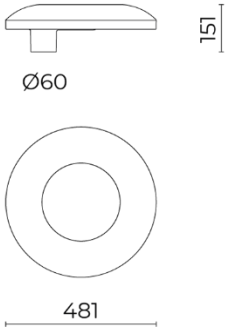
Line Sheet
Rev 25.03.22

DUAL
Options: asymmetric, symmetric
Colour temperature: 4000K / 3000K
Type of optics: asymmetrical street LA-01
rotosymmetric RS-01
asymmetrical LT-06

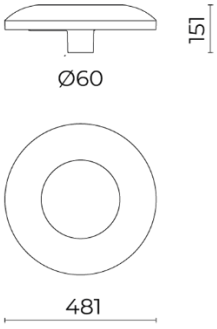
01DU_____

Colour: Sablé 100 Noir

Asymmetric



Rotosymmetric



General features

Description: LED device for the lighting of pathways and urban areas

Insulation class: class II (class I on request)

Nominal voltage: 220-240 V / 50-60 Hz

Protection level: IP66

Protection against impact: IK08

Surge protection device: integrated 10kV-10kA, Class III, equipped with LED signalling and thermal fuse for disconnection at product end of life; impulse resistance CL II 10kV CM/DM

Power factor: > 0.9

Ambient temperature Ta: -30°C +50°C

Weight: 6 kg

Maximum exposed surface: 0,18 m²

Exposed lateral surface: 0,04 m²

Common mode surge protection: 10 kV

Differential mode surge protection: 10 kV

Driver: included

Marks and Certifications: ENEC / CE

Classification: CUT OFF

Materials

Body and fastening system: die-cast aluminium alloy UNI EN AB 47100 (copper content <1%)

Screen: transparent polycarbonate UV stabilized with photoengraving in the non-optically interesting parts

Optical unit: High-transparency PMMA lenses

Seal: anti-age expanded silicone

External screws and metal components: AISI 304 stainless steel

Internal screws: chrome-plated steel

Wiring plate: galvanised steel

Finish: phosphochromatisation-treated and polyester powder-coated in 16 phases for optimal weather resistance

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Colours

Sablé 100 Noir

Installation and maintenance

Installation: post top

Poles diameter: Ø 60 mm

Pole-top fitting for poles Ø 60 mm (h.70 mm): die-cast aluminium alloy UNI EN AB 47100 (copper content <1%), polyester powder-coated Sablé 100 Noir

Wiring: pre-wired product with an outgoing cable (L = 200 mm) and a 2-pin plug and socket connector for a quick and easy installation

Ø power cable: 10 ÷ 14 mm

1 x 0.75 mm2 double-insulated silicone rubber rigid cables

Cable gland: PG16

Optical unit substitutability: removable by unlocking grubscrews

Wiring plate substitutability: removable plate

Power supply compartment: independent from the optical system

Optical system

Provided with 4000K and 3000K white emitters fitted via a “pick and place” system to a heat sinking metal core printed circuit board (MCPCB). Optical system composed of high-transparency poly-methyl-methacrylate lenses developed in order that each light source provides full photometry. This solution guarantees that the malfunctioning of an individual LED will not lead to less-illuminated areas, but at most will cause an overall decrease in the percentage of light over the entire area covered.

Colour rendering index (CRI): ≥ 70 (≥ 80 on request)

Chromatic consistency (SDCM): 4; @ 6.000h SDCM ≤5

Optical unit life expectancy: > 160.000 h @ 700mA @ Ta 25° C TM21 L80B10 L80B20

Driver life expectancy: 100.000 h @ 700mA @ Ta 25° C

Photobiological safety class: EXEMPT GROUP

ULOR: 0 %

DLOR: 100 %

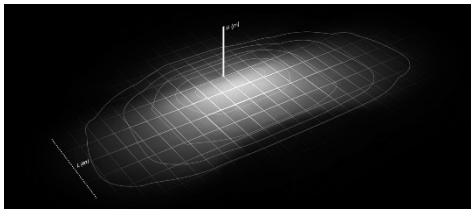
Light intensity category: G*3 asymmetrical street, G*6 asymmetrical and rotosymmetric

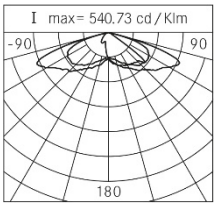
Normative framework

EN60598-1 / EN60598-2-3 / EN62471 / EN61547

Asymmetrical street optics

LA-01 LA-01 L/H = 1.25 (L = Street width, H = Pole height)





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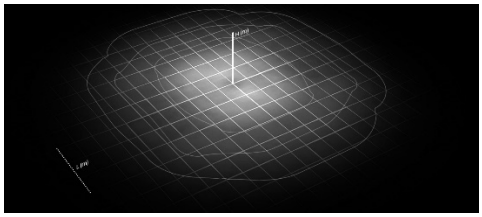
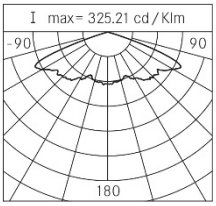
Rotosymmetric optics

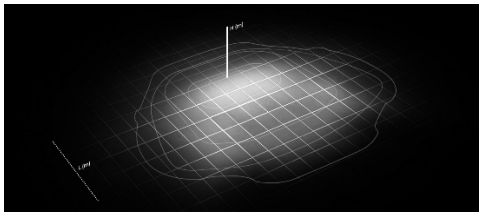
RS-01

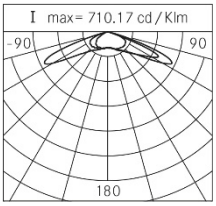




Asymmetrical optics

LT-06 L/H = 2 (L = Street width, H = Pole height)





Performance data

ASYMMETRICAL STREET OPTICS LA-01 ASYMMETRICAL OPTICS LT-06 ROTOSYMMETRIC OPTICS RS-01									
Options	**Sources**	**mA**	**K**	**φ mod [lm]**	**P mod [W]**	**η mod [lm/W]**	**φ app [lm]**	**P app [W]**	**η app [lm/W]**
AS/ROT	R1	350	4000	2360	11,5	205	1965	13,5	146
AS/ROT	R1	525	4000	3355	17,5	192	2775	20	139
AS/ROT	R1	700	4000	4300	24	179	3530	27	131
AS/ROT	R2	350	4000	4670	23	203	3910	26,5	148
AS/ROT	R2	525	4000	6600	35,5	186	5515	39,5	140
AS/ROT	R2	700	4000	8405	48	175	7010	52,5	134
AS/ROT	R1	350	3000	2200	11,5	191	1830	13,5	136
AS/ROT	R1	525	3000	3135	17,5	179	2590	20	130
AS/ROT	R1	700	3000	4010	24	167	3295	27	122
AS/ROT	R2	350	3000	4360	23	190	3650	26,5	138
AS/ROT	R2	525	3000	6160	35,5	174	5145	39,5	130
AS/ROT	R2	700	3000	7845	48	163	6545	52,5	125

Data of the lighting source flux and efficiency refer to the LED module, without lenses. In case you need data of the LED module complete with lenses, please multiply the mentioned data by 0.9 factor.
Values indicated in this technical sheet are to be considered nominal values with a tolerance of +/-7%.

Legend

mA = Power supply
K = Colour temperature
φ mod [lm] = Source flux
φ app [lm] = Unit flux
P mod [W] = Source power
P app [W] = Unit power

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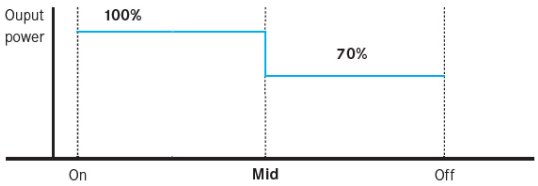
η mod [lm/W] = Source efficiency η app [lm/W] = Unit efficiency

Flux regulation

Custom programmable virtual midnight self-learning (code ending in _HM4)

Custom programmable versions available on request; via the virtual midnight algorithm it is possible to obtain a precise percentage reduction of the luminous flux and therefore of the power consumption of the unit.



Profile standard

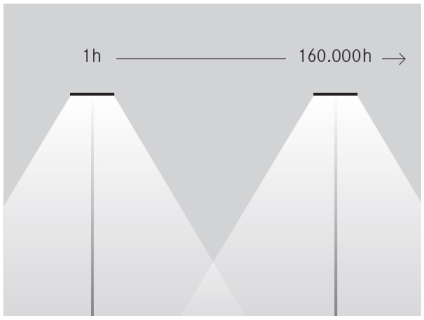
700 mA 525 mA 350 mA

Mid (mezzanotte virtuale - *virtual midnight* - virtuellen mitternacht)

Ex. code: 01OR....**HM4**

Constant Lumen Output CLO (on request)

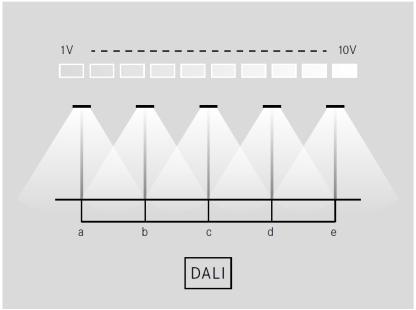
The aim of the CLO is to compensate the natural deterioration of the luminous flux of the LEDs. Through a gradual pre-programmed increase in current, the luminous flux is maintained over time and in any case never drops below pre-set limits.



Group Management: flux adjustment of 1-10V (on request) and DALI (on request)

1-10V — This is an analogical control system based on the distribution of a voltage signal of between 1 and 10 Volts, where 1V corresponds to the minimum light intensity value and 10V corresponds to the maximum value.

DALI — This is a digital control system where every device is assigned a unique address that allows individual light points to be controlled and control groups to be created.



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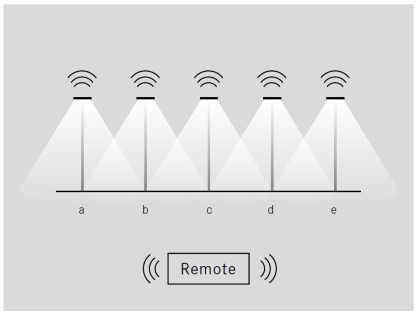
Remote Management (on request)

PLC (Power Line Communication) and wireless remote control systems allow remote luminous flux dimming managing, system monitoring and the display of consumption statistics and faults. In addition to reducing consumption and running costs, remote management systems provide an infrastructure that can be used to host other local systems or services that are compatible with the latest smart lighting projects.

PLC — Via PLC, without additional wiring in the system, it is possible to communicate with every single light point. The system allows each individual unit to be monitored remotely and consumption profiles to be modified.
Wireless — The wireless remote management system allows simple remote management of units, without any constraint due to the pre-existing system.



IoT – ready (on request)

The product is set up for the integration of sensors and communication devices that enable the Internet of Things on an urban scale. Sensors and antennas can be added to the product during the installation or subsequently for updating the system (the connector is in accordance with Zhaga Book 18).

Motion and presence sensors (on request)

The use of motion sensors allows for the detection of passing pedestrians or vehicles and the regulation of the flux, thus guaranteeing an appropriate level of safety. If no moving pedestrians or vehicles are detected, flux is reduced, thus allowing significant reductions in consumption and cost. The type of sensor and the method of installation must be defined according to the application context and the size and shape of the space in question. The system control can be centralised through communication with the 1-10V, DALI or Wireless systems. Sensors must be mounted on the exterior of the product.

Light sensor (on request)

Cariboni products with DALI, 1-10V or Wireless adjustment are compatible with light sensors that adjust light emission based on the level of environmental light. This solution avoids unnecessary waste and guarantees rapid return on investment.