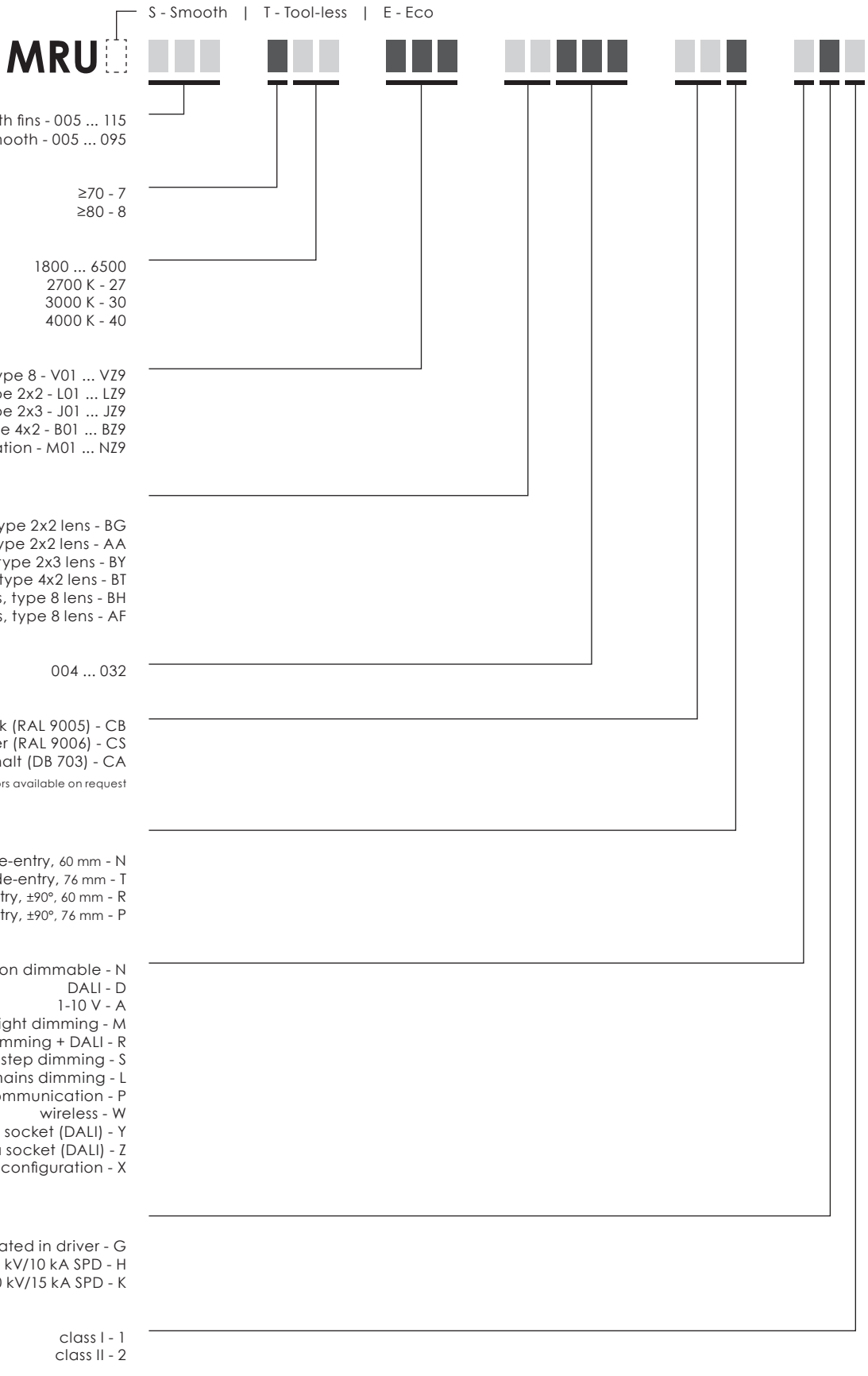
9) EPD registration number: S-P-04351 (link to page)

10) Synergrid approved only for tool-less versions

* 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.

Model name principles

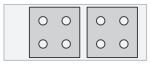
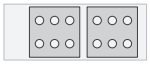
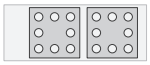
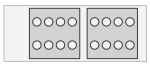


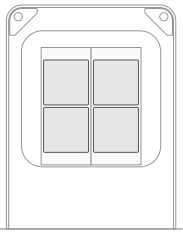
EXAMPLE MRUTE 100 740 BC5 BT032 CSN NG1

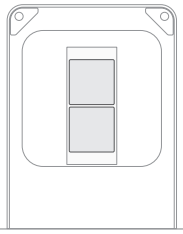
*** CUSTOM CONFIGURATION EXAMPLE**

NEMA socket + Zhaga socket; NEMA socket + Zhaga socket + midnight dimming; etc.
Custom configuration information is available in order confirmation.

LED modules

Type	Max module QTY	Min LED QTY per module	Max LED QTY per module	Max LED QTY per luminaire	LED step	LED type	Lens type	LED module
AA	2	4	8	16	2	Standard Eco	type 2x2 L01…LZ9	
BY	2	6	12	24	6	Eco	type 2x3 J01…JZ9	
AF	2	8	16	32	2	Standard	type 8 V01…VZ9	
BT	2	8	16	32	8	Standard Eco	type 4x2 B01…BZ9	

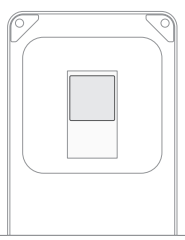




AA	max 16 LEDs up to 9 085 lm	max 8 LEDs up to 4 625 lm
BY	max 24 LEDs up to 12 595* / 13 780 lm	max 12 LEDs up to 7 040 lm
AF	max 32 LEDs up to 10 125 lm	max 16 LEDs up to 5 110 lm
BT	max 32 LEDs up to 13 070* / 15 030 lm	max 16 LEDs up to 9 080 lm

* Max lumen output for MINI MARTIN smooth versions

Type	Max module QTY	Min LED QTY per module	Max LED QTY per module	Max LED QTY per luminaire	LED step	LED type	Lens type	LED module
BG	1	4	4	4	2	Standard Eco	type 2x2 L01…LZ9	
BH	1	4	8	8	2	Standard	type 8 V01…VZ9	



BG max 4 LEDs
up to 2 320 lm

BH max 8 LEDs
up to 2 530 lm

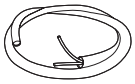
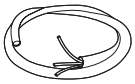
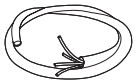
Cable core count

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

Cable order information*

* Custom cable lengths available on request

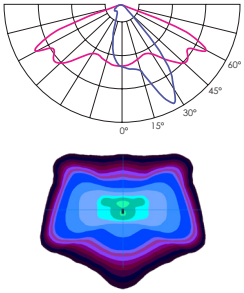





Cable length [m]	2 x 1.5 mm²	3 x 1.5 mm²	4 x 1.5 mm²	5 x 1.5 mm²
0.5	*Art. 70100184*	*Art. 70100179*	*Art. 70100402*	*Art. 70100409*
1	*Art. 70100156*	*Art. 70100193*	*Art. 70000527*	*Art. 70100220*
1.5	*Art. 70100391*	*Art. 70100258*	*Art. 70100403*	*Art. 70100410*
2	*Art. 70100202*	*Art. 70100177*	*Art. 70000515*	*Art. 70100262*
2.5	*Art. 70100392*	*Art. 70100213*	*Art. 70100404*	*Art. 70100411*
3	*Art. 70100166*	*Art. 70100178*	*Art. 70000529*	*Art. 70100217*
4	*Art. 70100172*	*Art. 70100144*	*Art. 70000530*	*Art. 70100189*
5	*Art. 70100173*	*Art. 70100146*	*Art. 70000531*	*Art. 70100185*
6	*Art. 70100099*	*Art. 70000512*	*Art. 70000532*	*Art. 70000370*
7	*Art. 70100174*	*Art. 70100182*	*Art. 70000533*	*Art. 70100201*
8	*Art. 70100152*	*Art. 70000630*	*Art. 70000534*	*Art. 70100212*
9	*Art. 70100176*	*Art. 70000381*	*Art. 70000535*	*Art. 70100192*
10	*Art. 70100153*	*Art. 70000631*	*Art. 70000536*	*Art. 70000387*
11	*Art. 70100191*	*Art. 70100143*	*Art. 70000537*	*Art. 70000388*
12	*Art. 70100167*	*Art. 70100147*	*Art. 70000538*	*Art. 70100200*
13	*Art. 70100186*	*Art. 70100187*	*Art. 70000539*	*Art. 70100412*
14	*Art. 70100204*	*Art. 70100164*	*Art. 70000540*	*Art. 70100165*
15	*Art. 70100380*	*Art. 70100030*	*Art. 70000541*	*Art. 70100183*
20	*Art. 70100393*	*Art. 70100397*	*Art. 70100405*	*Art. 70100413*
25	*Art. 70100276*	*Art. 70100398*	*Art. 70100406*	*Art. 70100414*

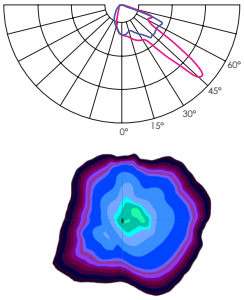
Optics

Type I

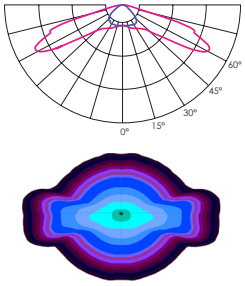
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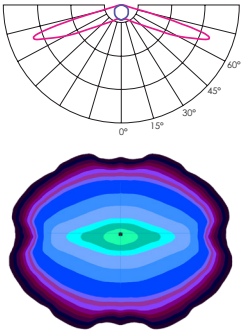
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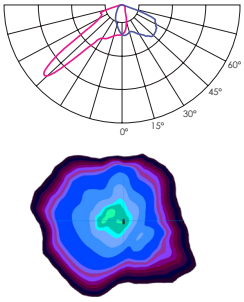
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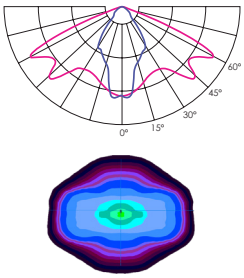
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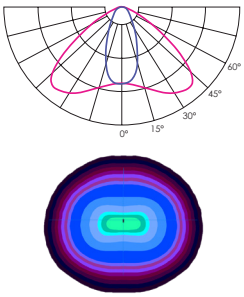
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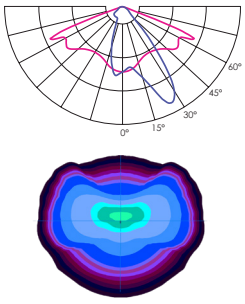
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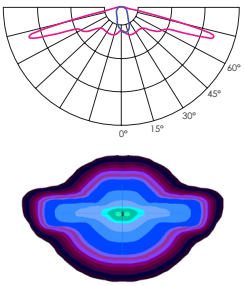
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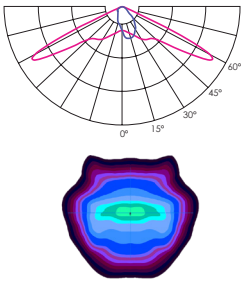
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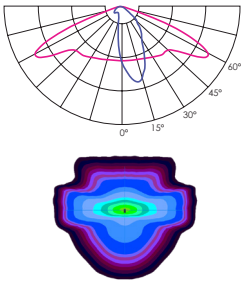
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V45

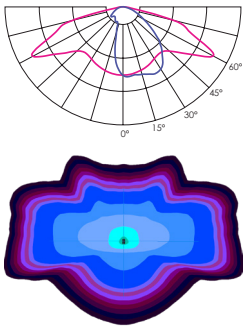


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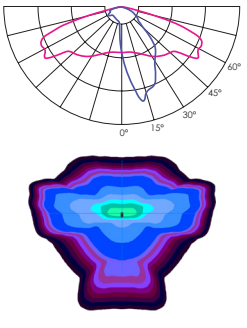


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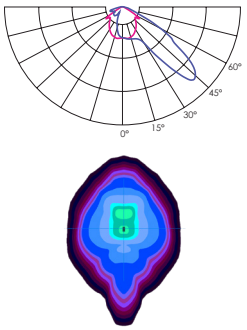
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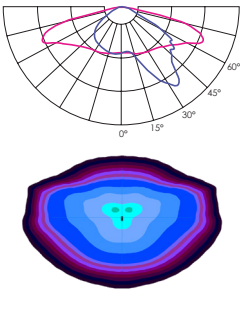
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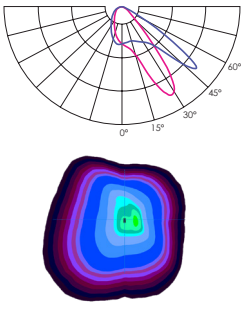
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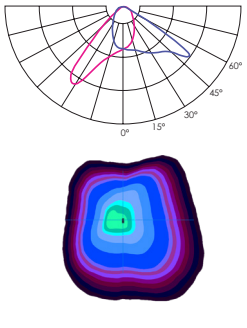
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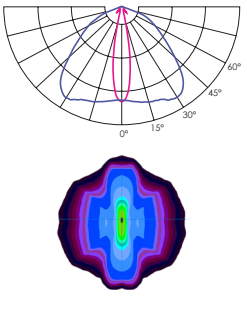
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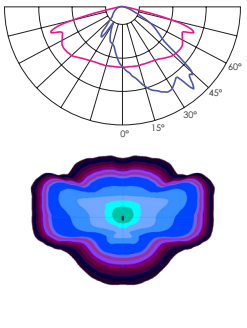
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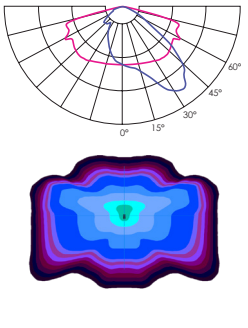
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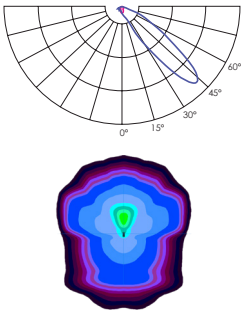
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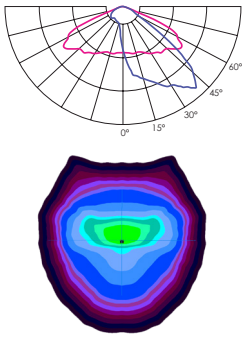
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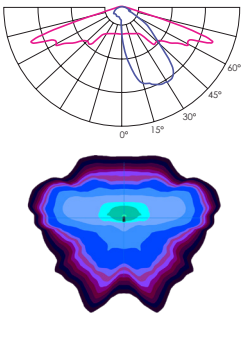
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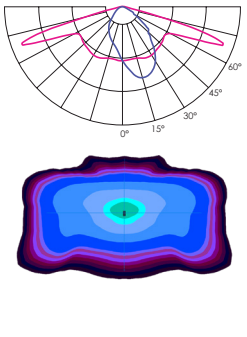
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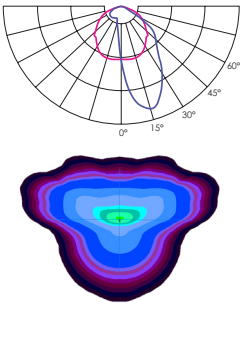
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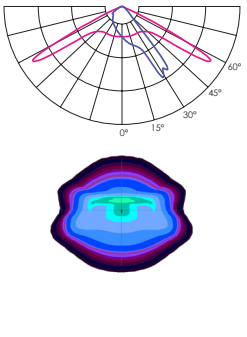
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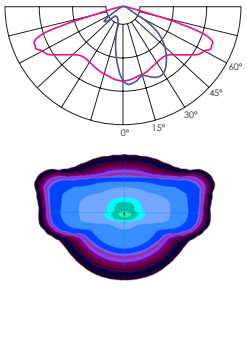
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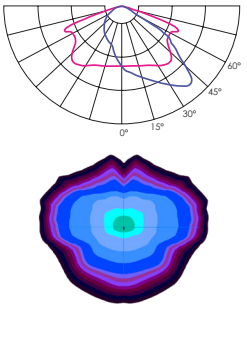
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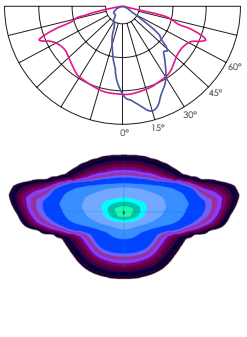
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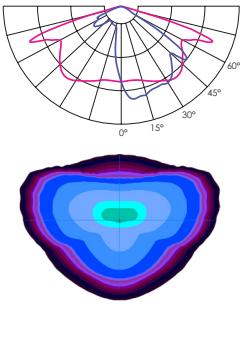
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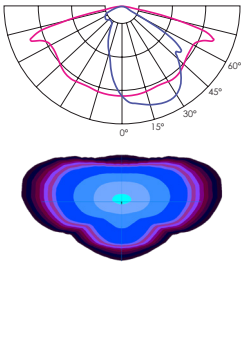
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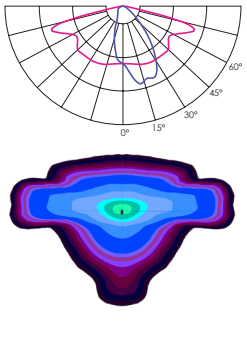
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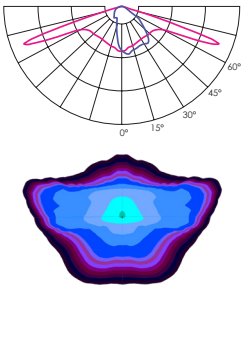
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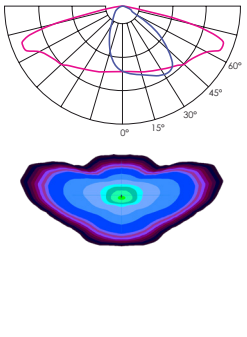
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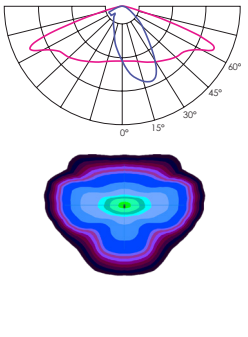
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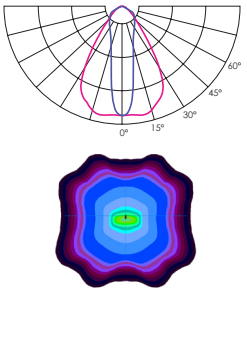
LC5



V04

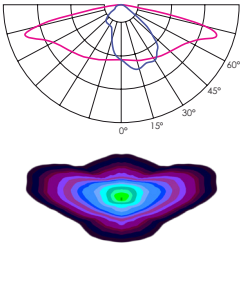


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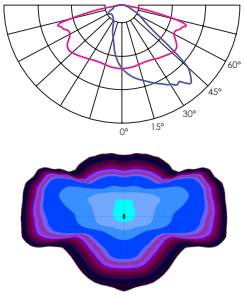


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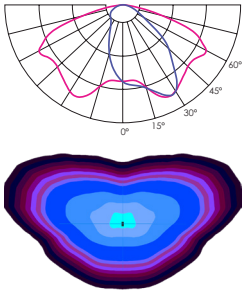
BC5



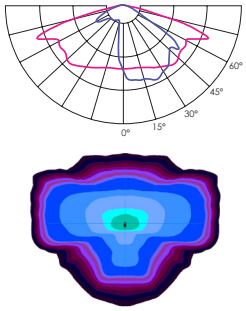
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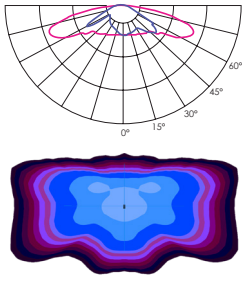
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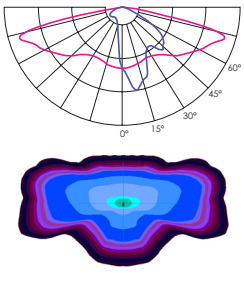
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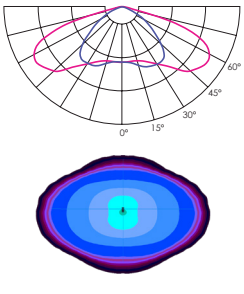
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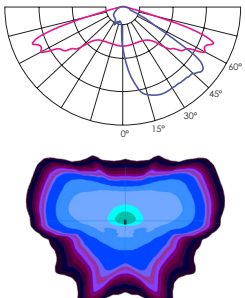
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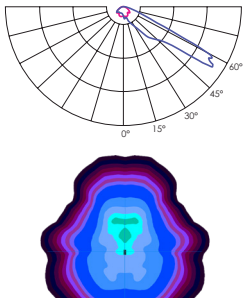
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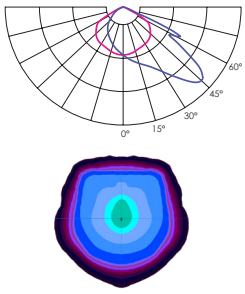
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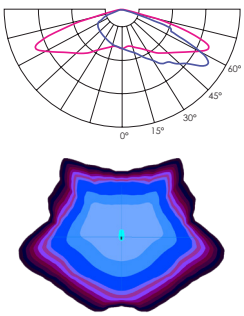
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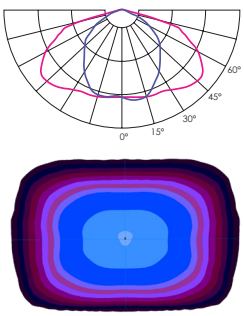
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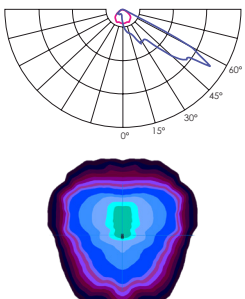
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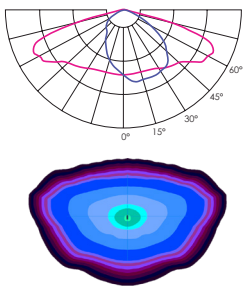
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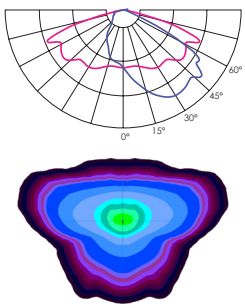
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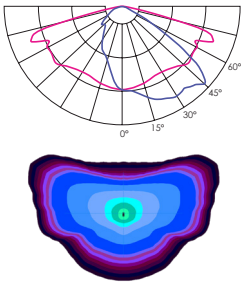
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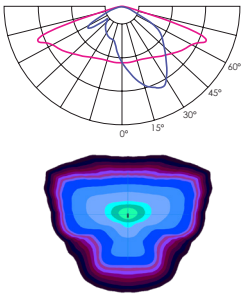
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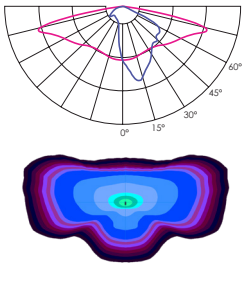
V01



V05

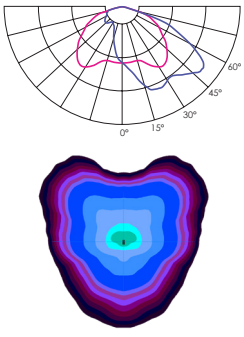


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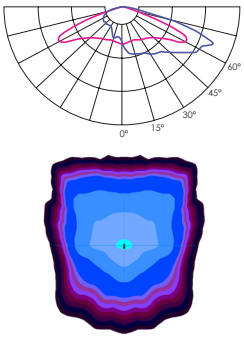


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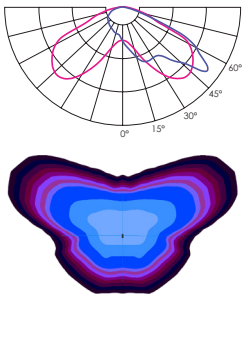
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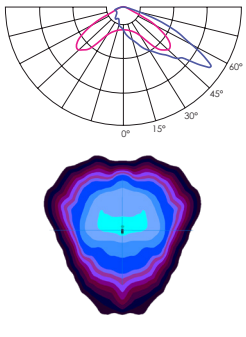
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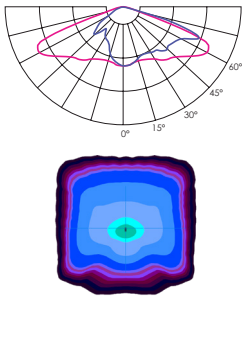
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LC1

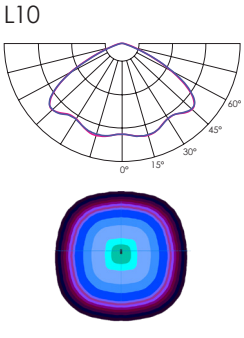


V35

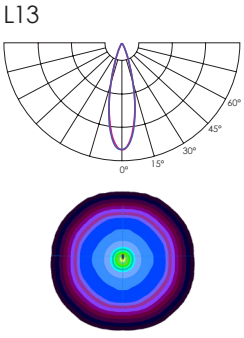


Type VS

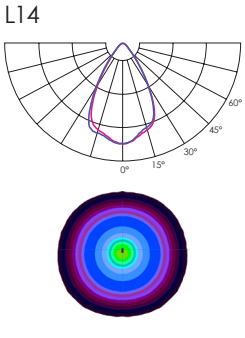
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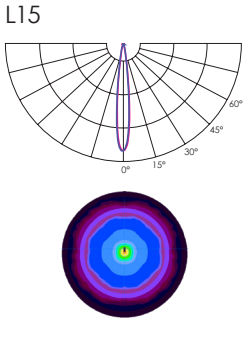
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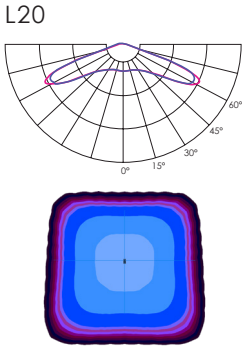
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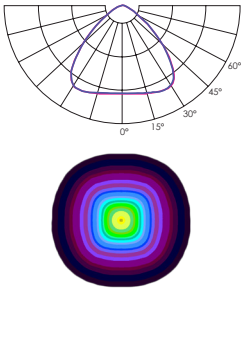
L15



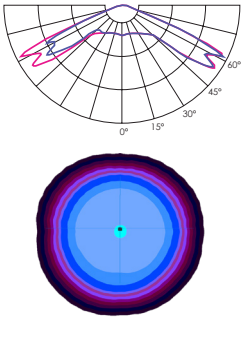
L20



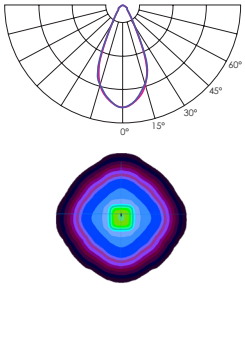
L24



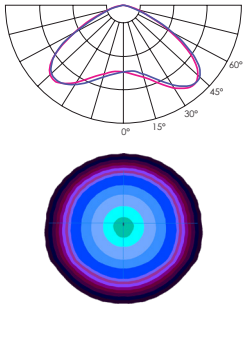
L44



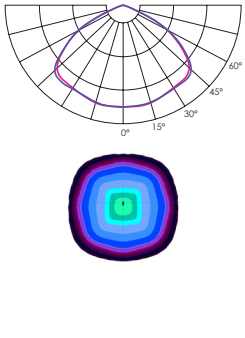
L53



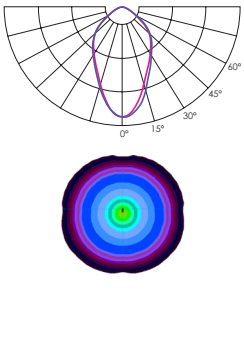
L64



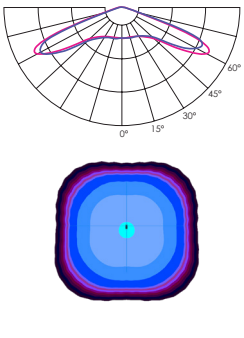
V10



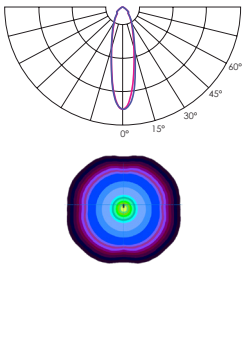
V13



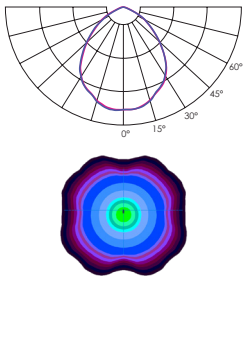
V20



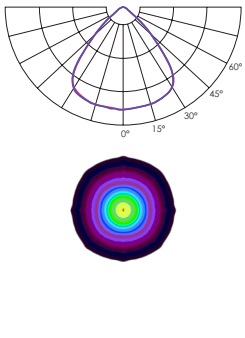
V52



V53



V75





Pedestrian crossing optics

IP66 | IK08 / IK09 / IK10 [9]

V	198 - 264
Hz	50 - 60
W	5 - 50 [1] / 5 - 115 [2] | with fins 5 - 50 [1] / 5 - 95 [2] | smooth
lm	Up to 6 290 [1] / 15 030 [2] | with fins Up to 6 290 [1] / 13 070 [2] | smooth
lm/W	Up to 179 [3]
K	2700 / 3000 / 4000 [4]
°C	-40 up to +50 [5]
CRI	>70 / >80 / >90 [4]

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*
Warranty:	5 years
Installation:	Tool-less / Pre-wired cable 30 cm [6]
Spigot:	32 - 40 mm [7] / 40 - 60 mm / 60 - 76 mm
Socket:	NEMA Top / Zhaga Top and Bottom
Intelligent Control:	Stand-alone / Group / CMS
Sensor:	Motion / Motion + Daylight / Daylight
Surge protection:	4 / 6 / 10 kV [8]
Corrosion protection:	Up to C5
Neto weight:	Up to 3.9 kg
Max. wind load area, SCd:	Up to 0.04 m^2

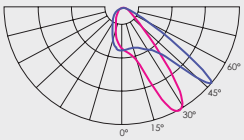
1) Standard modules, lumen output indicated at CRI > 70
2) Eco modules, lumen output indicated at CRI > 70
3) This value depends from configuration and can reach even higher number when max efficient components are combined
4) 1800 / 2200 / 3500 / 5000 / 5700 / 6500 K available on request along with other not listed CRI and CCT
5) Operating temperature differs depending on chosen output wattage
6) Other lengths available on request
7) Achievable with pole adapter from luminaire with ø 60 mm console to pole with ø 32 - 40 mm (on request)
8) 10 kV (L-N; L/N-PE) surge protection device available on request
9) Depending on the configuration. Please contact VIZULO export representatives for additional information
10) EPD registration number: S-P-04351 (link to page)
11) Synergrid approved only for tool-less versions

* 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.

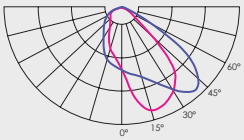
Technical parameters for final product can differ from typical data by 7% due to special conditions of LED manufacturing processes.

Right side traffic

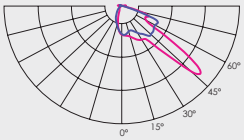
L11



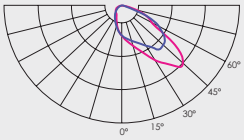
L11
ECO

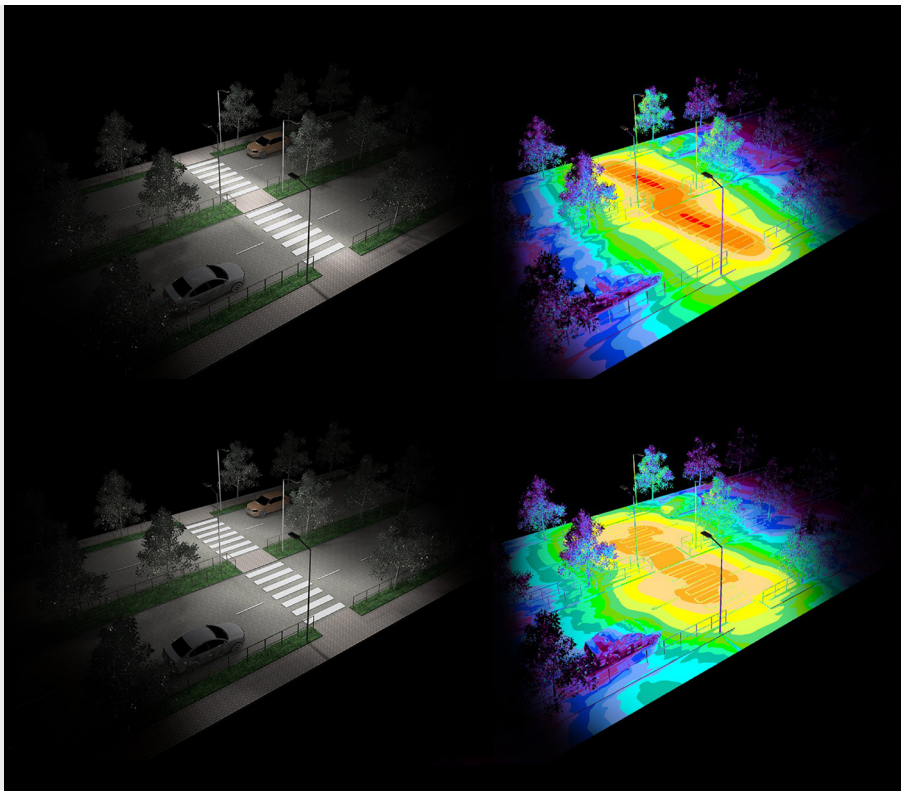


L36



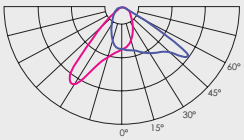
L36
ECO



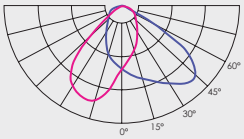


Left side traffic

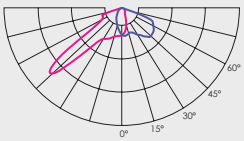
L12



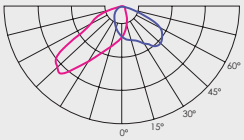
L12
ECO

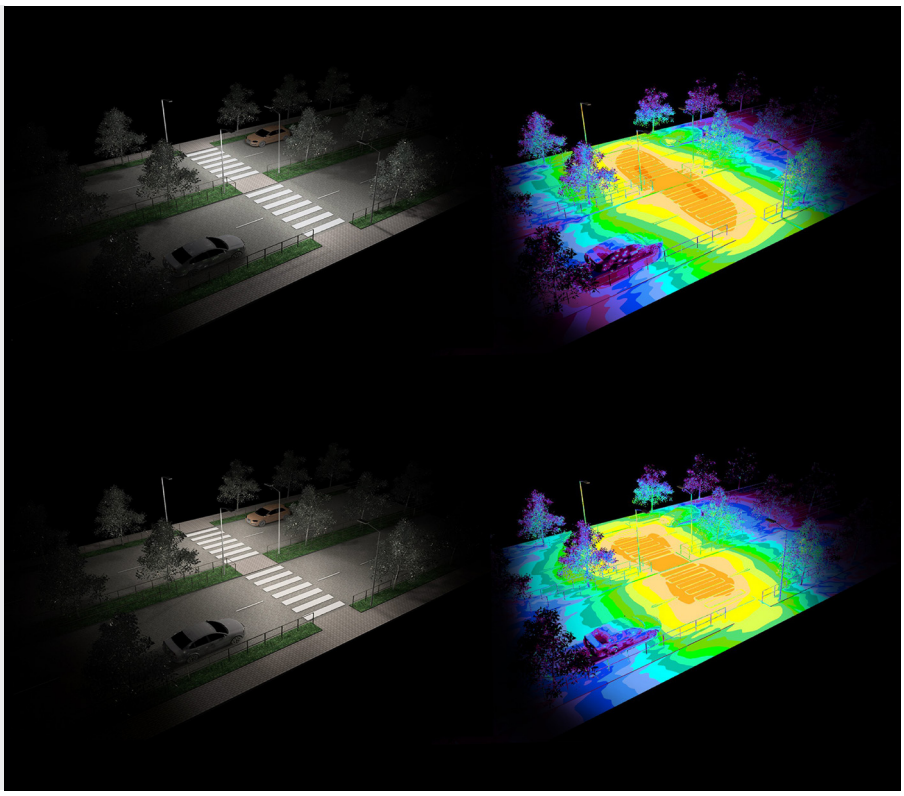


L46



L46
ECO



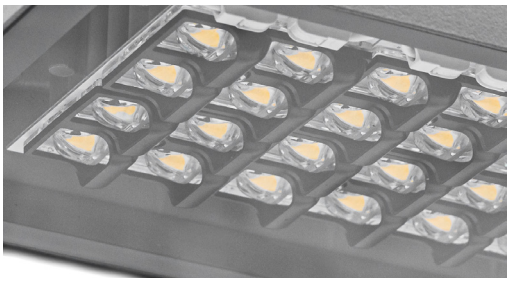


Backlight cutter

Backlight cutter | black

Art. 70000661

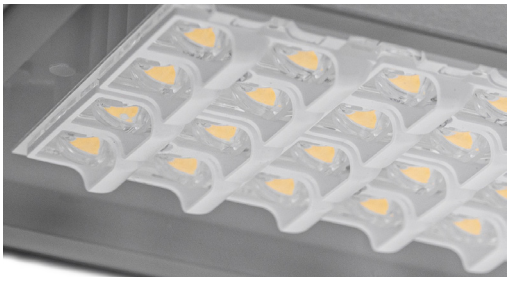




Backlight cutter | white

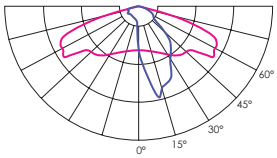
Art. 70000662

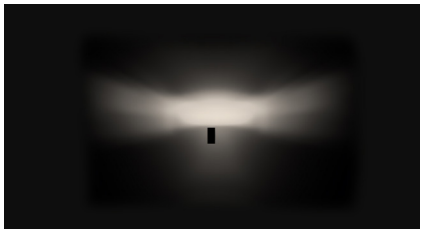


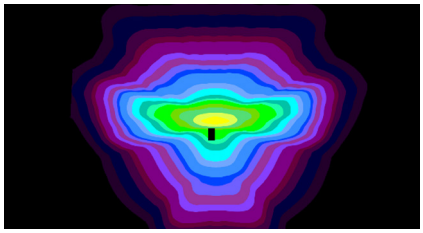


Optical loses from 10% to 31% depending from used optic.

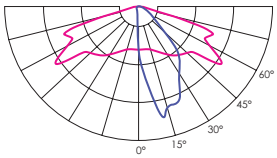
Without backlight cutter

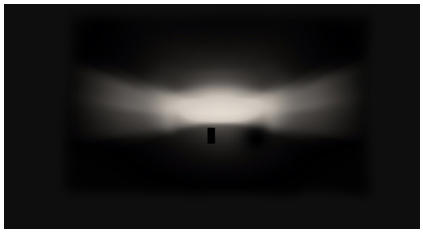


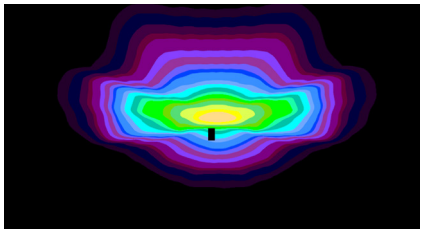




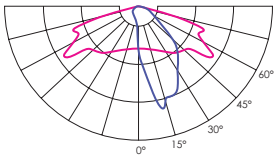
Backlight cutter | black

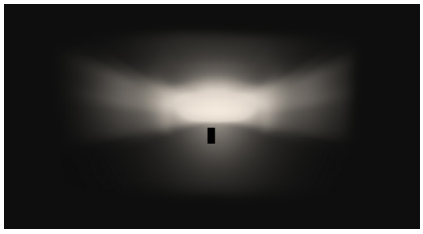


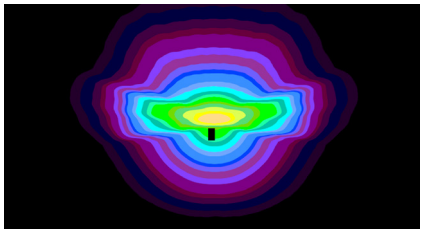




Backlight cutter | white



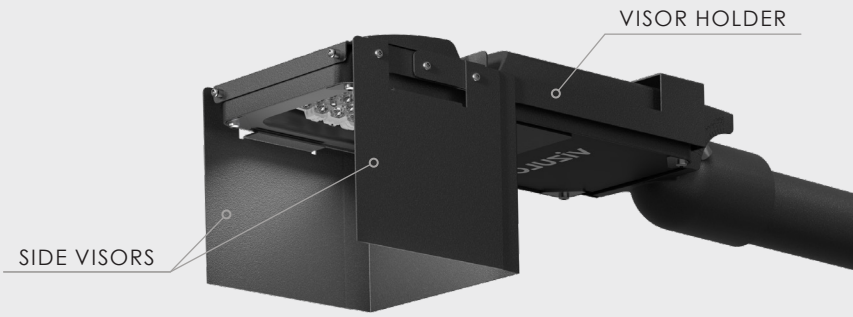




Visors



BACK VISOR



VISOR HOLDER

SIDE VISORS



FRONT VISOR

MICRO MARTIN visor set ..... *Art. 70055132*

Color: silver (RAL9006). Other colors available on request!

The MICRO MARTIN visor set includes:

- back visor - 1 pc.
- front visor - 1 pc.
- side visors - 2 pcs.
- visor holder - 1 pc.



If you wish to order individual visor(s) — such as only the front, back, or side visors — or any combination of them, please note that the visor holder is not included by default and must be ordered separately!

MICRO MARTIN visor holder ..... *Art. 70055115*

Color: silver (RAL9006). Other colors available on request!

MICRO MARTIN individual visors

Color: silver (RAL9006). Other colors available on request!

Back visor ..... *Art. 70055116*
Side visor * ..... *Art. 70055117*
Front visor ..... *Art. 70055118*

* The article includes a **single** side visor, which can be mounted on either the left or right side

Accessories

NEMA Socket

operating temperature up to 105 °C

2213362-3, 5 pin NEMA socket ..... *Art. 70000362*
2213362-4, 7 pin NEMA socket ..... *Art. 70000333*

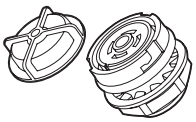


Dummy Link for NEMA Socket ..... *Art. 70000113*



Zhaga Socket

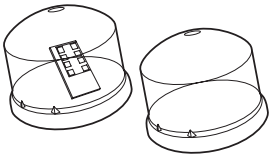
with cap ..... *Art. 70000613*
without cap ..... *Art. 70000612*



Luminaire controller for Zhaga-standard connectors

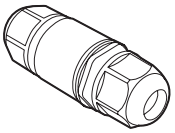
ø 80 mm

MSLC205RG controller with radar ..... *Art. 70010027*
MSLC205RGL controller ..... *Art. 70010029*



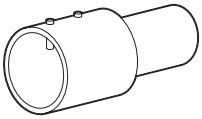
IP68 rated wire cable connector

2 wire cable connector ..... *Art. 70000676*
3 wire cable connector ..... *Art. 70000677*
4 wire cable connector ..... *Art. 70000725*
5 wire cable connector ..... *Art. 70000678*



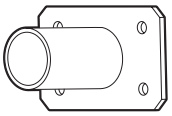
Pole adapter ..... *Art. 70044002*

from luminaire with ø 60 mm console
to pole with ø 60 - 76 mm



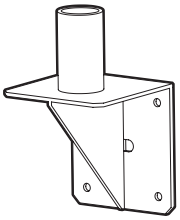
Wall mounting bracket ..... *Art. 70044001*

for luminaire with ø 60 mm console



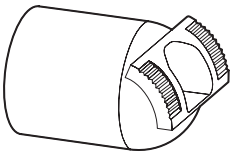
Vertical wall mounting bracket ..... *Art. 70044004*

for luminaire with ø 60 mm console



Console ø 76 mm

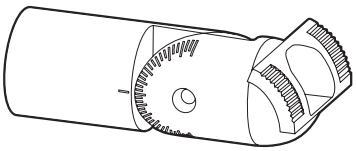
RAL 7035 ..... *Art. 70055197*
RAL 9006 ..... *Art. 70055199*
DB 703 ..... *Art. 70055174*
RAL 9005 ..... *Art. 70055198*



Adjustable console ø 60 mm

regulation angles ±90°

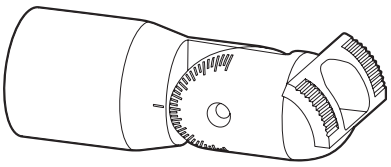
RAL 7035 ..... *Art. 70055158*
RAL 9006 ..... *Art. 70055005*
DB 703 ..... *Art. 70055068*
RAL 9005 ..... *Art. 70055200*



Adjustable console ø 76 mm

regulation angles ±90°

RAL 7035 ..... *Art. 70055130*
RAL 9006 ..... *Art. 70055006*
DB 703 ..... *Art. 70055069*
RAL 9005 ..... *Art. 70055201*



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.

EAC - compliance with the regulations of the Eurasian Customs Union

The EAC Mark demonstrates conformity with all technical regulations defined by the Eurasian Customs Union. The conformity is assessed by an accredited independent testing laboratory. The EAC marking is a requirement in order to place a product on the market of Russia and the Eurasian Economic Union.

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.

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.

Byggvarubedömningen – product chemical content and life cycle assessment

Byggvarubedömningen is a non-profit organization owned by large constructors and property owners in Sweden. The organization conducts assessments of various construction products based on chemical content and sustainability criteria. The consituent substances and product life cycle are evaluated and the product is assigned one of three levels:

Recommended (green) Accepted (yellow) To be avoided (red)

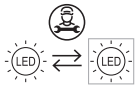
Note: the Recommended level assessment is unavailable for electronic products since it is assumed that all electronic products contain brominated flame retardants.

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.

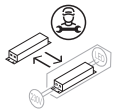
Synergrid approved - compliance with Synergrid requirements for LED lighting

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

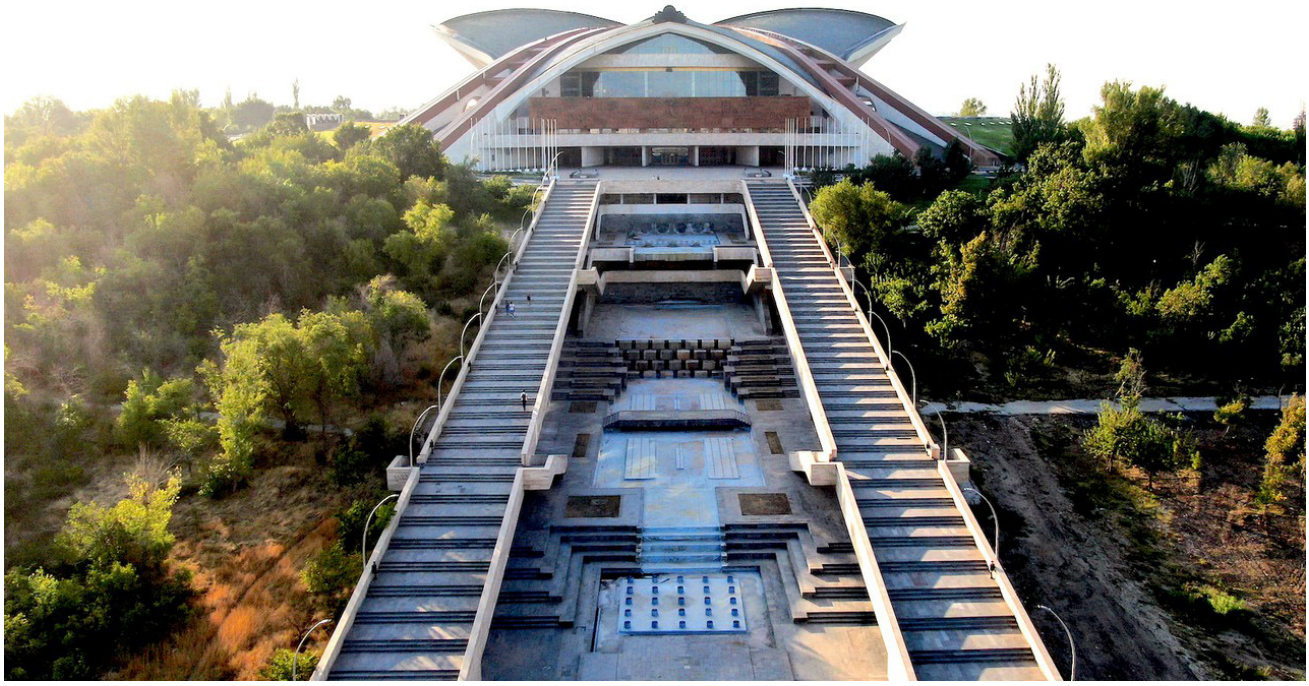
This pictogram shows that the LED modules included in the luminaire are only replaceable by a professional. This labeling is a requirement folowing the introdution of European Union's Regulation on energy labelling for light sources (EU) 2019/2015.



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 folowing the introdution of European Union's Regulation on energy labelling for light sources (EU) 2019/2015.

References



↘ Karen Demirchyan Sports and Concerts Complex, Armenia





↘ Carnikava, Latvia

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