

OUTDOOR SMART SOLUTION

disano ●
illuminazione
www.disano.it

LED LUMINAIRES FOR URBAN LIGHTING
EQUIPPED WITH NEMA OR ZHAGA SOCKET



In the outdoor lighting sector, and particularly in urban lighting applications, Nema or Zhaga Socket are key components for lighting management and communication between drivers and LED modules.

The standardization introduced by Nema or Zhaga Socket enables the integration of new functionalities, upgrades to control systems, and the implementation of smart technologies without the need to replace the entire luminaire.

This makes it possible to intervene exclusively on the control unit or communication modules, reducing maintenance costs, upgrade times, and the environmental impact associated with the complete replacement of luminaires.







To monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with subcode -40 (sealing cap to be ordered separately)	Mounted directly on the fixture's body, ideal for remote lighting management applications.
Zhaga Socket order with subcode -0054 (complete with sealing cap)	

Disano's luminaires with **subcode -40** come with the **Nema Socket** to enable the electrical and mechanical connection between the sensor and the light fixture. The socket is made in plastic material and is complete with a gasket to ensure perfect IP protection; moreover, thanks to its removable structure, it can be installed directly onto the luminaire's body (without accessing any internal parts) and **without using tools**, hence facilitating future maintenance; **upon request**, the sealing cap can be installed. The Nema Socket can be adapted to **5/7 poles**: 3 for the electrical connection, and the remaining 2/4 to carry 1/10V or DALI signals; it is also perfectly suited to integrate all "smart" devices for remote lighting control.

Upon request,
the **sealing cap**
can be installed



Advantages:

- Easy installation without tools
- Up to 355-degree rotation
- Robust twist-lock contacts for reliable power interconnection
- The socket is pre-terminated with wire conductors to facilitate the integration into new and existing lighting systems
- It accepts DIMM dimmable photocells (ANSI standard) to enable connection between the photocell and the lighting fixture
- Available with two or four dimming contacts to support dimming protocols over one or two channels

Disano's fixtures with **subcode -0054** are compatible with the **Zhaga Socket** that ensures an electric and mechanical connection between the sensor and the luminaire, simplifying the complex architecture of street lighting installations and removing the need for accessory modules and cabling. The **Zhaga Socket** consists of a standard interface between the receptacle on the fixture and its basic components and cover that, together, form the housing of the control module. The built-in low friction seals, that can be coupled together, protect both the fixture and the module. UV-resistant and strong materials complete the features of this reliable connector.

Sealing cap
supplied as standard



Advantages:

- Easy tool-free mounting. The module is attached and secured with a bayonet clamp
- Compact dimensions for greater design flexibility
- The special (push-in) contacts reduce logistics problems arising from the need to use cables with various lengths for different lighting fixtures
- Single built-in seal that protects both the fixture and the modules, minimizing mounting times.

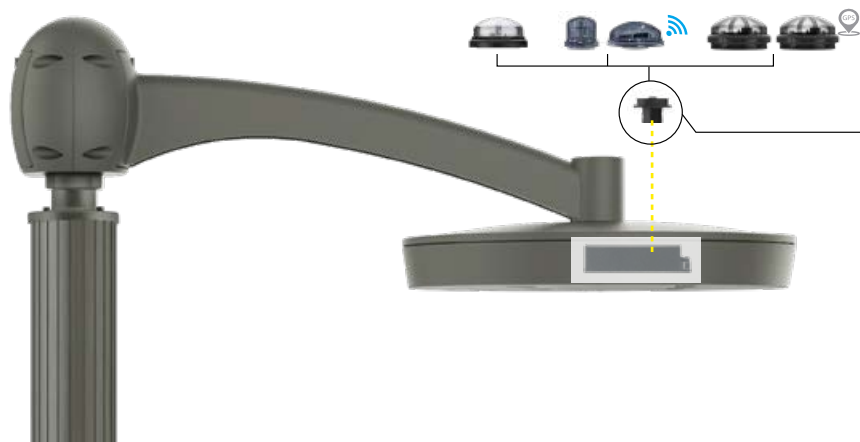


The fixture is designed to accept Zhaga socket, projecting public lighting into the future. You can create a 'smart' Plug-and-Play solution featuring maximum interoperability. The Zhaga D4i certification means that a product has a Zhaga Book 18 interface and is compliant with DALI-2 and D4i standards.

The Zhaga-D4i mark certifies the fixture's compliance with Zhaga Book 18 version 2 specifications for outdoor luminaires and DiiA's D4i specifications for intra-luminaire DALI interface. This joint certification covers all critical features including mechanical adaptation, digital communication, data reporting and power requirements within a single luminaire, ensuring "plug & play" interoperability of luminaires (drivers) and peripherals, such as connectivity nodes.



Urban lighting with luminaires equipped with Nema or Zhaga Socket



The photocells, wireless antennas and controllers are installed directly onto the supplied Zhaga socket.

Zhaga socket -0054 (standard top configuration)

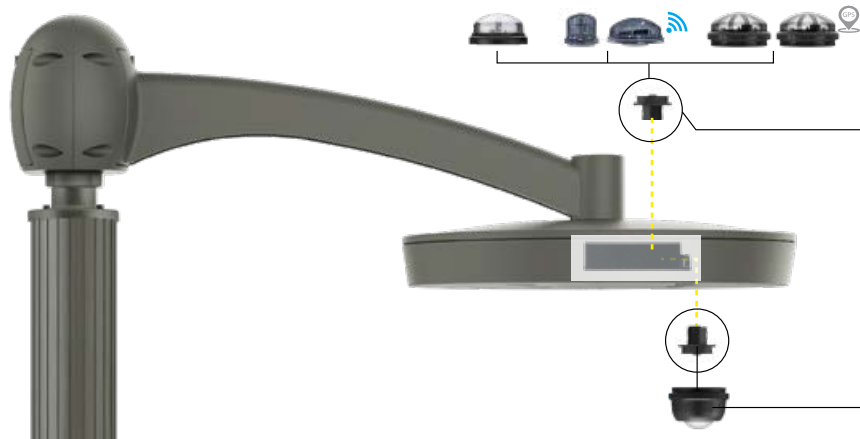
Fixture designed to accept Zhaga socket, which is found on the **top part of the lighting fixture**, electrically connected to the lighting fixture's driver.



Zhaga socket -0075 (bottom configuration)

Fixture designed to accept the Zhaga socket, which is found in the **lower part of the lighting fixture**, electrically connected to the lighting fixture's driver.

The photocell is installed directly to the supplied Zhaga socket.



The photocells, wireless antennas and controllers are installed directly onto the supplied Zhaga socket.

Zhaga socket -0085 (double configuration)

Fixture designed to accept the Zhaga socket, which is found on **both the top and lower part of the lighting fixture**, electrically connected to the lighting fixture's driver.

The photocell is installed directly to the supplied Zhaga socket.

EXAMPLE OF FIXTURES WITH ZHAGA OR NEMA SOCKETS



* Fixture with the Zhaga D4i certification.

PHOTOCELL AND LIGHTING-MOTION SENSOR - for DALI-2 / D4i street lighting

Luminaires compatible with Zhaga receptacles may be equipped with photocells or light/motion sensors. In this way, the luminaire will have the necessary "intelligence" to adjust to specific needs.

PHOTOCELL



cod. 986450-00



bottom view

Main features:

- Monitoring of ambient lighting for stand-alone or network applications
- Ready for Zhaga receptacles for quick installation to the luminaire
- Precise light measurement from 0.2 to 20,000 Lux
- Detection angle for light measurement: 150° - Start time: ≤ 5 s
- Designed to be installed to the upper side of the luminaire
- Service life up to 100,000 h at a TC of 60 °C

Structural features:

- Body: grey plastic
- Lens: plastic, smoked grey
- Protection up to IP66
- Impact resistance ≤ IK09

Advantages:

- Innovative: simple start-up for stand-alone applications, Plug & Play interface
- Flexible: luminaire switches on/off depending on ambient light
- Reliable: tested for critical outdoor conditions

MOTION AND LIGHT SENSOR



cod. 986451-00



bottom view

Main features:

- Monitoring of ambient light and presence detection
- Integrated temperature measurement
- 2 PIR sensors with extended features such as detecting objects with side orientation
- Ready for Zhaga receptacle for quick installation to the luminaire
- Rectangular detection range, ideal for street applications - Start time: 30 s
- Detection angle for light measurement: 76°
- Precise light measurement from 1 to 4,000 Lux
- Integrated pressure equalizing membrane
- Service life up to 100,000 h at a TC of 60 °C

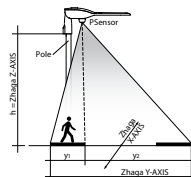
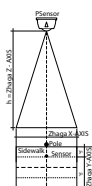
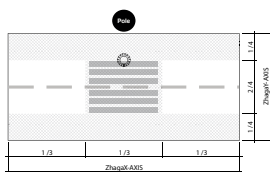
Structural features:

- Body: dark grey (RAL 7040)
- Protection up to IP66
- Impact resistance IK08 (without lens)

Advantages:

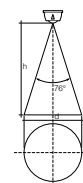
- Innovative: first DALI-2 asymmetric motion sensor based on Zhaga socket
- Flexible: adjustment of parameters with configuration software
- Reliable: tested for critical outdoor conditions

Motion detection: the motion sensor detects moving objects that radiate warmth (mainly pedestrians) thanks to PIR technology that reacts to heat changes within a rectangular coverage area (part of a street). The entire coverage area is rectangular, while the highlighted area is the one optimised for the detection of pedestrians. The sensitivity of the sensor can be adjusted via the application.



Height	Detection area				Covered area
h	x	y	y ₁	y ₂	
4.0 m	17.0 m	8 m	2.0 m	6.0 m	136 m ²
4.5 m	19.3 m	9 m	2.3 m	6.8 m	173 m ²
5.0 m	21.5 m	10 m	2.5 m	7.5 m	215 m ²
5.5 m	23.8 m	11 m	2.8 m	8.3 m	261 m ²
6.0 m	26.0 m	12 m	3.0 m	9.0 m	312 m ²
6.5 m	28.3 m	13 m	3.3 m	9.9 m	367 m ²
7.0 m	30.5 m	14 m	3.5 m	10.5 m	427 m ²
7.5 m	32.8 m	15 m	3.8 m	11.3 m	491 m ²
8.0 m	35.0 m	16 m	4.0 m	12.0 m	560 m ²

Brightness detection: the detection angle for light measurement is 76°.



Height	Detection area		Covered area
h	d		
4.0 m	6.2 m		31 m ²
4.5 m	7.0 m		39 m ²
5.0 m	7.8 m		48 m ²
5.5 m	8.6 m		58 m ²
6.0 m	9.4 m		69 m ²
6.5 m	10.2 m		81 m ²
7.0 m	10.9 m		94 m ²
7.5 m	11.7 m		108 m ²
8.0 m	12.5 m		123 m ²



Wireless antennas with remote control for Zhaga Socket - DALI-2 / D4i street lighting

WIRELESS ANTENNAS WITH REMOTE CONTROL - for DALI-2 / D4i street lighting

Thanks to Zhaga compatibility, remote communication modules can now be effectively used for lighting control and data transmission. Each RF node has the necessary "intelligence" to control multiple DALI devices while simultaneously setting up a stable wireless network.

WIRELESS ANTENNAS



Main features:

- Each control unit stores information about its own configuration and the configuration of the rest of the controls installed in the same network.
- Configuration and control can be done from a mobile phone or a tablet using the free CASAMBI APP (available for iOS and Android).
- Remote control of the installation is also possible via cloud through a Casambi router connected to the Internet.
- Electrical connection and mechanical fixing are done through standard ZHAGA Book 18 compatible socket by twisting and locking into place, without tools.
- No need for hubs, master devices, computers or programmes. Communication is via a Bluetooth BLE mesh network.



FEATURES	
Nominal input voltage	24 VDC SELV
Energy consump. in standby mode	0,5W
Energy consump. in operating mode	0,6W
Control interface	DALI/DALI2
DALI output current	40mA max.
Dimming	0-100%
RF communication interface	Bluetooth BLE
RF communication protocol	Casambi
Wireless class	Class 2
Firmware update	OTA (Over the air)
Casing material	PC con trattamento UV
IP - IK	66 - 09
Connectors	ZHAGA Book 18
Dimensions (diameter - height)	986445-00 Ø48mm. H 44mm
	986446-00 Ø80mm. H 50mm

Operation and configuration:

From the **CASAMBI APP** it is possible to group luminaires by street, set dimming levels according to time, schedule special events for particular days, etc. The communication range between controllers is up to **200m** outdoors. Since devices are operating on a mesh network, controllers communicate with each other until the information reaches the controller for which it was intended, even if it is far away. During setup it is sufficient to be located in the range of one of the controllers.



THE “CONTROL-GROUP PROG” SYSTEM - for DALI-2 / D4i street lighting (upon request)

The CONTROL-GROUP PROG solution allows managing the lighting system through local and autonomous dimming programmes based on the data supplied by motion and light sensors. The CONTROL-GROUP PROG is ideal for automating the lighting of roads, pedestrian routes and cycle lanes, residential neighbourhoods, parks, car parks, road junctions, marinas and much more.

Main features:

The system is made up of a PROGRAMMER for the on-site management/programming of the light points through the CONTROLLERS installed on the fixtures.

- Management of wireless mesh installations divided into groups of up to 60 nodes
- Dynamic point-to-point management, with integration of sensors
- Easy to use, both at the hardware and software level
- Multi-channel DALI support up to 8 power suppliers
- Real-time clock, and access to satellite clock in case of power outages lasting longer than 48h
- Light sensor integrated in the RF node
- 868 MHz signal that guarantees reliable communication and node-to-node distances of up to 100 metres

CONTROL-GROUP PROGRAMMER



- Programmer for on-site commissioning
- Control via smartphone / tablet (android and iOS) and laptop with dedicated WEB app
- Local autonomous management of groups of luminaires via RF mesh
- Groups of luminaires, small installations of up to 60 network nodes
- Standard-based solution (ZD4i) can be applied directly to a smart city solution via IoT
- Built-in battery for offline operation, including power supplier and an additional 12V charger

Structural features:

- Housing: Black ABS
- IP40 protection
- Radio range: 100 m max
- Life: up to 50,000 h

Advantages:

- Innovative: integrates sensors, schedules and scenes for customized outdoor lighting
- Intuitive: user-friendly interface display with map support and live test function
- Reliable: creates a network built on self-healing mesh technology for stable and long-lasting operation
- Safe: hardware components tested for outdoor use

CONTROLLER



- *RF DALI Controller* with built-in light sensor: controls up to 8 DALI DT6 channels and 1 motion sensor, it automatically sets the driver to DALI mode; compatible with 868 MHz narrow frequency band

- *Controller GPS* version for quick commissioning with user interface display and acting as master clock

Structural features:

- Body: grey plastic
- Lens: plastic, smoked grey
- Protection up to IP66
- Impact resistance $\leq$ IK09

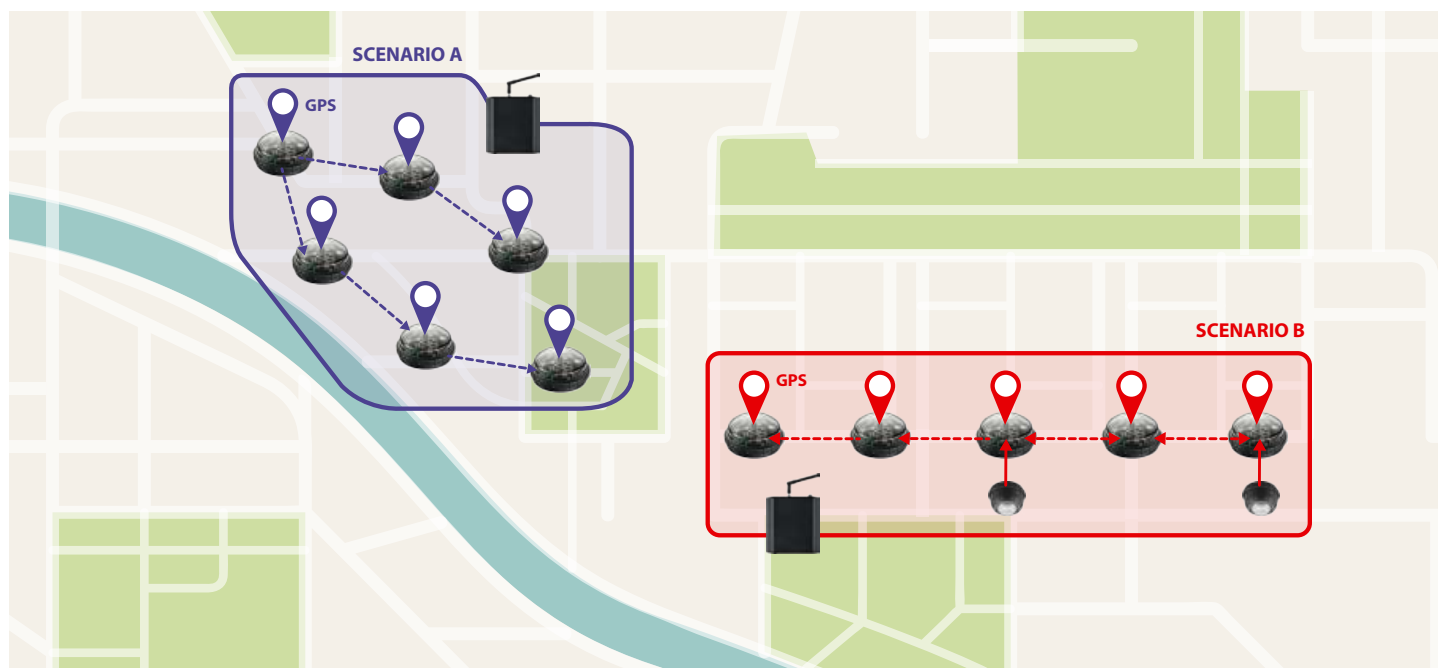
Advantages:

- Innovative: RF Multi Master controller based on Zhaga interface with IPv6 6LoWPAN mesh technology
- Intuitive: fast and easy connectivity update of the luminaire with Zhaga Book 18 Ed. 2 interface
- Reliable: self-healing mesh network for stable and safe operation
- Safe: pressure equalization membrane to withstand quick outdoor temperature changes



“CONTROL-GROUP PROG” system for Zhaga Socket DALI-2 / D4i street lighting

The CONTROL-GROUP PROG is based on the most advanced industry standards, such as ZD4i, ensuring future-proof operation, interoperability and easy maintenance. The system integrates directly into a cloud-connected IoT solution. All you need to do is to add a gateway and connect it to the Internet.



Example of possible installations

- Map support for device location



- Schedule definition and weekly programming



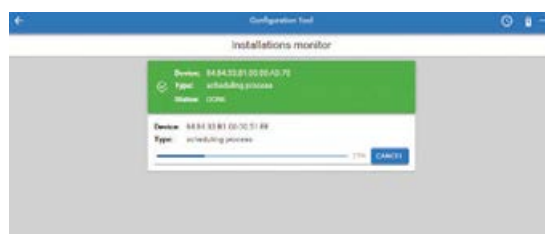
- Contextual submenus for detailed programming



- Identification of on-site fixtures (fig. a) and confirmation of information upload (fig. b)



a)



b)

- Selection of the luminaires that make up the motion path (fig. c) and checking of onboard controllers (fig. d)

Type	MAC address	RSSI	Time
Light	04.04.2021 00:00:00	80	✓
Light	04.04.2021 00:00:00	80	✓
Light	04.04.2021 00:00:00	80	✓
Light	04.04.2021 00:00:00	80	✓

c)



d)

Cities strive for a sustainable future. The desire for more liveable urban spaces with no energy waste and a minimum impact on the environment is a growing interest everywhere, from large cities to small towns. The installation of more efficient lights that can be managed with the new technologies is the first step to building a greener city. new technologies is the first step towards a greener city.



Overview of urban lighting luminaires equipped with Nema or Zhaga Socket

Disano offers a wide range of luminaires with next-generation LEDs that integrate light management systems. These systems are particularly suited for public and private lighting installations to constantly monitor the whole system while reducing operating costs, controlling the luminous flux and, consequently, saving energy.



MINI ISCHIA - ISCHIA



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TORPEDO 2.0



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ISEO



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VISCONTI 2.0



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**ISEO
street-centre**



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VOLO



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COMO



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LUCERNA



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GARDA



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GRANADA



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LOTO



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VISTA 2.0

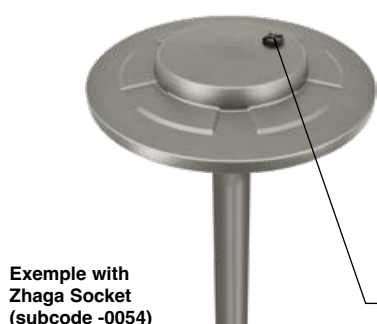


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With its round, simple and modern design, Mini Ischia and Ischia recalls the ecological credentials of LED lighting making it ideal for illuminating parks and residential areas; The family's fixtures are available in 3000K/4000K colour temperatures and in AMBER, the colour temperature designed to reproduce the cosy ambient light associated with sunset.

In this way, artificial light becomes a less invasive element in the environment, respecting the needs of the surrounding flora and fauna. Moreover, the fixtures are equipped to accept all the most advanced management and control system. The range includes luminaires with different photometric curves to achieve the best lighting performance in every pathway and setting.





Exemple with
Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

Mounted directly on the fixture's body, ideal for remote lighting management applications.



The Zhaga-D4i mark certifies the fixture's compliance with Zhaga Book 18 version 2 specifications for outdoor luminaires and DiA's D4i specifications for intra-luminaire DALI interface.

GENERAL CHARACTERISTICS



Housing: pressed in die-cast aluminium.

Pole connection: pressed in die-cast aluminium. Suited for poles with a diameter 60 mm.

Optics: made of PMMA with high temperature resistance and UV rays.

Reflector: in pre-anodised 99.85 aluminium for COB version.

Diffuser: polycarbonate 2,5 mm thick, thermal shock and impact resistant (UNI-EN 12150-1: 2001).

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS



Standard supply: automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with water-proof connector for quick installation and anti-condensation valve for air recirculation.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.

- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Mini Ischia - Ischia: 6/10kV.

PHOTOBIOLOGICAL SAFETY



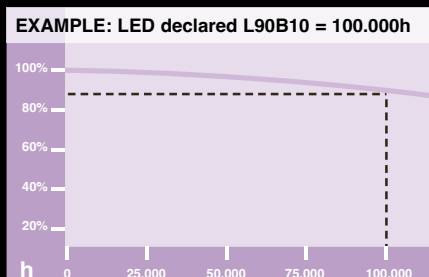
Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LOW FLICKER



Product with a very low flicker; uniform light for greater eye protection.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

Mini Ischia / Ischia:

luminous flux maintenance 90%: **100.000h (L90B10)**

Ischia COB:

luminous flux maintenance 80%: **90.000h (L80B10)**

luminous flux maintenance 70%: **100.000h (L70B50)**

2200K (subcode -73): lamps with warm amber light at a colour temperature of 2200K reduces the risks of an excessive exposure to harmful blue LED light and allows a "softer" impact on inhabited zones, especially in historic centres.

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

Upon request LED 4000K - CRI 80 versions with **sub-code -60**.

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

Minimum and maximum operating ambient temperature: $-30^{\circ}\text{C} \div +50^{\circ}\text{C}$.

ENEC is a European Mark that demonstrates that Ischia fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

The ENEC Plus mark certifies that the LED luminaires are compliant and reliable in terms of safety and declared performance.

The International Bureau of the World Intellectual Property Organization (WIPO) hereby certifies that the particulars given below correspond to the recording made in the International Register of Industrial Designs.

The Zhaga-D4i mark certifies the fixture's compliance with Zhaga Book 18 version 2 specifications for outdoor luminaires and DiiA's D4i specifications for intra-luminaire DALI interface.

PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

The fixture's design is configured to minimise wind exposure surfaces.

THE RANGE OF MINI ISCHIA - ISCHIA STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

2200K
3000K
4000K

IK LEVEL OF PROTECTION



AMBIENT TEMPERATURE



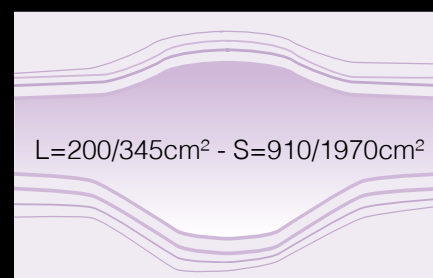
CERTIFICATIONS



CLD PROG

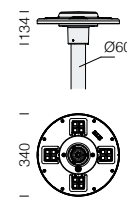


SURFACE EXPOSED TO WIND

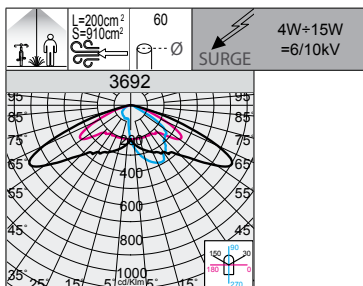




IP66IK10

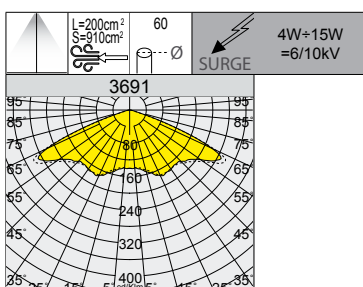


LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
100.000h (L90B10).



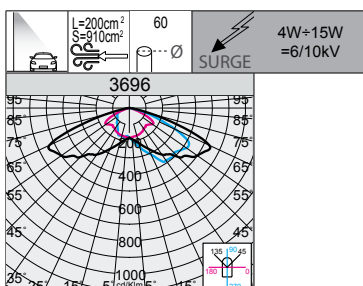
3692 Mini Ischia - cycle-pedestrian CA

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
graphite	2.60	424780-0054-0110-CA	424780-40-0110-CA	4	4000K - 562lm - CRI>80
		424780-3954-0110-CA	424780-3940-0110-CA		3000K - 522lm - CRI>80
		424780-7354-0110-CA	424780-7340-0110-CA		2200K - 477lm - AMBER



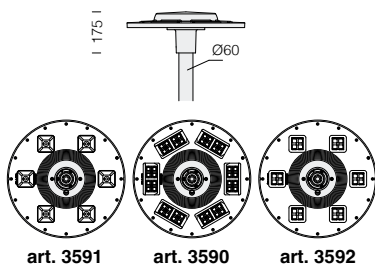
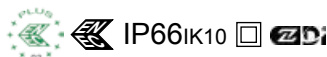
3691 Mini Ischia - rotosymmetric medium beam RM

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
graphite	2.60	424770-0054-0110-RM	424770-40-0110-RM	4	4000K - 582lm - CRI>80
		424770-3954-0110-RM	424770-3940-0110-RM		3000K - 541lm - CRI>80
		424770-7354-0110-RM	424770-7340-0110-RM		2200K - 495lm - AMBER



3696 Mini Ischia - asymmetric wide beam AW

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
graphite	2.60	424750-0054-0110-AW	424750-40-0110-AW	4	4000K - 583lm - CRI>80
		424750-3954-0110-AW	424750-3940-0110-AW		3000K - 542lm - CRI>80
		424750-7354-0110-AW	424750-7340-0110-AW		2200K - 495lm - AMBER



COB: power factor $\geq 0,92$.
Luminous flux maintenance 80%:
90.000h (L80B10).
Luminous flux maintenance 70%:
100.000h (L70B50).

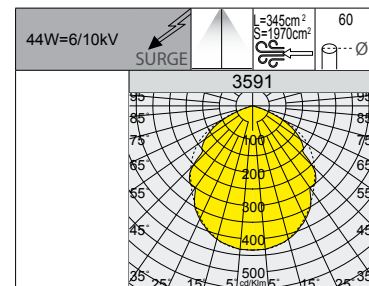
LED: power factor $\geq 0,9$.
Luminous flux maintenance 90%:
100.000h (L90B10).

Upon request (sub-code -60)	
LED	4000K - CRI 80



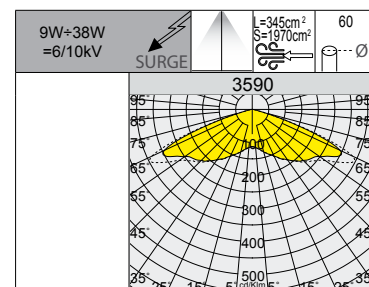
3591 Ischia - COB rotosymmetric medium beam RM

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
graphite	4.90	424670-0054	424670-40	44	4000K - 5877lm - CRI 80
		424671-0054	424671-40		3000K - 5469lm - CRI 80
		424670-7354	424670-7340		2200K - 5172lm - AMBER



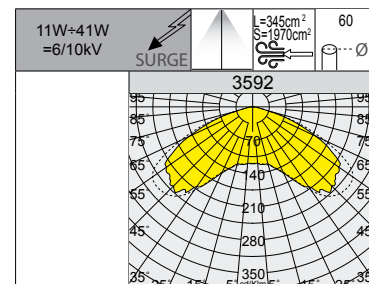
3590 Ischia - rotosymmetric wide beam RW

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
graphite	4.90	424660-0054	424660-40	30	4000K - 4770lm - CRI 70
		424660-3954	424660-3940		3000K - 4510lm - CRI 70
graphite	4.90	424661-0054	424661-40	38	4000K - 6030lm - CRI 70
		424661-3954	424661-3940		3000K - 5710lm - CRI 70



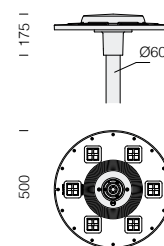
3592 Ischia - square wide beam SW

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
graphite	4.90	424680-0054	424680-40	31	4000K - 4835lm - CRI 70
		424680-3954	424680-3940		3000K - 4593lm - CRI 70
graphite	4.90	424681-0054	424681-40	41	4000K - 6244lm - CRI 70
		424681-3954	424681-3940		3000K - 5931lm - CRI 70



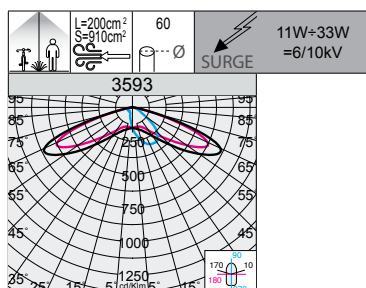


Registered Design
DM100271



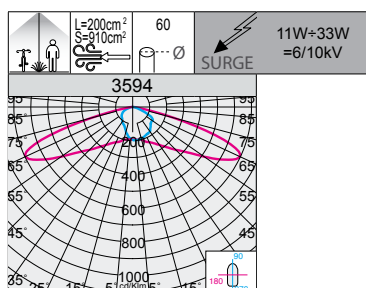
LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
100.000h (L90B10).

Upon request (sub-code -60)	
LED	4000K - CRI 80



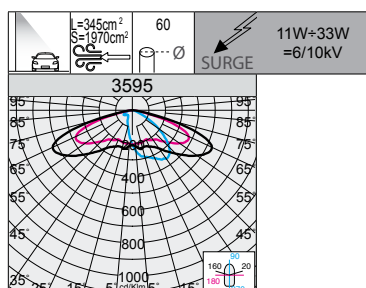
3593 Ischia - cycle-pedestrian asymmetric CA

	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI	
graphite	4.90	424690-0054-0280-CA	424690-40-0280-CA	11	4000K - 1658lm - CRI 70	
		424690-354-0280-CA	424690-3940-0280-CA		3000K - 1575lm - CRI 70	



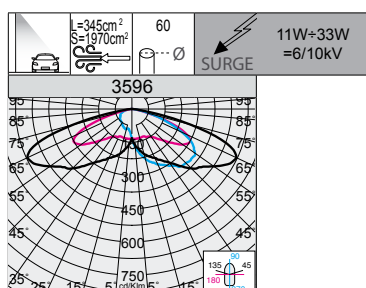
3594 Ischia - cycle-pedestrian symmetric CS

	CLD PROG		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI	
graphite	4.90	424700-0054-0280-CS	424700-40-0280-CS	11	4000K - 1653lm - CRI 70	
		424700-3954-0280-CS	424700-3940-0280-CS		3000K - 1571lm - CRI 70	



3595 Ischia - asymmetric medium beam AM

	CLD PROG		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI	
graphite	4.90	424710-0054-0280-AM	424710-40-0280-AM	11	4000K - 1665lm - CRI 70	
		424710-3954-0280-AM	424710-3940-0280-AM		3000K - 1582lm - CRI 70	



3596 Ischia - asymmetric wide beam AW

	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI	
graphite	4.90	424720-0054-0450-AW	424720-40-0450-AW	33	4000K - 4932lm - CRI 70	
		424720-3954-0450-AW	424720-3940-0450-AW		3000K - 4686lm - CRI 70	

Another notable advantage of the Torpedo 2.0 is the ability to select the driving current of the LEDs. This allows for customisable efficiency: a lower current minimises energy waste, while a higher light output reduces the number of luminaires required, enhancing overall performance and cost-effectiveness. **Luminous flux setup: this can be done by programming the drive current values requested when ordering/purchasing the fixture.**

MINI ISCHIA ART. 3692 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424781-0054-0220-CA	424781-40-0220-CA	6,5	4000K - 951lm - CRI>80
424781-3954-0220-CA	424781-3940-0220-CA		3000K - 885lm - CRI>80
424781-7354-0220-CA	424781-7340-0220-CA		2200K - 809lm - AMBER
424782-0054-0440-CA	424782-40-0440-CA	11	4000K - 1835lm - CRI>80
424782-3954-0440-CA	424782-3940-0440-CA		3000K - 1707lm - CRI>80
424782-7354-0440-CA	424782-7340-0440-CA		2200K - 1561lm - AMBER
424783-0054-0280-CA	424783-40-0280-CA	15	4000K - 2448lm - CRI>80
424783-3954-0280-CA	424783-3940-0280-CA		3000K - 2276lm - CRI>80
424783-7354-0280-CA	424783-7340-0280-CA		2200K - 2080lm - AMBER



MINI ISCHIA ART. 3691 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424771-0054-0220-RM	424771-40-0220-RM	6,5	4000K - 986lm - CRI>80
424771-3954-0220-RM	424771-3940-0220-RM		3000K - 918lm - CRI>80
424771-7354-0220-RM	424771-7340-0220-RM		2200K - 838lm - AMBER
424772-0054-0440-RM	424772-40-0440-RM	11	4000K - 1809lm - CRI>80
424772-3954-0440-RM	424772-3940-0440-RM		3000K - 1683lm - CRI>80
424772-7354-0440-RM	424772-7340-0440-RM		2200K - 1538lm - AMBER
424773-0054-0280-RM	424773-40-0280-RM	15	4000K - 2413lm - CRI>80
424773-3954-0280-RM	424773-3940-0280-RM		3000K - 2244lm - CRI>80
424773-7354-0280-RM	424773-7340-0280-RM		2200K - 2051lm - AMBER

MINI ISCHIA ART. 3696 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424751-0054-0220-AW	424751-40-0220-AW	6,5	4000K - 988lm - CRI>80
424751-3954-0220-AW	424751-3940-0220-AW		3000K - 919lm - CRI>80
424751-7354-0220-AW	424751-7340-0220-AW		2200K - 840lm - AMBER
424752-0054-0440-AW	424752-40-0440-AW	11	4000K - 1772lm - CRI>80
424752-3954-0440-AW	424752-3940-0440-AW		3000K - 1649lm - CRI>80
424752-7354-0440-AW	424752-7340-0440-AW		2200K - 1506lm - AMBER
424753-0054-0280-AW	424753-40-0280-AW	15	4000K - 2363lm - CRI>80
424753-3954-0280-AW	424753-3940-0280-AW		3000K - 2198lm - CRI>80
424753-7354-0280-AW	424753-7340-0280-AW		2200K - 2008lm - AMBER

ISCHIA ART. 3590 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424660-0054-0420-RW	424660-40-0420-RW	9	4000K - 1520lm - CRI 70
424660-3954-0420-RW	424660-3940-0420-RW		3000K - 1430lm - CRI 70
424660-0054-0660-RW	424660-40-0660-RW	15	4000K - 2390lm - CRI 70
424660-3954-0660-RW	424660-3940-0660-RW		3000K - 2260lm - CRI 70
424660-0054-0510-RW	424660-40-0510-RW	23	4000K - 3690lm - CRI 70
424660-3954-0510-RW	424660-3940-0510-RW		3000K - 3480lm - CRI 70



ISCHIA ART. 3592 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424680-0054-0280-SW	424680-40-0280-SW	11	4000K - 1650lm - CRI 70
424680-3954-0280-SW	424680-3940-0280-SW		3000K - 1568lm - CRI 70
424680-0054-0440-SW	424680-40-0440-SW	16	4000K - 2440lm - CRI 70
424680-3954-0440-SW	424680-3940-0440-SW		3000K - 2318lm - CRI 70
424680-0054-0320-SW	424680-40-0320-SW	24	4000K - 3791lm - CRI 70
424680-3954-0320-SW	424680-3940-0320-SW		3000K - 3601lm - CRI 70

ISCHIA ART. 3593 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424690-0054-0480-CA	424690-40-0480-CA	17	4000K - 2822lm - CRI 70
424690-3954-0480-CA	424690-3940-0480-CA		3000K - 2681lm - CRI 70
424690-0054-0340-CA	424690-40-0340-CA	25	4000K - 3997lm - CRI 70
424690-3954-0340-CA	424690-3940-0340-CA		3000K - 3797lm - CRI 70
424690-004-0450-CA	424690-40-0450-CA	33	4000K - 5126lm - CRI 70
424690-3954-0450-CA	424690-3940-0450-CA		3000K - 4870lm - CRI 70

ISCHIA ART. 3595 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424710-0054-0480-AM	424710-40-0480-AM	17	4000K - 2835lm - CRI 70
424710-3954-0480-AM	424710-3940-0480-AM		3000K - 2693lm - CRI 70
424710-0054-0340-AM	424710-40-0340-AM	25	4000K - 4016lm - CRI 70
424710-3954-0340-AM	424710-3940-0340-AM		3000K - 3813lm - CRI 70
424710-0054-0450-AM	424710-40-0450-AM	33	4000K - 5150lm - CRI 70
424710-3954-0450-AM	424710-3940-0450-AM		3000K - 4893lm - CRI 70

ISCHIA ART. 3594 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424700-0054-0480-CS	424700-40-0480-CS	17	4000K - 2815lm - CRI 70
424700-3954-0480-CS	424700-3940-0480-CS		3000K - 2674lm - CRI 70
424700-0054-0340-CS	424700-40-0340-CS	25	4000K - 3988lm - CRI 70
424700-3954-0340-CS	424700-3940-0340-CS		3000K - 3788lm - CRI 70
424700-0054-0450-CS	424700-40-0450-CS	33	4000K - 5114lm - CRI 70
424700-3954-0450-CS	424700-39-0450-CS		3000K - 4859lm - CRI 70

ISCHIA ART. 3596 - OTHER AVAILABLE VERSIONS			
code - ZHAGA	code - NEMA	W tot	K - ølm - CRI
424720-0054-0280-AW	424720-40-0280-AW	11	4000K - 1595lm - CRI 70
424720-3954-0280-AW	424720-3940-0280-AW		3000K - 1515lm - CRI 70
424720-0054-0480-AW	424720-40-0480-AW	17	4000K - 2715lm - CRI 70
424720-3954-0480-AW	424720-3940-0480-AW		3000K - 2580lm - CRI 70
424720-0054-0340-AW	424720-40-0340-AW	25	4000K - 3846lm - CRI 70
424720-3954-0340-AW	424720-3940-0340-AW		3000K - 3653lm - CRI 70

Iseo, is a luminaire with a linear, minimalist design, created to enhance the modern aesthetics of cities and green spaces. Its clean lines bring elegance to the environment, while its uniform, high-efficiency lighting enhances paths, squares, and pedestrian areas. Equipped with the latest generation of LEDs, it delivers excellent lighting performance with low energy consumption and a refined, non-intrusive presence, perfectly suited to contemporary urban settings.

The optics provide uniform, well-controlled, and glare-free lighting, improving visual comfort and user safety. These features make this luminaire an ideal solution for lighting green spaces, pedestrian zones, residential areas, and urban spaces, helping to create pleasant, safe, and sustainable environments.





Example with
Nema Socket
(subcode -40)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS



Housing and arms: pressed in die-cast aluminium and designed with a very small surface exposed to wind.

Optics: made of PMMA with high temperature resistance and UV rays.

Pole connection: suited for poles with a diameter 60mm.

Diffuser: extra-clear tempered glass, 4 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001).

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS



Standard supply: nylon wiring plate 30% fibre glass; automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.

- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Iseo: 6/10kV.

PHOTOBIOLOGICAL SAFETY



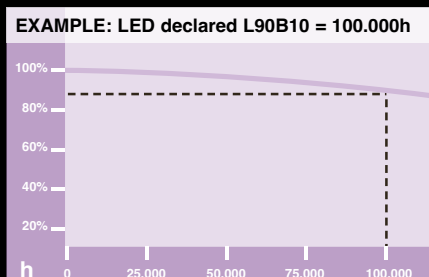
Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LOW FLICKER



Product with a very low flicker; uniform light for greater eye protection.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: ≥ 0.9 .

luminous flux maintenance 90%: **>100.000h (L90B10)**

CCT / POWER SWITCH

LED: power factor ≥ 0.9 .

Luminous flux maintenance 80%: **100.000h (L80B20)**

2200K (upon request with subcode -73): lamps with warm amber light at a colour temperature of 2200K reduces the risks of an excessive exposure to harmful blue LED light and allows a “softer” impact on inhabited zones, especially in historic centres.

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

CCT SWITCH = with this integrated switch you can select the desired light colour, 2700K-3000K-4000K y 1800K-2200K.

POWER SWITCH = with this integrated switch you can select the fixture's total wattage, 25W-45W-60W.

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

Minimum and maximum operating ambient temperature: $-40^{\circ}\text{C} \div +45^{\circ}\text{C}$.

ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

The fixture's design is configured to minimise wind exposure surfaces.

THE RANGE OF ISEO STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

2200K
3000K
4000K

CCT / POWER SWITCH VERSION



IK LEVEL OF PROTECTION



AMBIENT TEMPERATURE



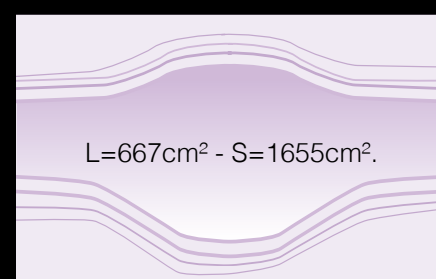
CERTIFICATIONS



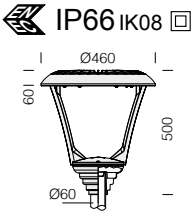
CLD PROG



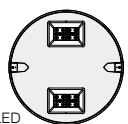
SURFACE EXPOSED TO WIND





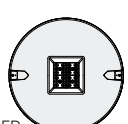


IP66 IK08



24 LED

art. 3360



24 LED

art. 3363

LED: power factor ≥0.9.
Luminous flux maintenance 90%:
>100.000h (L90B10).

RG0

EthR

+45°C

-40°C

U.V.

LOW

FLICKER

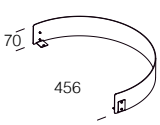
3000K

4000K

3360 Iseo 1 - bi-symmetric					
		CLD ZHAGA	CLD NEMA		
colour	weight	code	code	W tot	LUMEN OUTPUT (tq= 25 °C)
RAL 7021	6.10	330563-0054	330563-40	14	4000K - 2182lm - CRI 70
		330563-3954	330563-3940		3000K - 2037lm - CRI 70
RAL 7021	6.10	330564-0054	330564-40	31	4000K - 4673lm - CRI 70
		330564-3954	330564-3940		3000K - 4445lm - CRI 70

3363 Iseo 4 - cycle-pedestrian					
		CLD ZHAGA	CLD NEMA		
colour	poids	code	code	W tot	LUMEN OUTPUT (tq= 25 °C)
RAL 7021	6.10	330593-0054	330593-40	14	4000K - 2068lm - CRI 70
		330593-3954	330593-3940		3000K - 1964lm - CRI 70
RAL 7021	6.10	330594-0054	330594-40	31	4000K - 4439lm - CRI 70
		330594-3954	330594-3940		3000K - 4217lm - CRI 70

ACCESSORIES



70

456

acc. 109 anti-glare shield

RAL 7021991309-00

To prevent glare effects. To be fitted when Garda is installed near a window.

27



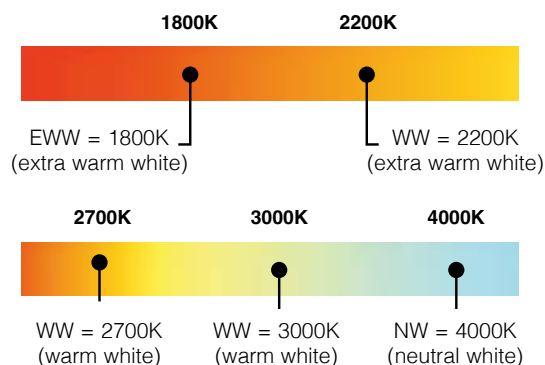
CCT SWITCH = with this integrated switch you can select the desired light colour, 2700K-3000K-4000K y 1800K-2200K.

POWER SWITCH = with this integrated switch you can select the fixture's total wattage, 25W-45W-60W.

The main feature of this fixture is the new colour-changing technology. With **two built-in switches** positioned on housing of the fixture, you can:



- select 5 different colour temperatures, adjusting to most installations:



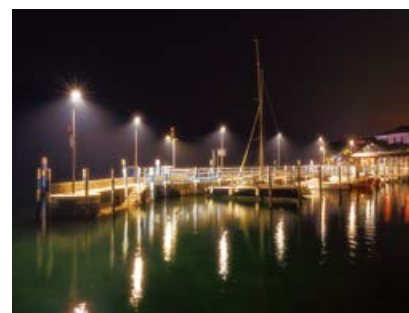
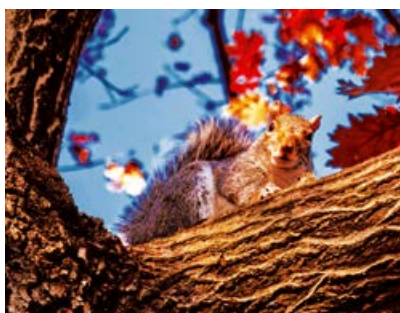
- select the type of luminous flux with 3 output power ranges :

LOW	MEDIUM	HIGH
25W	45W	60W

ISEO is available as standard with a **1800K** and **2200K** colour temperature to reproduce a cosy ambient light associated with sunset. In this way, the artificial light becomes a less invasive element in the environment, **respecting the needs of the surrounding flora and fauna**.

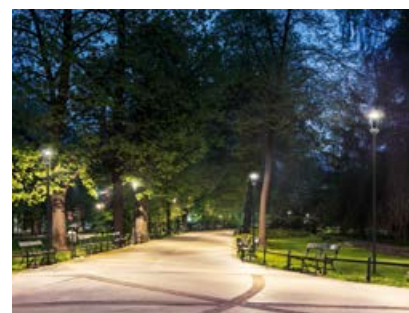
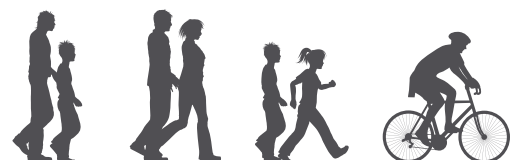
Research has shown that different types of lighting can significantly impact nocturnal insects, birds and other creatures that play a vital role in local ecosystems. Environmental organisations are increasingly calling for this aspect to be properly considered in the design of new lighting systems. Modern LEDs, with a reduced blue light component, provide an opportunity to create less disruptive lighting in streets or parking areas near green spaces, while offering better protection for local wildlife.

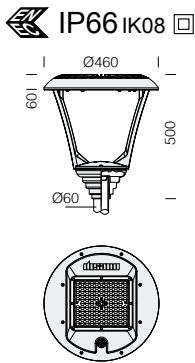
1800K - 2200K: lamps with warm light at a colour temperature of 1800K-2200K *reduces the risks of an excessive exposure to harmful blue LED light* and allows a "softer" impact on inhabited zones, especially in historic centres.



ISEO come with colour temperatures of **2700K**, **3000K** and **4000K**. These versions are ideal for urban spaces such as public parks, squares, and historic town centres that require an illumination that enhance architectural features while ensuring pedestrian safety, visual comfort, and minimising light pollution

2700K - 3000K - 4000K: lamps with 2700K-3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.





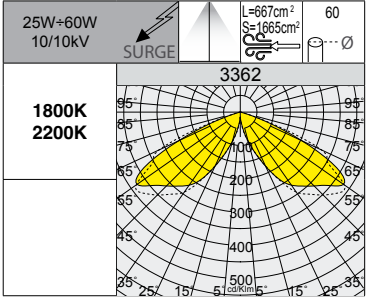
LED: power factor ≥ 0.9 .
Luminous flux maintenance 80%:
100.000h (L80B20).



3362 Iseo 3 - CCT 1800K-2200K / POWER SWITCH - rotosymmetric

CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	6.10	330584-0054	330584-40	25	1800K - 2338lm - CRI>80
					2200K - 2694lm - CRI>80
				45	1800K - 4211lm - CRI>80
					2200K - 4851lm - CRI>80
				60	1800K - 5613lm - CRI>80
					2200K - 6468lm - CRI>80

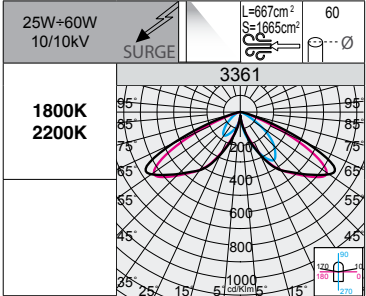
Ideal for lighting up historic town centres, residential areas, parks, and protected areas, while respecting the needs of nocturnal flora and fauna.



3361 Iseo 2 - CCT 1800K-2200K / POWER SWITCH - asymmetric

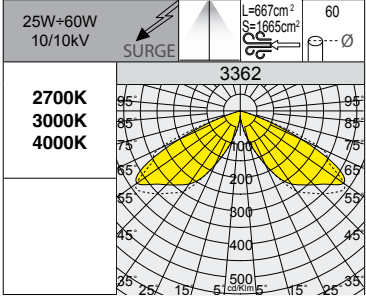
CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	6.10	330574-0054	330574-40	25	1800K - 2229lm - CRI>80
					2200K - 2568lm - CRI>80
				45	1800K - 4014lm - CRI>80
					2200K - 4624lm - CRI>80
				60	1800K - 5352lm - CRI>80
					2200K - 6167lm - CRI>80

Ideal for lighting up historic town centres, residential areas, parks, and protected areas, while respecting the needs of nocturnal flora and fauna.



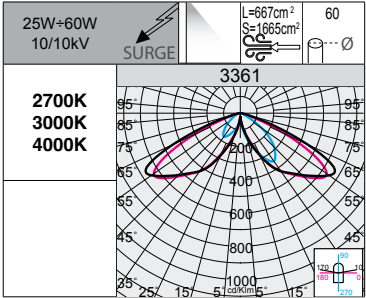
3362 Iseo 3 - CCT 2700K-3000K-4000K / POWER SWITCH - rotosymmetric

CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	6.10	330583-0054	330583-40	25	2700K - 3150lm - CRI>80
					3000K - 3384lm - CRI>80
					4000K - 3465lm - CRI>80
				45	2700K - 5670lm - CRI>80
					3000K - 6098lm - CRI>80
					4000K - 6237lm - CRI>80
				60	2700K - 7560lm - CRI>80
					3000K - 8132lm - CRI>80
					4000K - 8316lm - CRI>80
				25	2700K - 3003lm - CRI>80
					3000K - 3230lm - CRI>80
					4000K - 3303lm - CRI>80



3361 Iseo 2 - CCT 2700K-3000K-4000K / POWER SWITCH - asymmetric

CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	6.10	330573-0054	330573-40	25	2700K - 3003lm - CRI>80
					3000K - 3230lm - CRI>80
					4000K - 3303lm - CRI>80
				45	2700K - 5404lm - CRI>80
					3000K - 5815lm - CRI>80
					4000K - 5946lm - CRI>80
				60	2700K - 7206lm - CRI>80
					3000K - 7753lm - CRI>80
					4000K - 7929lm - CRI>80
				25	2700K - 3003lm - CRI>80
					3000K - 3230lm - CRI>80
					4000K - 3303lm - CRI>80



Iseo is a suspended street-centre luminaire designed to enhance and uniformly light urban roads, historic centres and public spaces. Equipped with the latest generation of LEDs, it delivers excellent lighting performance with low energy consumption and a refined, non-intrusive presence, perfectly suited to contemporary urban settings.

The optics provide uniform, well-controlled, and glare-free lighting, improving visual comfort and user safety. Ideal for suspended installations, Iseo ensures visual safety, lighting continuity and a clear definition of the urban space.





Example with
Nema Socket
(subcode -40)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS



Housing: in die-cast aluminium with cooling fins.

Optics: made of PMMA with high temperature resistance and UV rays.

Pole connection: suited for poles with a diameter 60mm.

Diffuser: extra-clear tempered glass, 4 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001).

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS



Standard supply: nylon wiring plate 30% fibre glass; automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.
- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Iseo: 6/10kV.

PHOTOBIOLOGICAL SAFETY



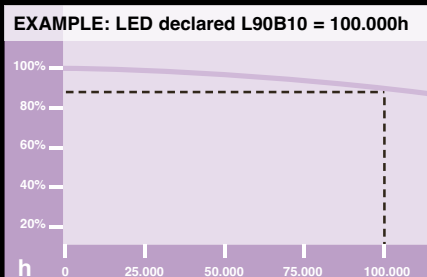
Risk Group 0 (RGO Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LOW FLICKER



Product with a very low flicker; uniform light for greater eye protection.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

luminous flux maintenance 90%: **>100.000h (L90B10)**

4000K as standard: lamps with 4000K white light, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

THE RANGE OF ISEO STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

4000K

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

IK LEVEL OF PROTECTION



Minimum and maximum operating ambient temperature: $-40^{\circ}\text{C} \div +45^{\circ}\text{C}$.

AMBIENT TEMPERATURE



ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

CERTIFICATIONS



PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

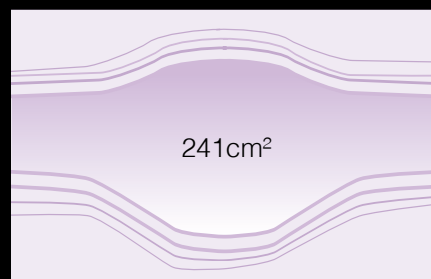
Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

CLD PROG



The fixture's design is configured to minimise wind exposure surfaces.

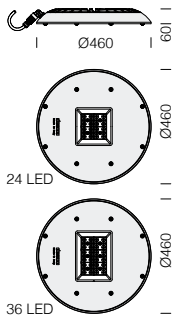
SURFACE EXPOSED TO WIND





Iseo suspended street-centre

IP66 IK08



RG0
Etr

+45
C
-40

U.V.

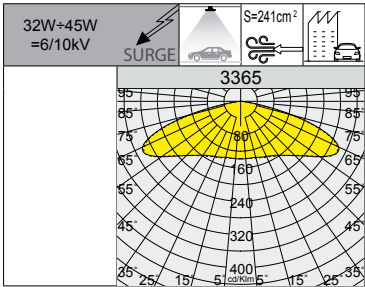
LOW
FLICKER

4000K

LED: power factor ≥0.9.
Luminous flux maintenance 90%:
>100.000h (L90B10).

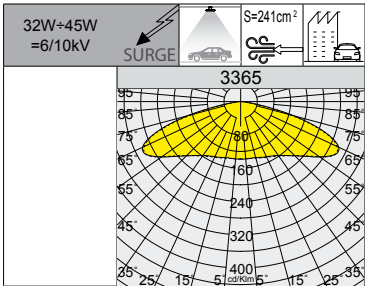
3365 Iseo - rotosymmetric - street-centre

CLD ZHAGA			CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	Ø	code	code	W tot	K - ølm - CRI
RAL 7021	5.50	460	330585-0054	330585-40	32	4000K - 4985lm - CRI 70
			330587-0054	330587-40	45	4000K - 6505lm - CRI 70

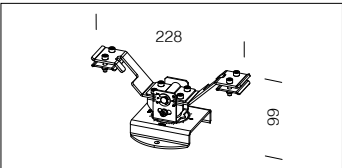


3366 Iseo - elliptical beam - street-centre

CLD ZHAGA			CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	Ø	code	code	W tot	K - ølm - CRI
RAL 7021	5.50	460	330586-0054	330586-40	32	4000K - 5077lm - CRI 70
			330588-0054	330588-40	45	4000K - 6625lm - CRI 70



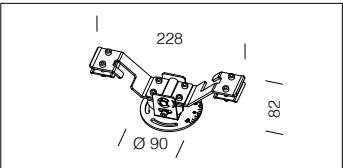
ACCESSORIES



acc. 54 suspension connection

1.00 995774-00

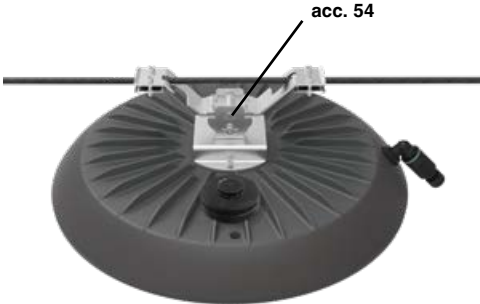
In stainless steel AISI 304. For installation on ropes and steel cables; rotation on the vertical axis of 360°.



acc. 55 suspension connection

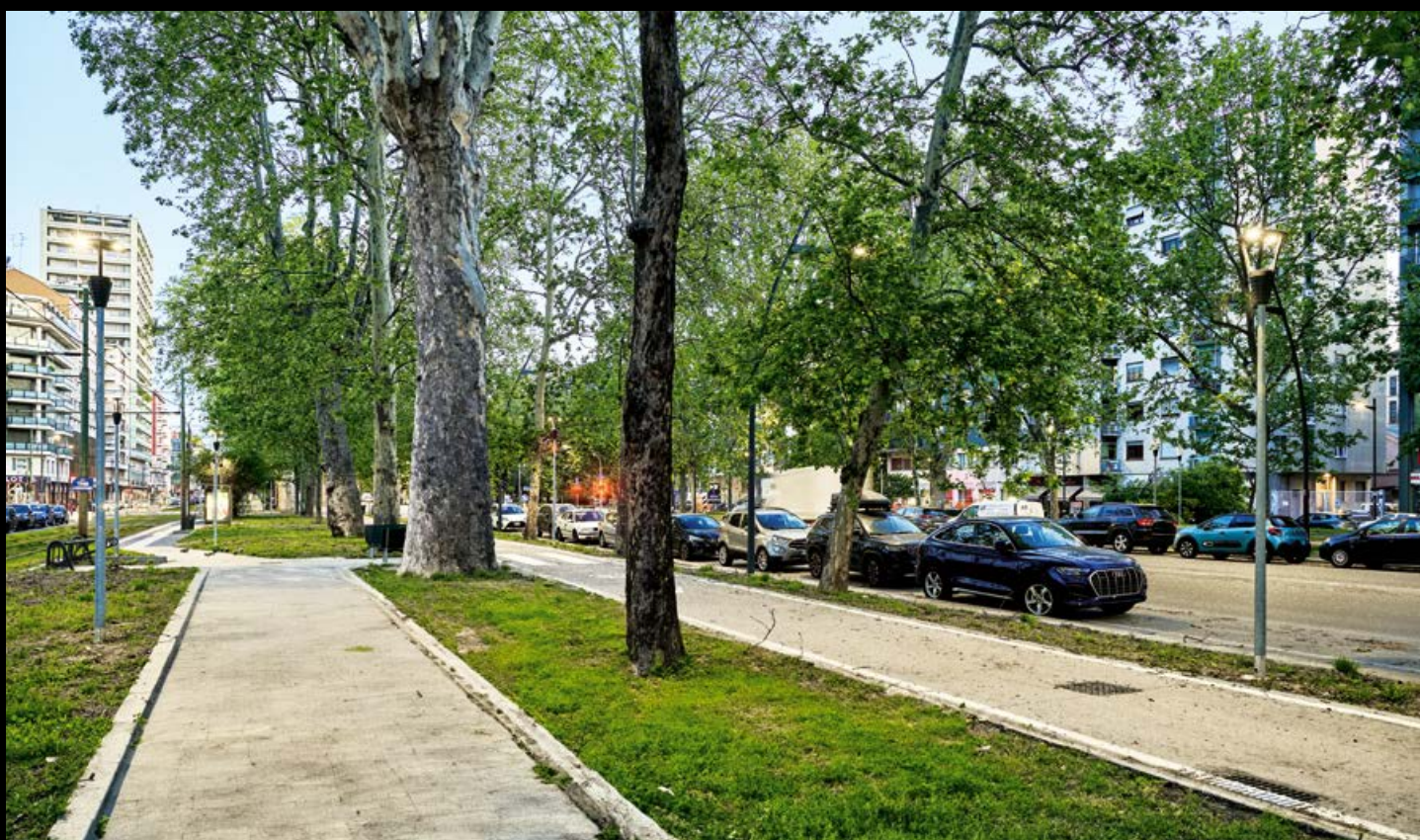
0.90 998098-00

In stainless steel AISI 304. For installation on ropes and steel cables; rotation on the vertical axis of 120°.



High energy efficiency and excellent light quality are the fundamental requirements for LED urban lighting that represents the true transition to an environmentally friendly technology capable of improving the quality of life in small and large cities.

Como and Garda are available in several versions - bi-symmetrical, asymmetrical, cycle, bisymmetrical - ideal to design the best light paths and make the streets safe and liveable for drivers, cyclists and pedestrians. In addition to being energy-efficient, these luminaires are highly technological and can be perfectly integrated with remote management, communication and surveillance systems that make the public lighting network the main support of any modern smart city.





Exemple with Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with subcode -40 (sealing cap to be ordered separately)	
Zhaga Socket (complete with sealing cap) order with subcode -0054 standard top configuration subcode -0075 bottom configuration subcode -0085 double configuration	Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS



Housing and arms: pressed in die-cast aluminium and designed with a very small surface exposed to wind.

Optics: made of PMMA with high temperature resistance and UV rays.

Pole connection: suited for poles with a diameter 60÷70mm.

Diffuser: extra-clear tempered glass, 4 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001).

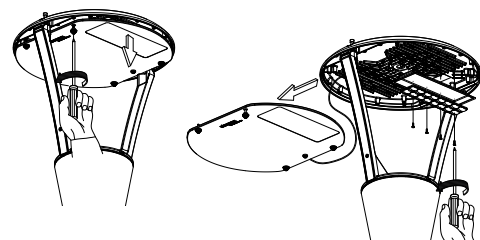
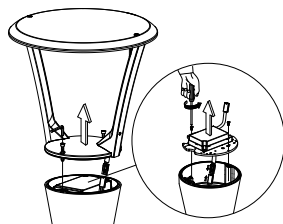
Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS

Standard supply: nylon wiring plate 30% fibre glass; automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation.

Accessory compartment opening: allows maintenance or replacement of the electrical auxiliary board (driver); the cover remains secured to the luminaire body by means of two steel safety cables.



Optical compartment opening: allows maintenance or replacement of the LED modules; the glass remains secured to the upper housing by means of a steel safety cable.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

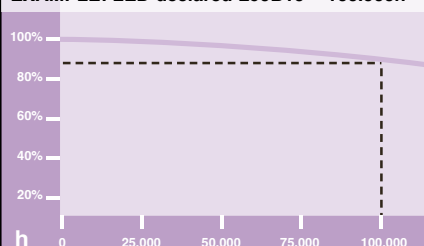
- differential mode: surge between power cables and between the phase and neutral.
- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.



Como: 6/10kV - **Garda:** 6/10kV; art. 3350-3354 available with a 12 kV/10 kA surge protection device, which disconnects the luminaire in the event of failure or end of service life.

LIFE EXPECTANCY

EXAMPLE: LED declared L90B10 = 100.000h



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

Como:

luminous flux maintenance 90%: **>100.000h (L90B10)**

Garda:

luminous flux maintenance 90%: **>100.000h (L90B10)**

luminous flux maintenance 80%: **>100.000h (L80B10)**

2200K (subcode -73): lamps with warm amber light at a colour temperature of 2200K reduces the risks of an excessive exposure to harmful blue LED light and allows a “softer” impact on inhabited zones, especially in historic centres.

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

Upon request LED 4000K - CRI 80 versions with **sub-code -60**.

THE RANGE OF COMO - GARDA STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

2200K
3000K
4000K

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

IK LEVEL OF PROTECTION



Minimum and maximum operating ambient temperature: $-40^{\circ}\text{C} \div +50^{\circ}\text{C}$.

AMBIENT TEMPERATURE



ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

CERTIFICATIONS



PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

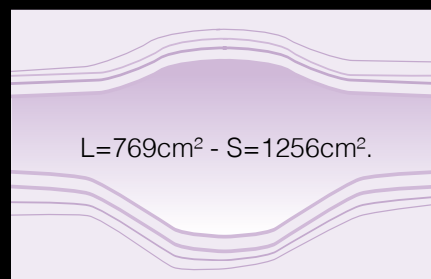
Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

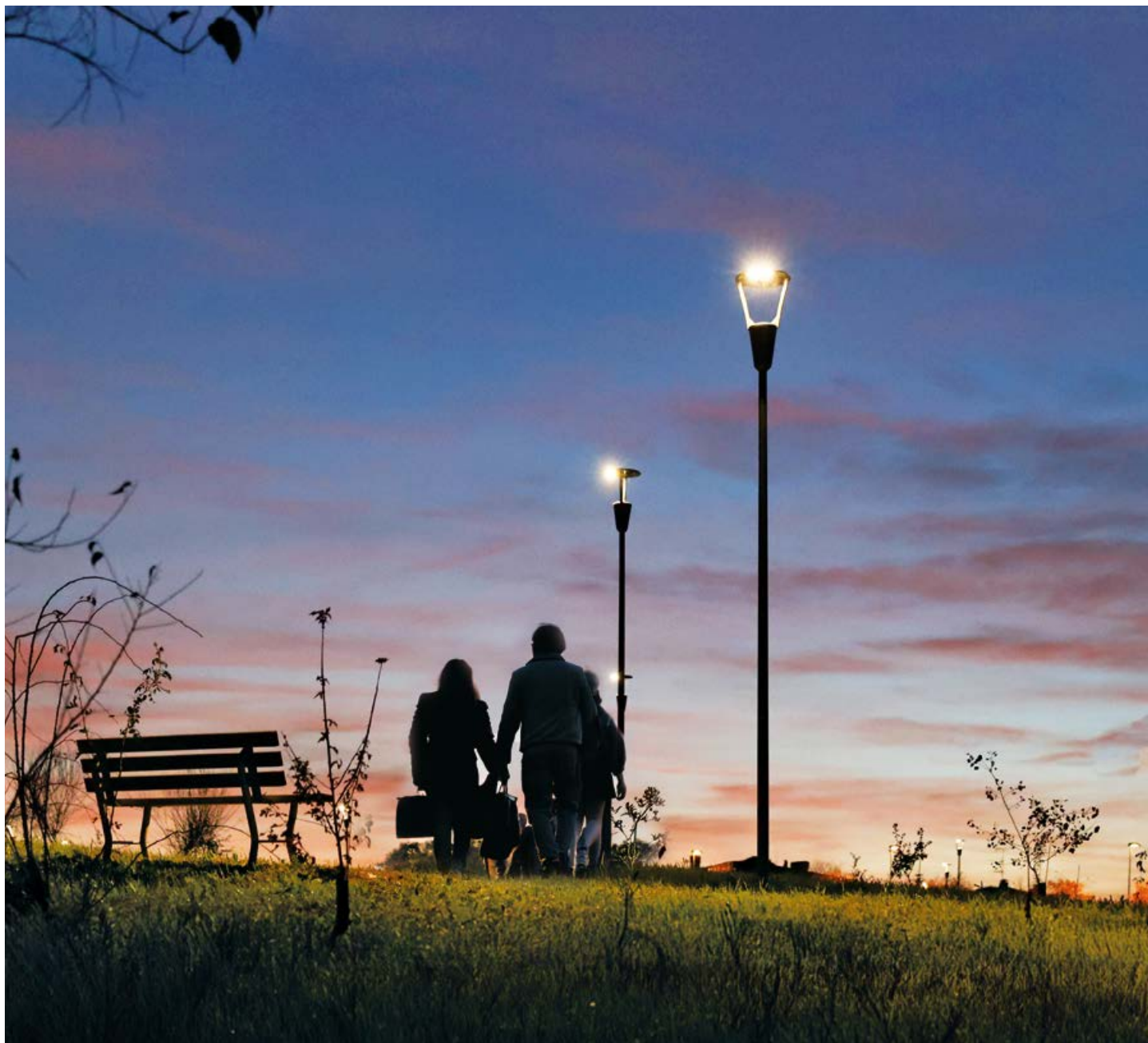
CLD PROG



The fixture's design is configured to minimise wind exposure surfaces.

SURFACE EXPOSED TO WIND





LUMINAIRE DESIGNED FOR INSTALLATION ON ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT.

The fixture is designed to accept Zhaga socket, projecting public lighting into the future. You can create a 'smart' Plug-and-Play solution featuring maximum interoperability. The Zhaga D4i certification means that a product has a Zhaga Book 18 interface and is compliant with DALI-2 and D4i standards.

Zhaga socket -0054 (standard top configuration)

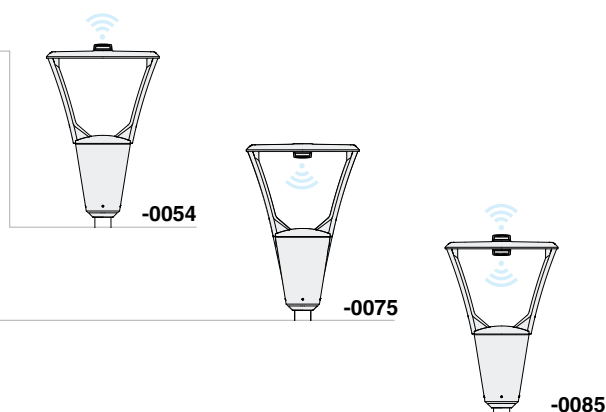
Fixture designed to accept Zhaga socket, which is found on the **top part of the lighting fixture**, electrically connected to the lighting fixture's driver.

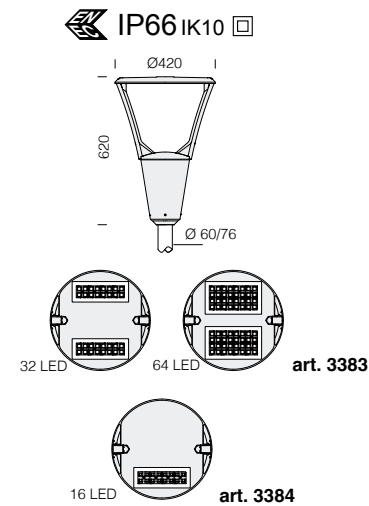
Zhaga socket -0075 (bottom configuration)

Fixture designed to accept the Zhaga socket, which is found in the **lower part of the lighting fixture**, electrically connected to the lighting fixture's driver.

Zhaga socket -0085 (double configuration)

Fixture designed to accept the Zhaga socket, which is found on **both the top and lower part of the lighting fixture**, electrically connected to the lighting fixture's driver.



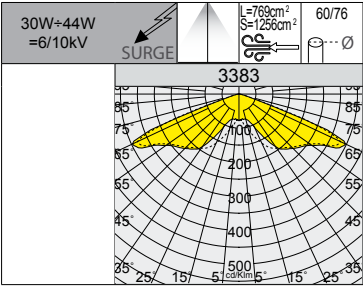


LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
>100.000h (L90B10).



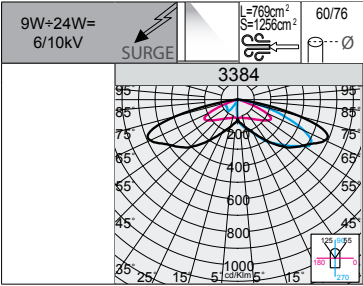
3383 Como 1 SMART - bi-symmetric

CLD ZHAGA				LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI
RAL 7021	5.90	340552-0075	340552-0085	30	4000K - 4530lm - CRI 70
		340552-3975	340552-3985		3000K - 4210lm - CRI 70
		340552-7375	340552-7385		2200K - 3851lm - AMBER
RAL 7021	5.90	340553-0075	340553-0085	44	4000K - 6520lm - CRI 70
		340553-3975	340553-3985		3000K - 6160lm - CRI 70
		340553-7375	340553-7385		2200K - 5542lm - AMBER

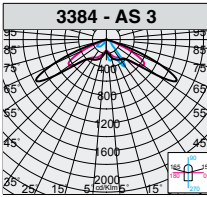
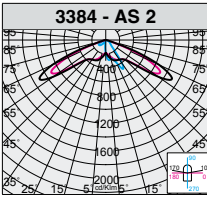
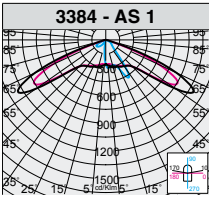
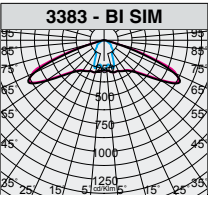


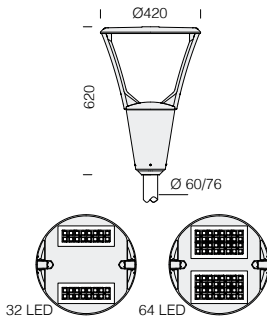
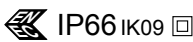
3384 Como 2 SMART - asymmetric large areas

CLD ZHAGA				LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI
RAL 7021	5.90	340560-0075	340560-0085	9	4000K - 1420lm - CRI 70
		340560-3975	340560-3985		3000K - 1340lm - CRI 70
		340560-7375	340560-7385		2200K - 1207lm - AMBER
RAL 7021	5.90	340561-0075	340561-0085	24	4000K - 3460lm - CRI 70
		340561-3975	340561-3985		3000K - 3270lm - CRI 70
		340561-7375	340561-7385		2200K - 2941lm - AMBER

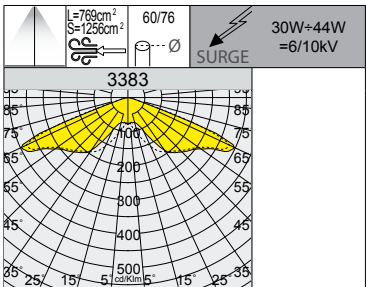


Upon request available Como with other photometric distributions:





LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
>100.000h (L90B10).



3383 Como 1 - bi-symmetric

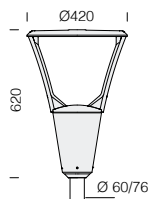
colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
RAL 7021	5.90	340552-0054	340552-40	30	4000K - 4530lm - CRI 70
		340552-3954	340552-3940		3000K - 4210lm - CRI 70
		340552-7354	340552-7340		2200K - 3851lm - AMBER
RAL 7021	5.90	340553-0054	340553-40	44	4000K - 6520lm - CRI 70
		340553-3954	340553-3940		3000K - 6160lm - CRI 70
		340553-7354	340553-7340		2200K - 5542lm - AMBER



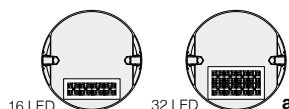
Available versions in colour
GREEN **RAL 6024**
WHITE **RAL 9003**
GREY **RAL 9006**



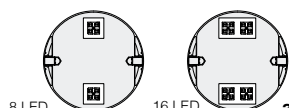
IP66 IK09



art. 3384



art. 3385



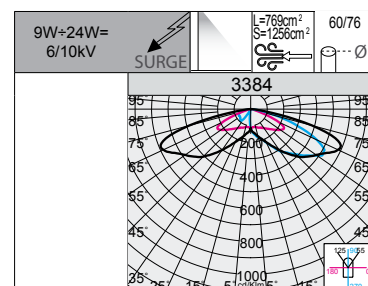
art. 3386

LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
>100.000h (L90B10).



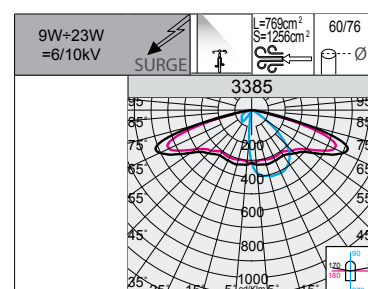
3384 Como 2 - asymmetric large areas

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
RAL 7021	5.90	340560-0054	340560-40	9	4000K - 1420lm - CRI 70
		340560-3954	340560-3940		3000K - 1340lm - CRI 70
		340560-7354	340560-7340		2200K - 1207lm - AMBER
RAL 7021	5.90	340561-0054	340561-40	24	4000K - 3460lm - CRI 70
		340561-3954	340561-3940		3000K - 3270lm - CRI 70
		340561-7354	340561-7340		2200K - 2941lm - AMBER



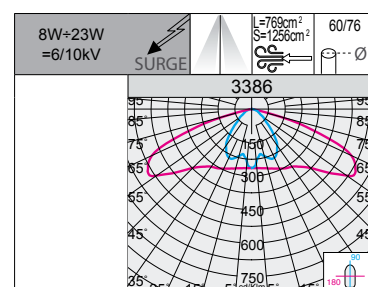
3385 Como 3 - cycleways

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
RAL 7021	5.90	340570-0054	340570-40	9	4000K - 1440lm - CRI 70
		340570-3954	340570-3940		3000K - 1360lm - CRI 70
		340570-7354	340570-7340		2200K - 1224lm - AMBER
RAL 7021	5.90	340572-0054	340572-40	23	4000K - 3530lm - CRI 70
		340572-3954	340572-3940		3000K - 3330lm - CRI 70
		340572-7354	340572-7340		2200K - 3001lm - AMBER



3386 Como 4 - bi-asymmetric

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
RAL 7021	5.90	340580-0054	340580-40	8	4000K - 1490lm - CRI 70
		340580-3954	340580-3940		3000K - 1386lm - CRI 70
		340580-7354	340580-7340		2200K - 1267lm - AMBER
RAL 7021	5.90	340581-0054	340581-40	23	4000K - 4274lm - CRI 70
		340581-3954	340581-3940		3000K - 3975lm - CRI 70
		340581-7354	340581-7340		2200K - 3633lm - AMBER





LUMINAIRE DESIGNED FOR INSTALLATION ON ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT.

The fixture is designed to accept Zhaga socket, projecting public lighting into the future. You can create a 'smart' Plug-and-Play solution featuring maximum interoperability. The Zhaga D4i certification means that a product has a Zhaga Book 18 interface and is compliant with DALI-2 and D4i standards.

Zhaga socket -0054 (standard top configuration)

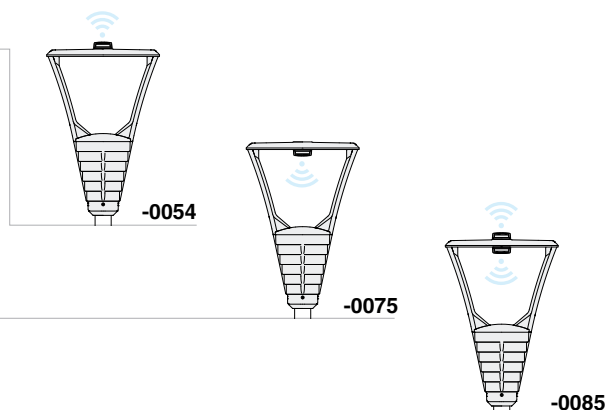
Fixture designed to accept Zhaga socket, which is found on the **top part of the lighting fixture**, electrically connected to the lighting fixture's driver.

Zhaga socket -0075 (bottom configuration)

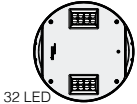
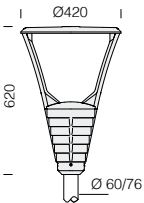
Fixture designed to accept the Zhaga socket, which is found in the **lower part of the lighting fixture**, electrically connected to the lighting fixture's driver.

Zhaga socket -0085 (double configuration)

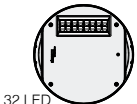
Fixture designed to accept the Zhaga socket, which is found on **both the top and lower part of the lighting fixture**, electrically connected to the lighting fixture's driver.



IP66 IK10



art. 3350



art. 3354

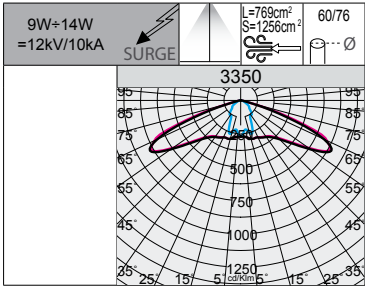
LED: power factor ≥ 0.9 .
Luminous flux maintenance 90% :
>100.000h (L90B10)

Upon request (sub-code -60)	
LED	4000K - CRI 80



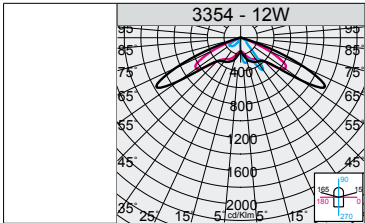
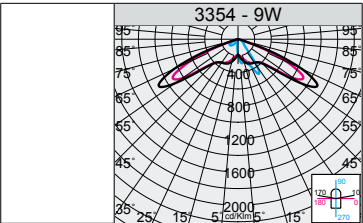
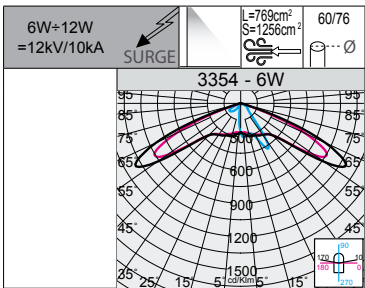
3350 Garda 1 HE SMART - bi-symmetric

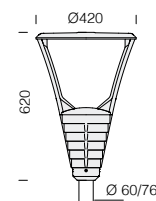
CLD ZHAGA					LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	code	W tot	K - ølm - CRI
RAL 7016	6.00	330512-0054	330512-0075	330512-0085	9	4000K - 1407lm - CRI 70
		330512-3954	330512-3975	330512-3985		3000K - 1337lm - CRI 70
RAL 7016	6.00	330518-0054	330518-0075	330518-0085	10	4000K - 1573lm - CRI 70
		330518-3954	330518-3975	330518-3985		3000K - 1494lm - CRI 70
RAL 7016	6.00	330510-0054	330510-0075	330510-0085	12	4000K - 1930lm - CRI 70
		330510-3954	330510-3975	330510-3985		3000K - 1833lm - CRI 70
RAL 7016	6.00	330517-0054	330517-0075	330517-0085	13	4000K - 2177lm - CRI 70
		330517-3954	330517-3975	330517-3985		3000K - 2068lm - CRI 70
RAL 7016	6.00	330511-0054	330511-0075	330511-0085	14	4000K - 2324lm - CRI 70
		330511-3954	330511-3975	330511-3985		3000K - 2208lm - CRI 70



3354 Garda 7 - asymmetric

CLD ZHAGA					LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	code	W tot	K - ølm - CRI
RAL 7016	6.00	330532-0054	330532-0075	330532-0085	6	4000K - 921lm - CRI 70
		330532-3954	330532-3975	330532-3985		3000K - 875lm - CRI 70
RAL 7016	6.00	330533-0054	330533-0075	330533-0085	9	4000K - 1460lm - CRI 70
		330533-3954	330533-3975	330533-3985		3000K - 1387lm - CRI 70
RAL 7016	6.00	330534-0054	330534-0075	330534-0085	12	4000K - 1964lm - CRI 70
		330534-3954	330534-3975	330534-3985		3000K - 1866lm - CRI 70





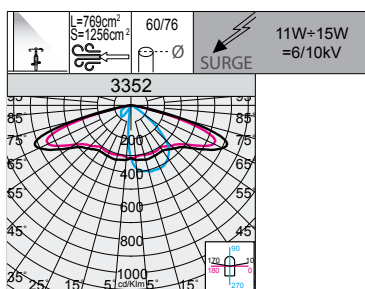
art. 3351



art. 3355

LED: power factor ≥ 0.9 .
Luminous flux maintenance 90% :
>100.000h (L90B10)

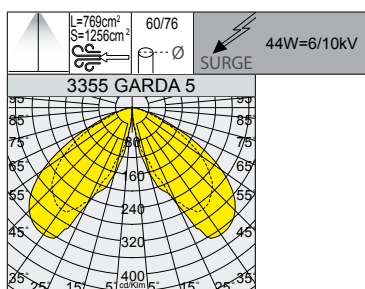
Upon request (sub-code -60)	
LED	4000K - CRI 80



3352 Garda 3 - cycle-pedestrian

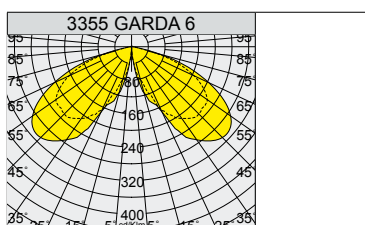
colour	weight	CLD ZHAGA		CLD NEMA		W tot	LUMEN OUTPUT (tq= 25 °C)	
		code		code			K - ølm - CRI	
RAL 7021	6.00	330530-0054		330530-40		11	4000K - 1790lm - CRI 70	
		330530-3954		330530-3940			3000K - 1680lm - CRI 70	
		330530-7354		330530-7340			2200K - 1522lm - AMBER	
RAL 7021	6.00	330531-0054		330531-40		15	4000K - 2280lm - CRI 70	
		330531-3954		330531-3940			3000K - 2160lm - CRI 70	
		330531-7354		330531-7340			2200K - 1938lm - AMBER	

Example	Power supply	n.LED	W tot	K	ølm	K	ølm	K	ølm
upon request	500mA	16	24	4000K	3500lm	3000K	3255lm	2200K	2975lm
	330mA	32	30		4630lm		4306lm		3935lm
	530mA	32	50		7300lm		6789lm		6205lm



3355 Garda 5 - roto-symmetric

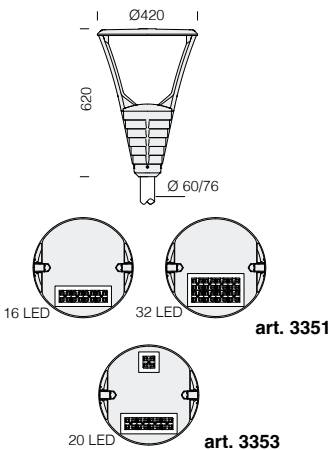
colour	weight	CLD ZHAGA		CLD NEMA		W tot	LUMEN OUTPUT (tq= 25 °C)	
		code		code			K - ølm - CRI	
RAL 7021	6.00	330550-0054		330550-40		44	4000K - 5767lm - CRI 70	
		330550-3954		330550-3940			3000K - 5363lm - CRI 70	
		330550-7354		330550-7340			2200K - 4902lm - AMBER	



3355 Garda 6 - roto-symmetric

colour	weight	CLD ZHAGA		CLD NEMA		W tot	LUMEN OUTPUT (tq= 25 °C)	
		code		code			K - ølm - CRI	
RAL 7021	6.00	330551-0054		330551-40		44	4000K - 5851lm - CRI 70	
		330551-3954		330551-3940			3000K - 5441lm - CRI 70	
		330551-7354		330551-7340			2200K - 4973lm - AMBER	

IP66 IK09



LED: power factor ≥0.9.
Luminous flux maintenance 80%:
>100.000h (L80B10).

Upon request (sub-code -60)	
LED	4000K - CRI 80

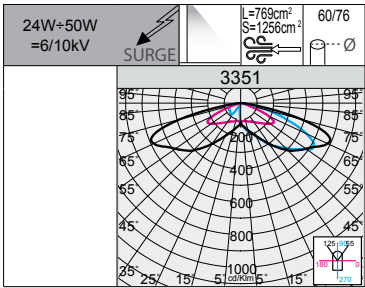


3351 Gard 2 - asymmetric large areas

		CLD ZHAGA	CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI
RAL 7021	6.00	330520-0054	330520-40	24	4000K - 3460lm - CRI 70
		330520-3954	330520-3940		3000K - 3270lm - CRI 70
RAL 7021	6.00	330521-0054	330521-40	50	4000K - 7210lm - CRI 70
		330521-3954	330521-3940		3000K - 6810lm - CRI 70

Example	Power supply	n.LED	W tot	K	ølm
upon request	330mA	16	15	4000K	2320lm
		32	30		4560lm

n.LED	W tot	K	ølm
16	15	3000K	2158lm
32	30		4241lm

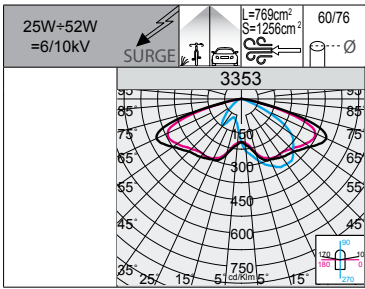


3353 Gard 4 - residential amenities + cycle-pedestrian

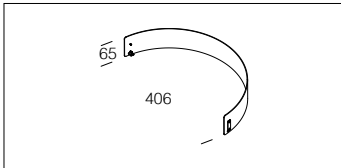
		CLD ZHAGA	CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI
RAL 7021	6.00	330540-0054	330540-40	25	4000K - 3520lm - CRI 70
		330540-3954	330540-3940		3000K - 3230lm - CRI 70
RAL 7021	6.00	330541-0054	330541-40	52	4000K - 6660lm - CRI 70
		330541-3954	330541-3940		3000K - 6300lm - CRI 70

Example	Power supply	n.LED	W tot	K	ølm
upon request	220mA	20	12	4000K	1870lm
	280mA		16		2370lm
	560mA		33		4560lm

n.LED	W tot	K	ølm
20	12	3000K	1739lm
	16		2204lm
	33		4241lm



ACCESSORIES



acc. 109 anti-glare shield

RAL 7021	991312-00
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To prevent glare effects. To be fitted when Gard is installed near a window.



Available versions in
colour
GREEN
WHITE
GREY

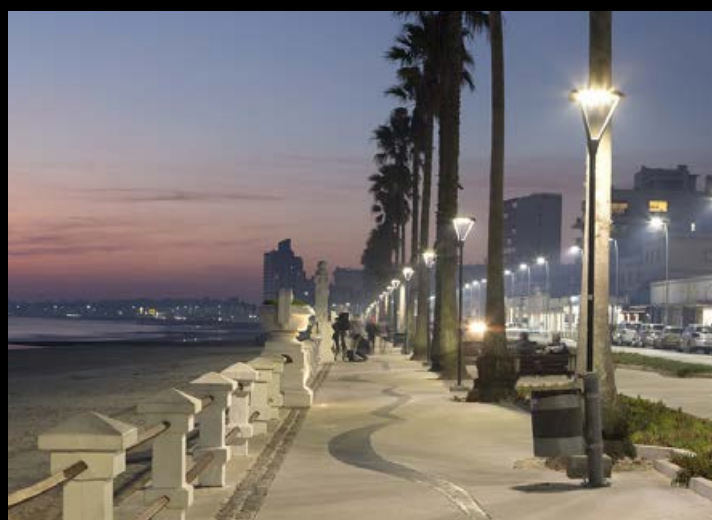


RAL 6024
RAL 9003
RAL 9006

Loto is the new frontier of lighting at the service of modern cities, public places and residents. With Loto, innovation is perfectly harmonised with the most advanced technologies in terms of quality and light emission.

It is a cutting-edge product in terms of quality and shape, with a design that differs from most products currently on the market, enabling to fit into any urban context, both historical and contemporary, as well as in green, pedestrian and vehicular traffic areas.

Its design combines technology and nature, making it resemble the shape of a plant. It's a visual presence capable of conveying the concepts of quality and light aimed at the well-being and excellence of the surrounding urban spaces.





Exemple with
Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS



Housing and frame: pressed in die-cast aluminium and designed with a very small surface exposed to wind. Cooling fins are integrated into the cover.

Optics: made of PMMA with high temperature resistance and UV rays.

Pole connection: suited for poles with a diameter 60 mm.

Diffuser: extra-clear tempered glass, 4 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001).

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS



Standard supply: automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.

- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Loto: 6/10kV.

PHOTOBIOLOGICAL SAFETY



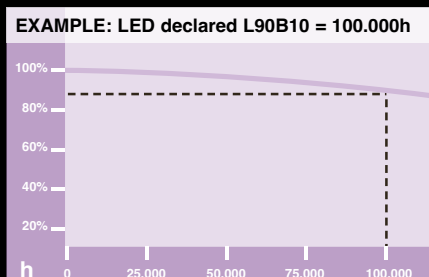
Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LOW FLICKER



Product with a very low flicker; uniform light for greater eye protection.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

luminous flux maintenance 90%: **>100.000h (L90B10)**

2200K (upon request with subcode -73): lamps with warm amber light at a colour temperature of 2200K reduces the risks of an excessive exposure to harmful blue LED light and allows a “softer” impact on inhabited zones, especially in historic centres.

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

THE RANGE OF LOTO STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

2200K
3000K
4000K

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

IK LEVEL OF PROTECTION



Minimum and maximum operating ambient temperature: -30°C ÷ +40°C.

AMBIENT TEMPERATURE



ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

CERTIFICATIONS



PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

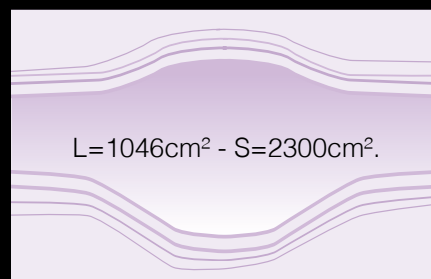
Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

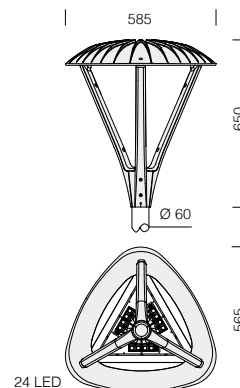
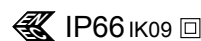
CLD PROG



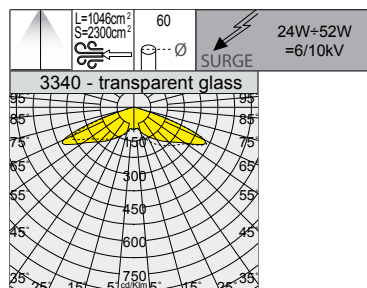
The fixture's design is configured to minimise wind exposure surfaces.

SURFACE EXPOSED TO WIND





LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
>100.000h (L90B10).



3340 Loto 1 - wide beam - transparent

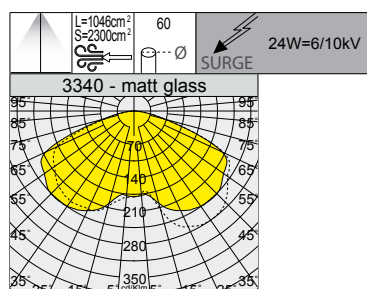
		CLD ZHAGA	CLD NEMA		LUMEN OUTPUT (tq= 25 °C)
colour	weight	code	code	W tot	K - ølm 340mA - CRI
grey	10.40	330210-0054	330210-40	24	4000K - 3730lm - CRI 70
graphite	10.40	330211-0054	330211-40	24	3000K - 3510lm - CRI 70
grey	10.40	330210-3954	330210-3940	52	4000K - 7170lm - CRI 70
graphite	10.40	330211-3954	330211-3940	52	3000K - 6740lm - CRI 70
grey	10.40	330212-0054	330212-40		
graphite	10.40	330213-0054	330213-40		
grey	10.40	330212-3954	330212-3940		
graphite	10.40	330213-3954	330213-3940		

Example	Power supply	n.LED	W tot	K	ølm
upon request	220mA	24	15	4000K	2420lm

n.LED	W tot	K	ølm
24	15	3000K	2270lm

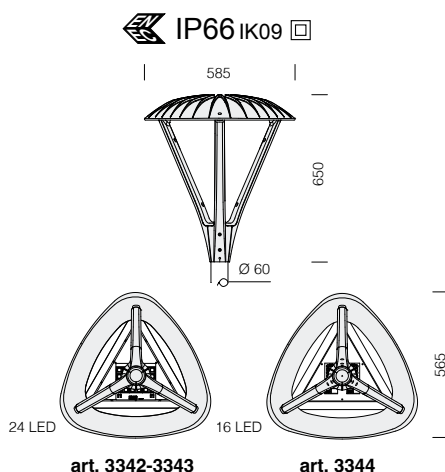
Example	Power supply	n.LED	W tot	K	ølm
upon request	460mA	24	33	4000K	4910lm

n.LED	W tot	K	ølm
24	33	3000K	4620lm



3340 Loto 2 - wide beam - matt

		CLD ZHAGA	CLD NEMA		LUMEN OUTPUT (tq= 25 °C)
colour	weight	code	code	W tot	K - ølm 340mA - CRI
grey	10.40	330214-0054	330214-40	24	4000K - 2900lm - CRI 70
graphite	10.40	330215-0054	330215-40	24	3000K - 2755lm - CRI 70
grey	10.40	330214-3954	330214-3940		
graphite	10.40	330215-3954	330215-3940		



LED: power factor ≥ 0.9 .

Luminous flux maintenance 90%:
 $>100.000h$ (L90B10).



3342 Loto 3 - T2 ciclabile

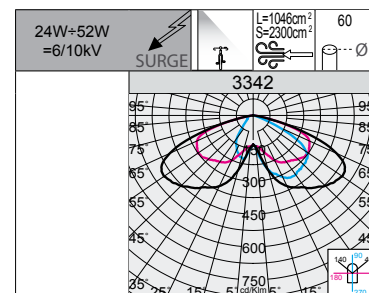
	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI	
grey	10.40	330230-0054	330230-40	24	4000K - 3650lm - CRI 70	
graphite		330231-0054	330231-40			
grey	10.40	330230-3954	330230-3940	24	3000K - 3431lm - CRI 70	
graphite		330231-3954	330231-3940			
grey	10.40	330232-0054	330232-40	52	4000K - 7080lm - CRI 70	
graphite		330233-0054	330233-40			
grey	10.40	330232-3954	330232-3940	52	3000K - 6650lm - CRI 70	
graphite		330233-3954	330233-3940			

Example	Power supply	n.LED	W tot	K	ølm
upon request	220mA	24	15	4000K	2400lm

n.LED	W tot	K	ølm
24	15	3000K	2260lm

Example	Power supply	n.LED	W tot	K	ølm
upon request	460mA	24	33	4000K	4880lm

n.LED	W tot	K	ølm
24	33	3000K	4590lm



3343 Loto 4 - T3 asimmetrico

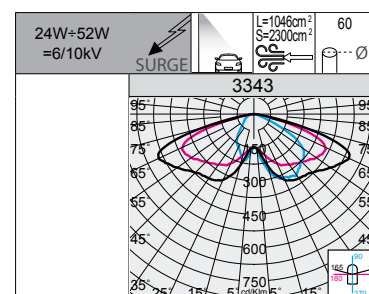
	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI	
grey	10.40	330240-0054	330240-40	24	4000K - 3650lm - CRI 70	
graphite		330241-0054	330241-40			
grey	10.40	330240-3954	330240-3940	24	3000K - 3431lm - CRI 70	
graphite		330241-3954	330241-3940			
grey	10.40	330242-0054	330242-40	52	4000K - 7080lm - CRI 70	
graphite		330243-0054	330243-40			
grey	10.40	330242-3954	330242-3940	52	3000K - 6650lm - CRI 70	
graphite		330243-3954	330243-3940			

Example	Power supply	n.LED	W tot	K	ølm
upon request	220mA	24	15	4000K	2400lm

n.LED	W tot	K	ølm
24	15	3000K	2260lm

Example	Power supply	n.LED	W tot	K	ølm
upon request	460mA	24	33	4000K	4880lm

n.LED	W tot	K	ølm
24	33	3000K	4590lm

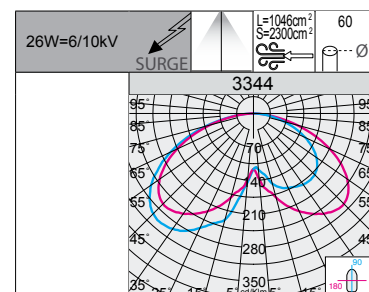


3344 Loto 5 - diffondente

	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm 530mA - CRI	
grey	10.40	330250-0054	330250-40	26	4000K - 2930lm - CRI 70	
graphite		330251-0054	330251-40			
grey	10.40	330250-3954	330250-3940	26	3000K - 2785lm - CRI 70	
graphite		330251-3954	330251-3940			

Example	Power supply	n.LED	W tot	K	ølm
upon request	700mA	16	35	4000K	3868lm

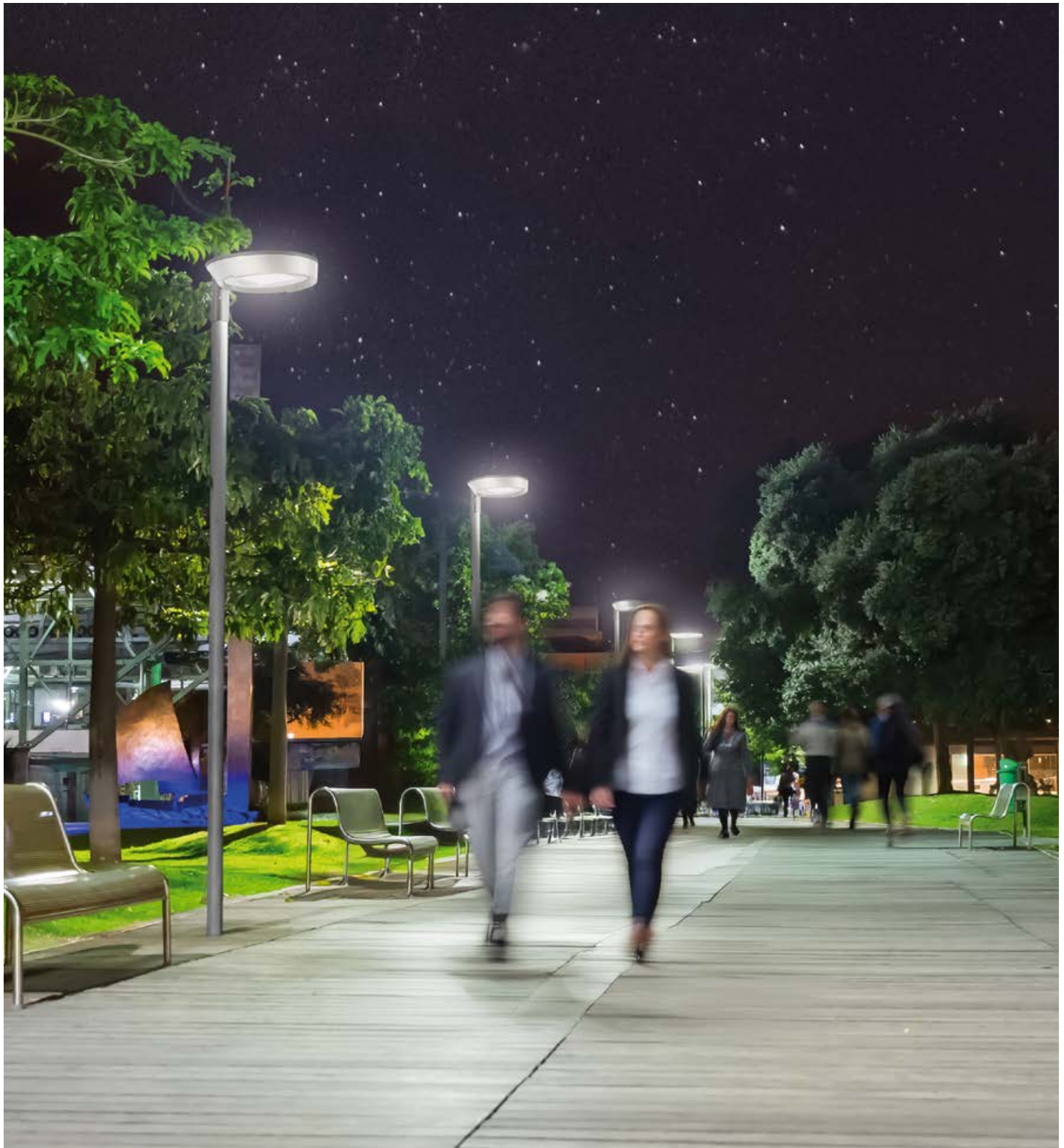
n.LED	W tot	K	ølm
16	35	3000K	3675lm



Torpedo 2.0 is a next-generation urban luminaire, an evolution of a Disano top seller, now upgraded with state-of-the-art LED technology. Thanks to its high energy efficiency and extended lifespan, Torpedo 2.0 is perfectly suited for any urban environment. Its design has been studied to maximise light efficiency while seamlessly blending into the surrounding urban landscape.

In summary, Torpedo 2.0 offers an advanced urban lighting solution that combines cutting-edge technology, efficient design, and exceptional adaptability. It is the ideal choice for those seeking durable, energy-efficient lighting that can meet the demands of diverse urban environments.





Exemple with
Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

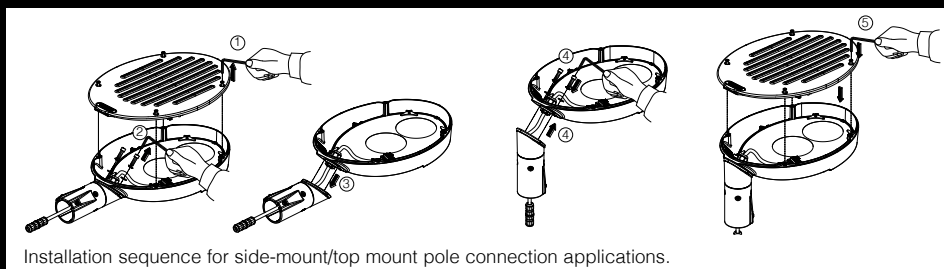
Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS

Housing and cover: in die-cast aluminium and designed with a very small surface exposed to wind. Cooling fins are integrated into the cover.

Optics: made of PMMA with high temperature resistance and UV rays; art. 1246 in aluminium coated with very high purity (99.99%) silver using physical vapour deposition (PVD); LED COB version in pressed 99.95 aluminium with PVD treatment, anodically oxidized and polished.

Pole connection: in die-cast aluminium; suited for poles with a diameter Ø60mm.



Diffuser: extra-clear tempered glass, 4 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001).

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.



OTHER CHARACTERISTICS

Standard supply: automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.
- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.



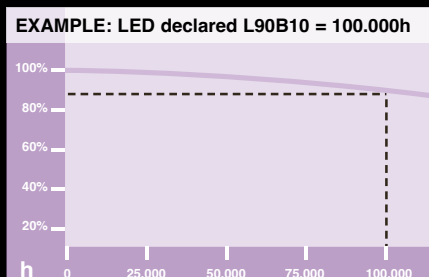
Torperdo 2.0: 6/10kV.

PHOTOBIOLOGICAL SAFETY



Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

luminous flux maintenance 90%: **100.000h (L90B10)**

luminous flux maintenance 80%: **100.000h (L80B10)**

COB: power factor: $\geq 0,92$.

luminous flux maintenance 80%: **90.000h (L80B10)**

luminous flux maintenance 70%: **100.000h (L70B50)**

Product with a very low flicker; uniform light for greater eye protection.

LOW FLICKER



2200K (upon request with subcode -73): lamps with warm amber light at a colour temperature of 2200K reduces the risks of an excessive exposure to harmful blue LED light and allows a “softer” impact on inhabited zones, especially in historic centres.

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

THE RANGE OF TORPEDO 2.0 STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

2200K
3000K
4000K

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

IK LEVEL OF PROTECTION



Minimum and maximum operating ambient temperature: -30°C ÷ +40°C.

AMBIENT TEMPERATURE



ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

CERTIFICATIONS



Registered
Design
DM/100271

The International Bureau of the World Intellectual Property Organization (WIPO) hereby certifies that the particulars given below correspond to the recording made in the International Register of Industrial Designs.

PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

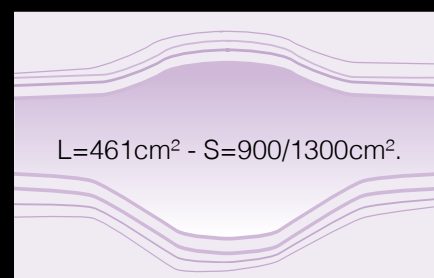
Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

CLD PROG



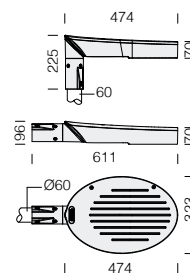
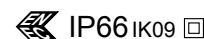
The fixture's design is configured to minimise wind exposure surfaces.

SURFACE EXPOSED TO WIND

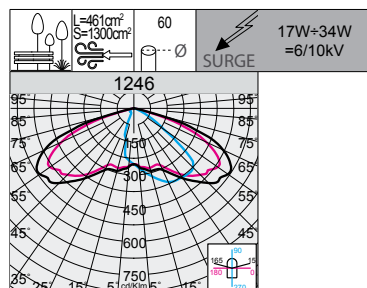




Registered Design
DM/100271



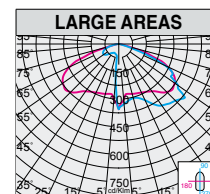
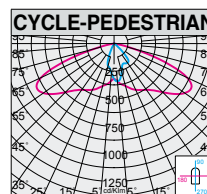
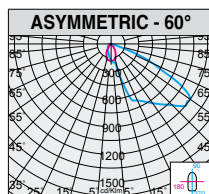
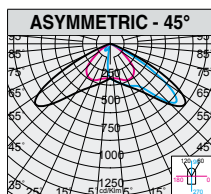
LED: power factor ≥ 0.9 .
Luminous flux maintenance 80%:
100.000h (L80B10).



1246 Torpedo 2.0 - residential amenities

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
grey + RAL 7021	4.50	427867-0054	427867-40	17	4000K - 2793lm - CRI>70
		427867-3954	427867-3940		3000K - 2653lm - CRI>70
		427868-0054	427868-40	34	4000K - 5586lm - CRI>70
		427868-3954	427868-3940		3000K - 5307lm - CRI>70

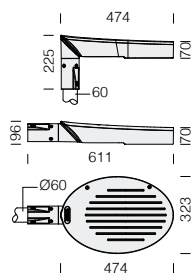
Upon request available art. 1246 Torpedo 2.0 with other photometric distributions:



Upon request: versions available in different colours and surface finishes to coordinate with any architectural design.



IP66 IK09



LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
100.000h (L90B10).



Registered Design
DM/100271

RG0
Etr

+40
C
-30

U.V.

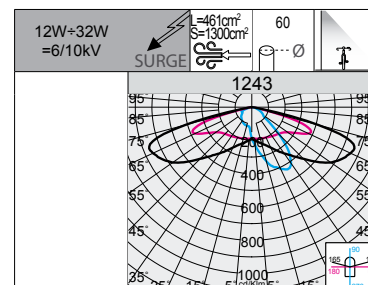
LOW
FLICKER

3000K

4000K

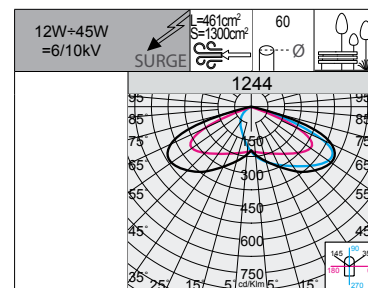
1243 Torpedo 2.0 - cycleways

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
grey + RAL 7021	4.50	427840-0054	427840-40	12	4000K - 1903lm - CRI>70
		427840-3954	427840-3940		3000K - 1808lm - CRI>70
		427841-0054	427841-40	22	4000K - 3438lm - CRI>70
		427841-3954	427841-3940		3000K - 3266lm - CRI>70
		427842-0054	427842-40	32	4000K - 5077lm - CRI>70
		427842-3954	427842-3940		3000K - 4823lm - CRI>70



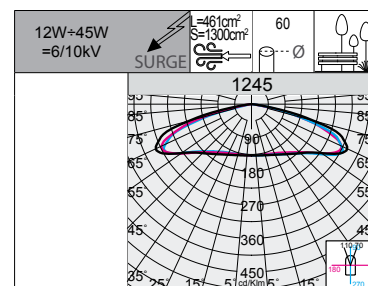
1244 Torpedo 2.0 - asymmetric

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
grey + RAL 7021	4.50	427850-0054	427850-40	12	4000K - 1987lm - CRI>70
		427850-3954	427850-3940		3000K - 1887lm - CRI>70
		427851-0054	427851-40	22	4000K - 3811lm - CRI>70
		427851-3954	427851-3940		3000K - 3620lm - CRI>70
		427852-0054	427852-40	32	4000K - 5530lm - CRI>70
		427852-3954	427852-3940		3000K - 5253lm - CRI>70
grey + RAL 7021	4.50	427853-0054	427853-40	45	4000K - 7666lm - CRI>70
		427853-3954	427853-3940		3000K - 7283lm - CRI>70

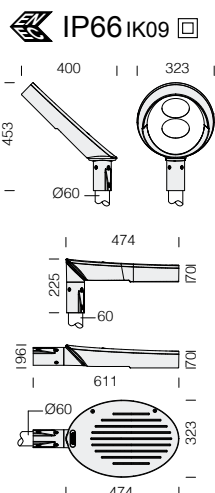


1245 Torpedo 2.0 - wide beam

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
grey + RAL 7021	4.50	427870-0054	427870-40	12	4000K - 1874lm - CRI>70
		427870-3954	427870-3940		3000K - 1780lm - CRI>70
		427871-0054	427871-40	22	4000K - 3420lm - CRI>70
		427871-3954	427871-3940		3000K - 3250lm - CRI>70
		427872-0054	427872-40	32	4000K - 4985lm - CRI>70
		427872-3954	427872-3940		3000K - 4736lm - CRI>70
grey + RAL 7021	4.50	427873-0054	427873-40	45	4000K - 6505lm - CRI>70
		427873-3954	427873-3940		3000K - 6180lm - CRI>70



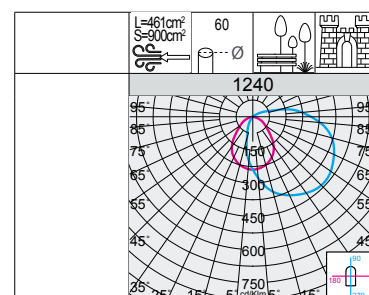




COB: power factor $\geq 0,92$.
Luminous flux maintenance 80%:
90.000h (L80B10).
Luminous flux maintenance 70%:
100.000h (L70B50).

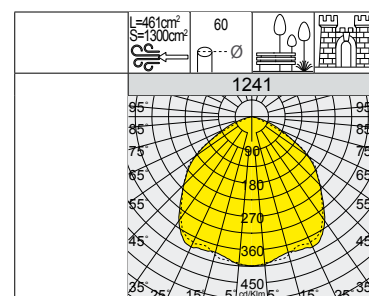
1240 Torpedo 2.0 COB - 45° top-mount with matt glass - wide beam

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
grey + RAL 7021	4.50	427810-0054	427810-40	25	4000K - 3182lm - CRI>80
		427810-3954	427810-3940		3000K - 3022lm - CRI>80
		427811-0054	427811-40	51	4000K - 6364lm - CRI>80
		427811-3954	427811-3940		3000K - 6046lm - CRI>80



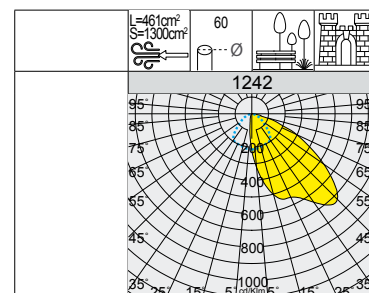
1241 Torpedo 2.0 COB - wide beam

colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
grey + RAL 7021	4.50	427820-0054	427820-40	25	4000K - 3990lm - CRI>80
		427820-3954	427820-3940		3000K - 3790lm - CRI>80
		427821-0054	427821-40	51	4000K - 7979lm - CRI>80
		427821-3954	427821-3940		3000K - 7580lm - CRI>80



1242 Torpedo 2.0 COB - asymmetric

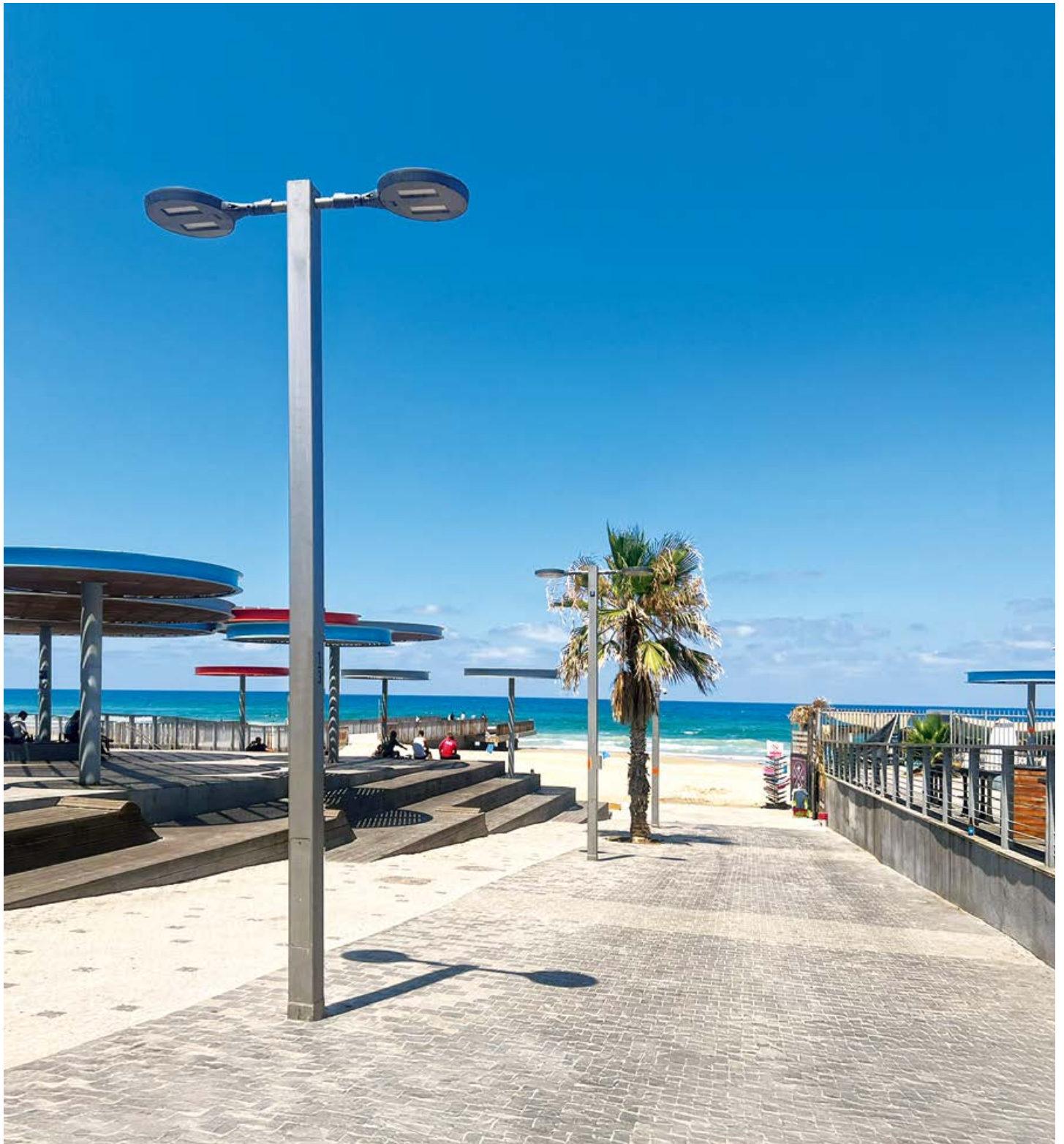
colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ølm - CRI
grey + RAL 7021	4.50	427830-0054	427830-40	25	4000K - 3723lm - CRI>80
		427830-3954	427830-3940		3000K - 3537lm - CRI>80
		427831-0054	427831-40	51	4000K - 7445lm - CRI>80
		427831-3954	427831-3940		3000K - 7073lm - CRI>80



The Visconti 2.0 range features a refreshed design that combines clean, essential lines with a contemporary aesthetic. Equipped with the latest-generation drivers, it optimizes energy consumption, adapts the operation of each lighting point to actual application needs, and enables intelligent lighting system management thanks to its compatibility with Nema or Zhaga sockets.

Available with optics specifically designed for different urban environments - including roads, pedestrian pathways, and green areas - Visconti 2.0 is equipped with LED light sources in 2200K, 3000K and 4000K color temperatures, ensuring high lighting quality and excellent energy efficiency. The range is also available in an Amber version, featuring a color temperature specifically developed to provide harmonious illumination that respects natural light conditions during sunset hours.





Exemple with
Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS



Housing: pressed in die-cast aluminium with fastening clamp for application of the arms.

Pole connection: version with pole connector incorporated directly into the fixture's housing to enable whip-type installation on poles with diameters Ø60mm.

Diffuser: art. 3336 polycarbonate 2,5 mm thick and art. 3337-3338 tempered glass, 4 mm thick, thermal shock and impact resistant (UNI-EN 12150-1 : 2001).

Optics: made of PMMA with high temperature resistance and UV rays.

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS



Standard supply: automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.
- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Visconti 2.0: 6/10kV.

PHOTOBIOLOGICAL SAFETY



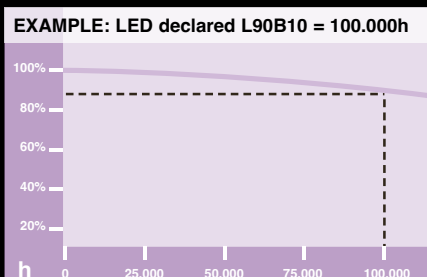
Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LOW FLICKER



Product with a very low flicker; uniform light for greater eye protection.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

luminous flux maintenance 90%: **100.000h (L90B10)**

2200K (subcode -73): lamps with warm amber light at a colour temperature of 2200K reduces the risks of an excessive exposure to harmful blue LED light and allows a “softer” impact on inhabited zones, especially in historic centres.

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

Minimum and maximum operating ambient temperature: $-30^{\circ}\text{C} \div +50^{\circ}\text{C}$.

ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

The International Bureau of the World Intellectual Property Organization (WIPO) hereby certifies that the particulars given below correspond to the recording made in the International Register of Industrial Designs.

PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

The fixture's design is configured to minimise wind exposure surfaces.

THE RANGE OF VISCONTI 2.0 STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

2200K
3000K
4000K

IK LEVEL OF PROTECTION



AMBIENT TEMPERATURE



CERTIFICATIONS

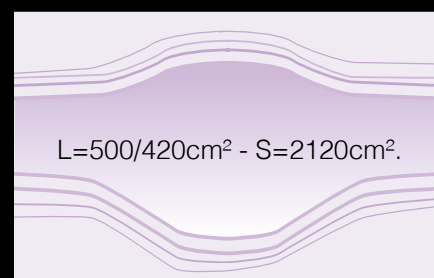


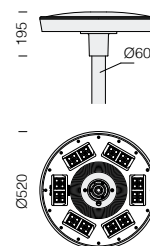
Registered
Design
DM/100271

CLD PROG

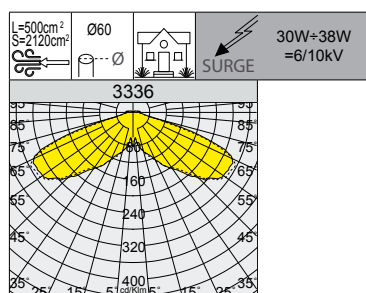


SURFACE EXPOSED TO WIND





LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
100.000h (L90B10).



3336 Visconti 2.0 - rotosymmetric

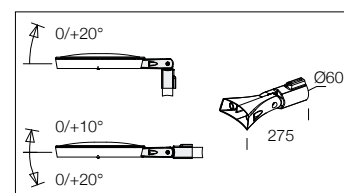
colour	weight	CLD ZHAGA	CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
		code	code		K - ø1m - CRI 70
graphite	7.20	328200-0054	328200-40	30	4000K - 4770lm - CRI 70
		328200-3954	328200-3940		3000K - 4510lm - CRI 70
graphite	7.20	328201-0054	328201-40	38	4000K - 6030lm - CRI 70
		328201-3954	328201-3940		3000K - 5710lm - CRI 70



Upon request: versions available in different colours and surface finishes to coordinate with any architectural design.



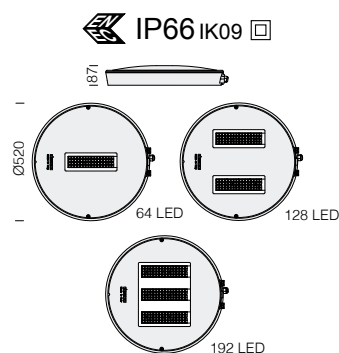
ACCESSORIES



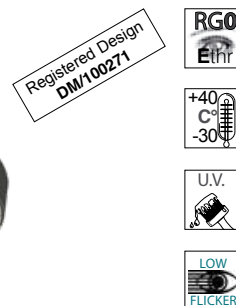
acc. 286 adjustable arm

graphite	991445-00
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In die-cast aluminium. For for Ø60mm side-mount applications.



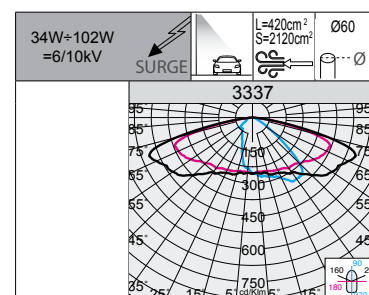
LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
100.000h (L90B10).



3337 Visconti 2.0 - ME

colour	weight	CLD ZHAGA code	CLD NEMA code	W tot	LUMEN OUTPUT (tq= 25 °C)
graphite	8.30	328210-0054	328210-40	34	4000K - 5354lm - CRI 75
		328210-3954	328210-3940		3000K - 5086lm - CRI 75
		328210-7354	328210-7340		2200K - 4712lm - AMBER
graphite	8.30	328211-0054	328211-40	68	4000K - 10422lm - CRI 75
		328211-3954	328211-3940		3000K - 9900lm - CRI 75
		328211-7250	328211-7340		2200K - 9171lm - AMBER
graphite	8.30	328212-0054	328212-40	102	4000K - 16062lm - CRI 75
		328212-3954	328212-3940		3000K - 15259lm - CRI 75
		328212-7350	328212-7340		2200K - 14135lm - AMBER

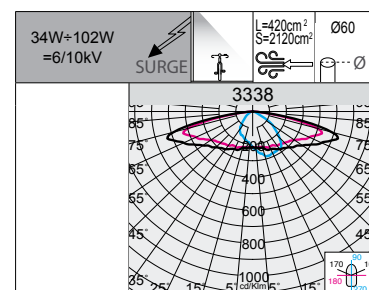
Example	Power supply	n.LED	W tot	K	ølm	K	ølm	K	ølm
upon request	350mA	64	16	4000K	2838lm	3000K	2700lm	2200K	2490lm
		128	32		5526lm		5250lm		4863lm
		192	48		8514lm		8088lm		7492lm
upon request	530mA	64	25	4000K	4177lm	3000K	3970lm	2200K	3675lm
		128	50		8130lm		7723lm		7154lm
		192	75		12531lm		11905lm		11027lm



3338 Visconti 2.0 - cycleways

colour	weight	CLD ZHAGA code	CLD NEMA code	W tot	LUMEN OUTPUT (tq= 25 °C)
graphite	8.30	328240-0054	328240-40	34	4000K - 5220lm - CRI 75
		328240-3954	328240-3940		3000K - 4960lm - CRI 75
		328240-7354	328240-7340		2200K - 4594lm - AMBER
graphite	8.30	328241-0054	328241-40	68	4000K - 10123lm - CRI 75
		328241-3954	328241-3940		3000K - 9617lm - CRI 75
		328241-7354	328241-7340		2200K - 8908lm - AMBER
graphite	8.30	328242-0054	328242-40	102	4000K - 15560lm - CRI 75
		328242-3954	328242-3940		3000K - 14877lm - CRI 75
		328242-7354	328242-7340		2200K - 13693lm - AMBER

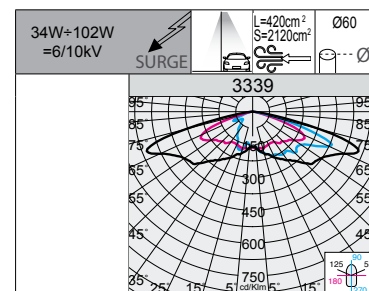
Example	Power supply	n.LED	W tot	K	ølm	K	ølm	K	ølm
upon request	350mA	64	16	4000K	2768lm	3000K	2630lm	2200K	2435lm
		128	32		5367lm		5100lm		4723lm
		192	48		8304lm		7889lm		7307lm
upon request	530mA	64	25	4000K	4072lm	3000K	3869lm	2200K	3583lm
		128	50		7897lm		7502lm		6849lm
		192	75		12216lm		11607lm		10750lm



3339 Visconti 2.0 - large areas

colour	weight	CLD ZHAGA code	CLD NEMA code	W tot	LUMEN OUTPUT (tq= 25 °C)
graphite	8.30	328250-0054	328250-40	34	4000K - 5162lm - CRI 75
		328250-3954	328250-3940		3000K - 4905lm - CRI 75
		328250-7354	328250-7340		2200K - 4542lm - AMBER
graphite	8.30	328251-0054	328251-40	68	4000K - 10220lm - CRI 75
		328251-3954	328251-3940		3000K - 9709lm - CRI 75
		328251-7354	328251-7340		2200K - 8992lm - AMBER
graphite	8.30	328252-0054	328252-40	102	4000K - 15486lm - CRI 75
		328252-3954	328252-3940		3000K - 14715lm - CRI 75
		328252-7354	328252-7340		2200K - 13628lm - AMBER

Example	Power supply	n.LED	W tot	K	ølm	K	ølm	K	ølm
upon request	350mA	64	16	4000K	2737lm	3000K	2600lm	2200K	2409lm
		128	32		5418lm		5150lm		4767lm
		192	48		8211lm		7800lm		7225lm
upon request	530mA	64	25	4000K	4030lm	3000K	3828lm	2200K	3546lm
		128	50		7212lm		6852lm		6434lm
		192	75		12090lm		11484lm		10639lm



Note: when ordering, make sure you select the **AMBER LED** type best suited for your lighting design and installation needs.



Examples of configurations with the Visconti lamp with central connection.

acc. 301 Oliva arm
426973-00

acc. 304 threaded connection
426978-00



acc. 302 wall mounting
426975-00

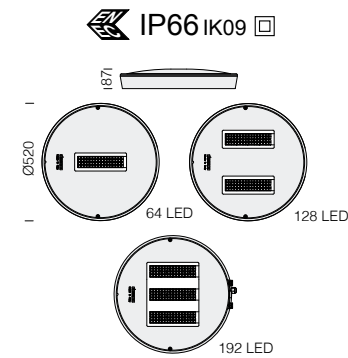
acc. 300 Oliva connector
426971-00

acc. 304 threaded connection
426978-00



acc. 301 Oliva arm
426973-00

Ø120
acc. 1508/1509



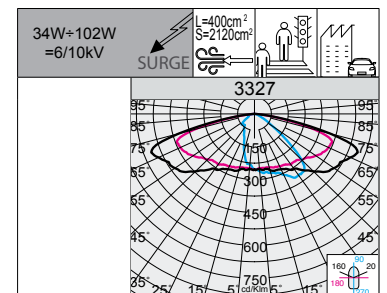
LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
100.000h (L90B10).



3327 Visconti 2.0 - ME

colour	weight	CLD ZHAGA code	CLD NEMA code	W tot	LUMEN OUTPUT (tq= 25 °C)
graphite	8.30	328270-0054	328270-40	34	4000K - 5354lm - CRI 75
		328270-3954	328270-3940		3000K - 5086lm - CRI 75
		328270-7354	328270-7340		2200K - 4712lm - AMBER
graphite	8.30	328271-0054	328271-40	68	4000K - 10422lm - CRI 75
		328271-3954	328271-3940		3000K - 9900lm - CRI 75
		328271-7250	328271-7340		2200K - 9171lm - AMBER
graphite	8.30	328272-0054	328272-40	102	4000K - 16062lm - CRI 75
		328272-3954	328272-3940		3000K - 15259lm - CRI 75
		328272-7350	328272-7340		2200K - 14135lm - AMBER

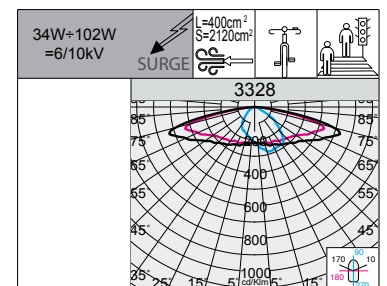
Example	Power supply	n.LED	W tot	K	ølm	K	ølm	K	ølm
upon request	350mA	64	16	4000K	2838lm	3000K	2700lm	2200K	2490lm
		128	32		5526lm		5250lm		4863lm
		192	48		8514lm		8088lm		7492lm
upon request	530mA	64	25	4000K	4177lm	3000K	3970lm	2200K	3675lm
		128	50		8130lm		7723lm		7154lm
		192	75		12531lm		11905lm		11027lm



3328 Visconti 2.0 - cycleways

colour	weight	CLD ZHAGA code	CLD NEMA code	W tot	LUMEN OUTPUT (tq= 25 °C)
graphite	8.30	328280-0054	328280-40	34	4000K - 5220lm - CRI 75
		328280-3954	328280-3940		3000K - 4960lm - CRI 75
		328280-7354	328280-7340		2200K - 4594lm - AMBER
graphite	8.30	328281-0054	328281-40	68	4000K - 10123lm - CRI 75
		328281-3954	328281-3940		3000K - 9617lm - CRI 75
		328281-7354	328281-7340		2200K - 8908lm - AMBER
graphite	8.30	328282-0054	328282-40	102	4000K - 15560lm - CRI 75
		328282-3954	328282-3940		3000K - 14877lm - CRI 75
		328282-7354	328282-7340		2200K - 13693lm - AMBER

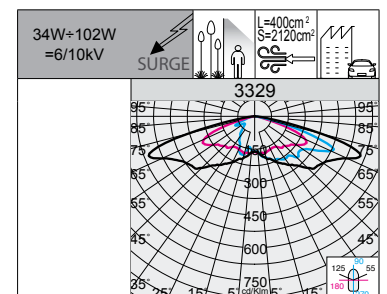
Example	Power supply	n.LED	W tot	K	ølm	K	ølm	K	ølm
upon request	350mA	64	16	4000K	2768lm	3000K	2630lm	2200K	2435lm
		128	32		5367lm		5100lm		4723lm
		192	48		8304lm		7889lm		7307lm
upon request	530mA	64	25	4000K	4072lm	3000K	3869lm	2200K	3583lm
		128	50		7897lm		7502lm		6849lm
		192	75		12216lm		11607lm		10750lm



3329 Visconti 2.0 - large areas

colour	weight	CLD ZHAGA code	CLD NEMA code	W tot	LUMEN OUTPUT (tq= 25 °C)
graphite	8.30	328290-0054	328290-40	34	4000K - 5162lm - CRI 75
		328290-3954	328290-3940		3000K - 4905lm - CRI 75
		328290-7354	328290-7340		2200K - 4542lm - AMBER
graphite	8.30	328291-0054	328291-40	68	4000K - 10220lm - CRI 75
		328291-3954	328291-3940		3000K - 9709lm - CRI 75
		328291-7354	328291-7340		2200K - 8992lm - AMBER
graphite	8.30	328292-0054	328292-40	102	4000K - 15486lm - CRI 75
		328292-3954	328292-3940		3000K - 14715lm - CRI 75
		328292-7354	328292-7340		2200K - 13628lm - AMBER

Example	Power supply	n.LED	W tot	K	ølm	K	ølm	K	ølm
upon request	350mA	64	16	4000K	2737lm	3000K	2600lm	2200K	2409lm
		128	32		5418lm		5150lm		4767lm
		192	48		8211lm		7800lm		7225lm
upon request	530mA	64	25	4000K	4030lm	3000K	3828lm	2200K	3546lm
		128	50		7212lm		6852lm		6434lm
		192	75		12090lm		11484lm		10639lm



Note: when ordering, make sure you select the **AMBER LED** type best suited for your lighting design and installation needs.

The Volo range, one of Disano's most popular products for urban amenities combines the performance of the latest LED technology with the characteristics of solidity and reliability, which have always distinguished this product. The basic design, which fully meets all technical needs, starting with the containment of lighting pollution, does not exclude the possibility to create original and innovative projects. This is why, Volo LED is also available with surface colours (light blue and pearl), capable of giving character and prestige to the lighting system.

It has a definitely stimulating design, but above all, it ensures high quality lighting. Latest generation high-efficiency LED sources in fact create a pleasant evening environment, conveying a sense of safety and great visual comfort. The optics, which have always been one of greatest strengths of all Disano lighting products are of different types in order to best use Volo LED in different urban routes (vehicle traffic, cycle lanes, pedestrian areas) as well as in residential zones.





Exemple with
Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS



Housing and frame: pressed in die-cast aluminium and designed with a very small surface exposed to wind. Cooling fins are integrated into the cover.

Pole connection: pressed in die-cast aluminium. Suited for poles with a diameter 60 mm.

Optics: made of PMMA with high temperature resistance and UV rays.

Diffuser: extra-clear tempered glass, 4 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001).

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS



Standard supply: automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.
- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Volo: 6/10kV.

PHOTOBIOLOGICAL SAFETY



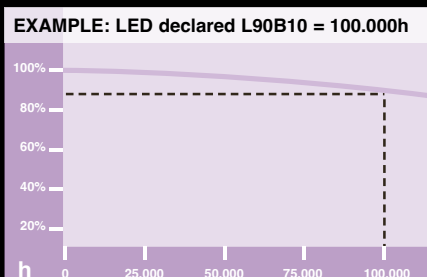
Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LOW FLICKER



Product with a very low flicker; uniform light for greater eye protection.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

luminous flux maintenance 90%: **>100.000h (L90B10)**

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

Upon request LED 4000K - CRI 80 versions with **sub-code -60**.

THE RANGE OF VOLO STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

3000K
4000K

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

IK LEVEL OF PROTECTION



Minimum and maximum operating ambient temperature: $-30^{\circ}\text{C} \div +40^{\circ}\text{C}$.

AMBIENT TEMPERATURE



ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

CERTIFICATIONS



PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

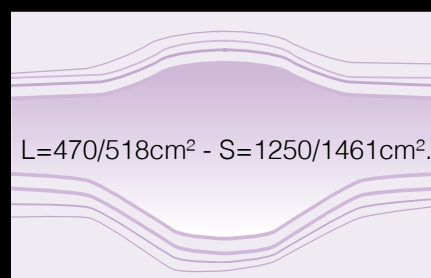
Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

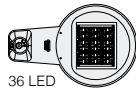
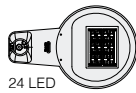
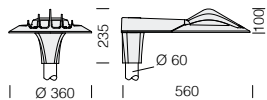
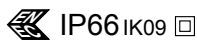
CLD PROG



The fixture's design is configured to minimise wind exposure surfaces.

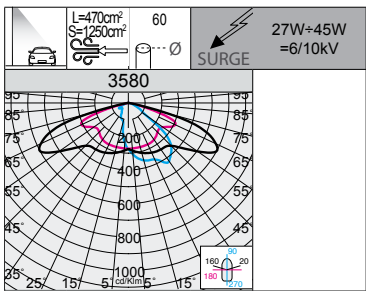
SURFACE EXPOSED TO WIND





LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
>100.000h (L90B10).

Upon request (sub-code -60)	
LED	4000K - CRI 80



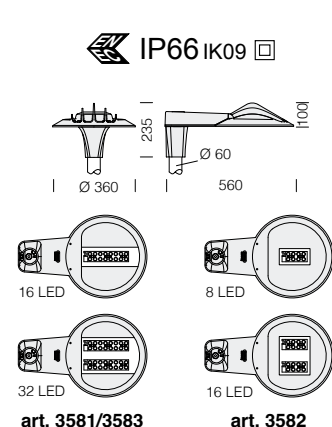
3580 Volo - residential amenities - HIGH PERFORMANCE

		CLD ZHAGA		CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)
colour	weight	code		code		K - ølm - CRI
graphite	5.50	424600-216854		424600-216840	27	4000K - 4563lm - CRI 70
		424600-396854		424600-396840		3000K - 4334lm - CRI 70
graphite	5.50	424602-216854		424602-216840	45	4000K - 7782lm - CRI 70
		424602-396854		424602-396840		3000K - 7393lm - CRI 70



- Available in:
- two-colour version (RAL 7021 - graphite)
 - pearl colour
 - blue colour





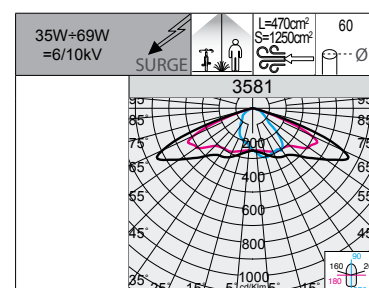
LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
>100.000h (L90B10).

Upon request (sub-code -60)	
LED	4000K - CRI 80



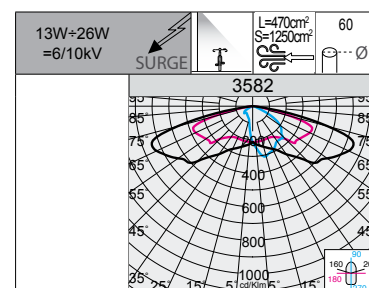
3581 Volo - cycleways + residential amenities

	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)
colour	weight	code	code	W tot	K - ølm - CRI
pearl	5.50	424610-0054	424610-40	35	4000K - 4631lm - CRI 70
graphite	5.50	424610-216854	424610-216840	35	4000K - 4631lm - CRI 70
		424610-396854	424610-396840		3000K - 4400lm - CRI 70
blue	5.50	424611-0054	424611-40	35	4000K - 4631lm - CRI 70
		424611-3954	424611-3940		3000K - 4400lm - CRI 70
graphite	5.50	424612-216854	424612-216840	69	4000K - 9418lm - CRI 70
		424612-396854	424612-396840		3000K - 8947lm - CRI 70
blue	5.50	424613-0054	424613-40	69	4000K - 9418lm - CRI 70
		424613-3954	424613-3940		3000K - 8947lm - CRI 70



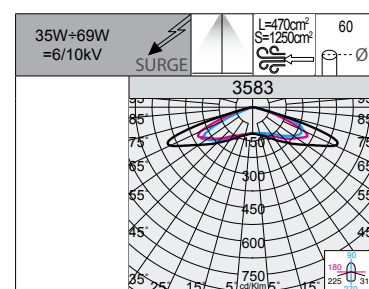
3582 Volo - cycleways

	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)
colour	weight	code	code	W tot	K - ølm - CRI
graphite	5.50	424620-216854	424620-216840	13	4000K - 1939lm - CRI 70
		424620-396854	424620-396840		3000K - 1842lm - CRI 70
blue	5.50	424621-0054	424621-40	13	4000K - 1939lm - CRI 70
graphite	5.50	424622-216854	424622-216840	26	4000K - 3768lm - CRI 70
		424622-396854	424622-396840		3000K - 3580lm - CRI 70
blue	5.50	424623-0054	424623-40	26	4000K - 3768lm - CRI 70

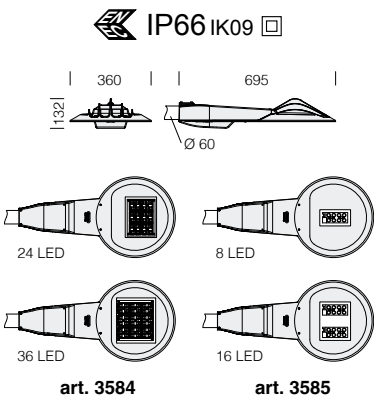


3583 Volo - symmetric

	CLD ZHAGA		CLD NEMA		LUMEN OUTPUT (tq= 25 °C)
colour	weight	code	code	W tot	K - ølm - CRI
pearl	5.50	424630-3954	424630-3940	35	3000K - 4250lm - CRI 70
graphite	5.50	424630-216854	424630-216840	35	4000K - 4474lm - CRI 70
		424630-396854	424630-396840		3000K - 4250lm - CRI 70
blue	5.50	424631-0054	424631-40	35	4000K - 4474lm - CRI 70
pearl	5.50	424632-0054	424632-40	69	4000K - 9150lm - CRI 70
graphite	5.50	424632-216854	424632-216840	69	4000K - 9150lm - CRI 70
		424632-396854	424632-396840		3000K - 8693lm - CRI 70
blue	5.50	424633-0054	424633-40	69	4000K - 9150lm - CRI 70





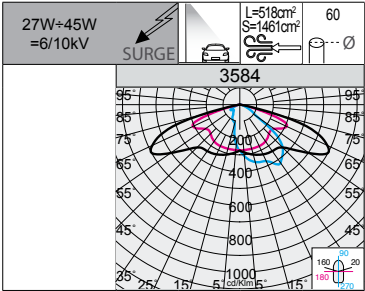


LED: power factor ≥ 0.9 .
Luminous flux maintenance 90%:
>100.000h (L90B10).

Upon request (sub-code -60)	
LED	4000K - CRI 80

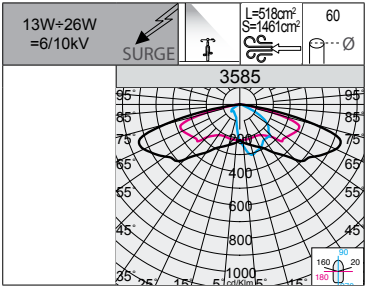
3584 Volo - stradale - HIGH PERFORMANCE

		CLD ZHAGA	CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI
graphite	5.50	424640-0054	424640-40	27	4000K - 4563lm - CRI 70
		424640-3954	424640-3940		3000K - 4335lm - CRI 70
graphite	5.50	424641-0054	424641-40	45	4000K - 7782lm - CRI 70
		424641-3954	424641-3940		3000K - 7393lm - CRI 70



3585 Volo - ciclabile

		CLD ZHAGA	CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ølm - CRI
graphite	5.50	424650-0054	424650-40	13	4000K - 1939lm - CRI 70
		424650-3954	424650-3940		3000K - 1842lm - CRI 70
graphite	5.50	424651-0054	424651-40	26	4000K - 3768lm - CRI 70
		424651-3954	424651-3940		3000K - 3580lm - CRI 70



In the history of design, there are classic shapes that are hard to give up. The typical lamp posts with the lantern is the familiar image of our cities, imprinted in our memories, and part of our everyday life. The opportunity to renew urban lighting with new technologies, to have a better light quality while saving energy, can go hand in hand with the timeless charm of the old street lamps.

Lucerna and Granada reinterpret the classic street lantern through a completely renewed design that enhances tradition with meticulous attention to detail. Thanks to their ability to blend harmoniously into historic and prestigious settings, they represent an outstanding solution for the lighting of historic town centres, villages, and valuable urban areas..





Exemple with Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with subcode -40 (sealing cap to be ordered separately)	Mounted directly on the fixture's body, ideal for remote lighting management applications.
Zhaga Socket order with subcode -0054 (complete with sealing cap)	

GENERAL CHARACTERISTICS



Housing, lid, spokes, and pole connection: die-cast aluminium.

Optics: made of PMMA with high temperature resistance and UV rays.

Pole connection: die-cast aluminium, suited for poles with a diameter 42/60 mm.

Lucerna diffuser: extra-clear tempered glass, 5 mm thick, resistant to thermal shocks and impacts (UNI-EN 12150-1: 2001): art. 3214 in shatterproof and self-extinguishing V2 polycarbonate, UV-stabilized, frosted inside for improved glare control.

Granada diffuser: in transparent, vandal-resistant and V2 self-extinguishing polycarbonate, UV-stabilized.

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

Upon request: Lucerna with protective coating recommended for marine environments within 5 km of the sea.

OTHER CHARACTERISTICS



Standard supply: standard knife switch, which enables to automatically cut off the power supply during maintenance ; automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module; Complete with waterproof connector for quick installation and anti-condensation valve for air recirculation. Granada supplied as standard with double switch to choose the colour temperature between **1800K-2200K** or **2700K-3000K-4000K** and the type of lighting for up to 3 lighting levels.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.

- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Lucerna: 6/10kV - **Granada:** 10/10kV.

PHOTOBIOLOGICAL SAFETY



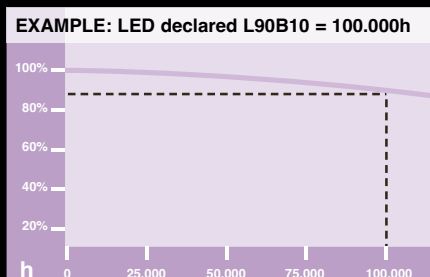
Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.

LOW FLICKER



Product with a very low flicker; uniform light for greater eye protection.

LIFE EXPECTANCY



The decrease of LED flux is defined by the working life and is represented by the L90 mark (see chart), which means that the flux is kept up to 90%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

Lucerna

LED: power factor: $\geq 0,9$.

luminous flux maintenance 90%: **100.000h (L90B10)**

luminous flux maintenance 80%: **100.000h (L80B10)**

COB: power factor: $\geq 0,92$.

luminous flux maintenance 80%: **90.000h (L80B10)**

luminous flux maintenance 70%: **100.000h (L70B50)**

Granada

LED: power factor: $\geq 0,9$.

luminous flux maintenance 80%: **100.000h (L80B20)**

2200K (subcode -73): lamps with warm amber light at a colour temperature of 2200K reduces the risks of an excessive exposure to harmful blue LED light and allows a “softer” impact on inhabited zones, especially in historic centres.

3000K - 4000K as standard: lamps with 3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

CCT SWITCH = with this integrated switch you can select the desired light colour, 2700K-3000K-4000K y 1800K-2200K.

POWER SWITCH = with this integrated switch you can select the fixture's total wattage, 25W-45W-60W.

The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

Minimum and maximum operating ambient temperature: -30°C ÷ +50°C.

ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

The fixture's design is configured to minimise wind exposure surfaces.

THE RANGE OF LUCERNA STREET LAMPS IS AVAILABLE IN THE FOLLOWING COLOUR TEMPERATURES

2200K
3000K
4000K

GRANADA CCT / POWER SWITCH



IK LEVEL OF PROTECTION



AMBIENT TEMPERATURE



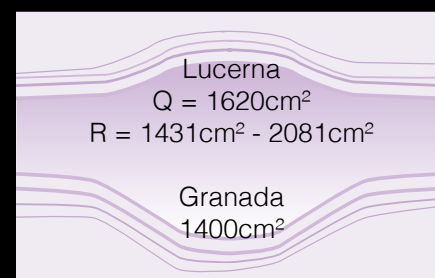
CERTIFICATIONS

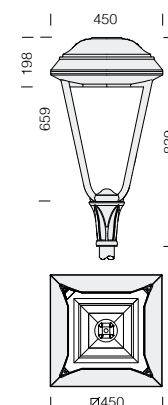
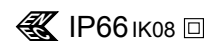


CLD PROG

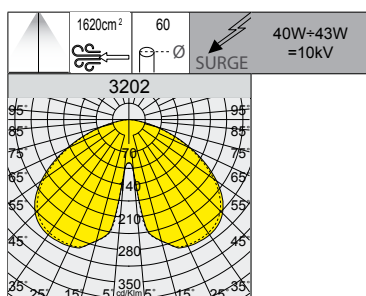


SURFACE EXPOSED TO WIND





COB: power factor $\geq 0,92$.
Luminous flux maintenance 80%:
90.000h (L80B10).
Luminous flux maintenance 70%:
100.000h (L70B50).



3202 Lucerna Q - COB

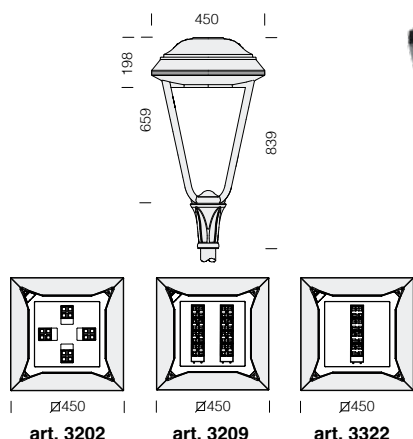
		CLD ZHAGA	CLD NEMA		LUMEN OUTPUT (tq= 25 °C)
colour	weight	code	code	W tot	K - ølm 1050mA - CRI
RAL 7021	12.60	326923-0054	326923-40	40	4000K - 3017lm - CRI 80
		326923-3954	326923-3940		3000K - 2806lm - CRI 80
		326923-7354	326923-7340	43	2200K - 2953lm - AMBRA



Available versions in colour
WHITE **RAL 9003**



IP66 IK08



LED: power factor ≥ 0.9 .
Art. 3202 luminous flux maintenance 80%: 100.000h (L80B10).
Art. 3322/3209 luminous flux maintenance 90%: 100.000h (L90B10).



RG0
Etr

+40°C
-30°C

U.V.

LOW
FLICKER

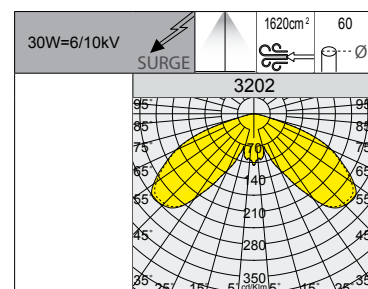
3000K

4000K

3202 Lucerna Q

CLD ZHAGA			CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code		K - ølm 300mA - CRI	
RAL 7021	12.60	326920-0054	326920-40	30	4000K - 3830lm - CRI>70	
		326920-3954	326920-3940		3000K - 3562lm - CRI>70	

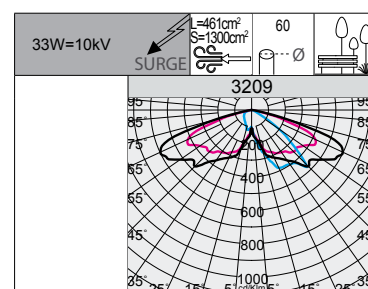
Example	Power supply	n.LED	W tot	K	ølm	n.LED	W tot	K	ølm
upon request	470mA	16	48	4000K	5700lm	16	48	3000K	5301lm



3209 Lucerna Q 8 - residential amenities

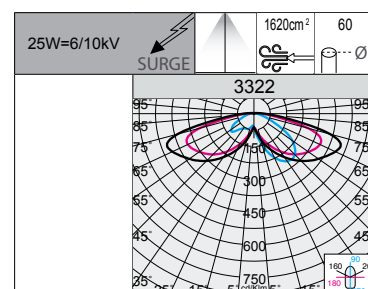
CLD ZHAGA			CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code		K - ølm 350mA - CRI	
RAL 7021	13.55	327220-0054	327220-40	33	4000K - 5320lm - CRI>70	
		327220-3954	327220-3940		3000K - 5045lm - CRI>70	

Example	Power supply	n.LED	W tot	K	ølm	n.LED	W tot	K	ølm
upon request	520mA	32	50	4000K	7904lm	32	50	3000K	7495lm



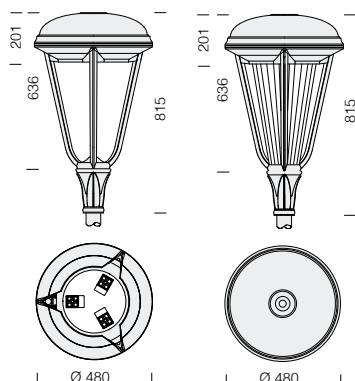
3322 Lucerna Q 7 FX

CLD ZHAGA			CLD NEMA	W tot	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code		K - ølm 530mA - CRI	
RAL 7021	12.60	326922-0054	326922-40	25	4000K - 4050lm - CRI 70	
		326922-3954	326922-3940		3000K - 3870lm - CRI 70	





IP66 IK09



LED: power factor ≥ 0.9 .
Luminous flux maintenance 80%:
100.000h (L80B10).

RG0
E_hr

+40
C
-30

U.V.

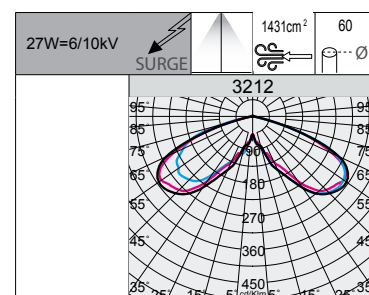
LOW
FLICKER

3000K

4000K

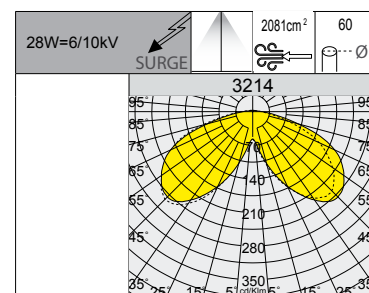
3212 Lucerna R

		CLD ZHAGA		CLD NEMA			LUMEN OUTPUT (tq= 25 °C)		
colour	weight	code		code		W tot	K - ø1m 350mA - CRI		
RAL 7021	12.60	326970-0054		326970-40		27	4000K - 3390lm - CRI>70		
		326970-3954		326970-3940			3000K - 3153lm - CRI>70		
		Power supply		n.LED	W tot	K	ø1m		
Upon request		530mA		12	42	4000K	5180lm		
				n.LED	W tot	K	ø1m		
				12	42	3000K	4817lm		



3214 Lucerna R - avec diffuser

		CLD ZHAGA	CLD NEMA			LUMEN USCENTI (tq= 25 °C)
colour	weight	code	code	W tot		K - ølm 350mA - CRI
RAL 7021	12.60	326985-0054	326985-40	28		4000K - 2626lm - CRI>70





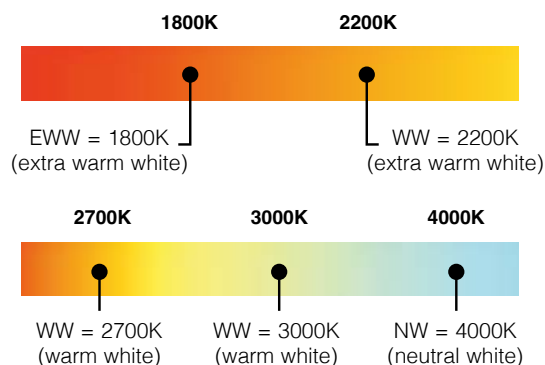
CCT SWITCH = with this integrated switch you can select the desired light colour, 2700K-3000K-4000K y 1800K-2200K.

POWER SWITCH = with this integrated switch you can select the fixture's total wattage, 25W-45W-60W.



The main feature of this fixture is the new colour-changing technology. With **two built-in switches** positioned on housing of the fixture, you can:

- select 5 different colour temperatures, adjusting to most installations:



- select the type of luminous flux with 3 output power ranges :

LOW	MEDIUM	HIGH
25W	45W	60W

GRANADA is available as standard with a **1800K** and **2200K** colour temperature to reproduce a cosy ambient light associated with sunset. In this way, the artificial light becomes a less invasive element in the environment, **respecting the needs of the surrounding flora and fauna**.

Research has shown that different types of lighting can significantly impact nocturnal insects, birds and other creatures that play a vital role in local ecosystems. Environmental organisations are increasingly calling for this aspect to be properly considered in the design of new lighting systems. Modern LEDs, with a reduced blue light component, provide an opportunity to create less disruptive lighting in streets or parking areas near green spaces, while offering better protection for local wildlife.

1800K - 2200K: lamps with warm light at a colour temperature of 1800K-2200K *reduces the risks of an excessive exposure to harmful blue LED light* and allows a "softer" impact on inhabited zones, especially in historic centres.

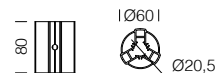


GRANADA come with colour temperatures of **2700K**, **3000K** and **4000K**. These versions are ideal for urban spaces such as public parks, squares, and historic town centres that require an illumination that enhance architectural features while ensuring pedestrian safety, visual comfort, and minimising light pollution

2700K - 3000K - 4000K: lamps with 2700K-3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.

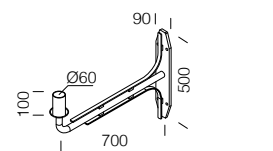


ACCESSORIES



acc. 319 3/4" adapter

RAL 7021 427004-00
3/4" fitting adapter, designed to allow quick installation of Granada on existing fittings.



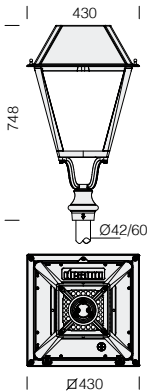
acc. 510 wall mounting bracket

RAL 7021 991289-00
To be used for the direct wall-mounting of Granada.



Upon request: "Liberty" bracket to be used for the direct pendant-mounting of Granada.

IP66 IK08

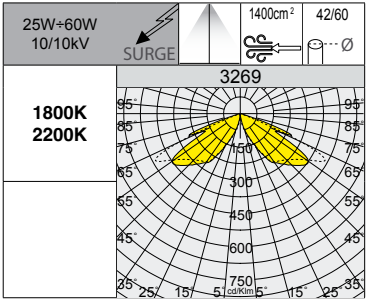


LED: power factor ≥ 0.9 .
Luminous flux maintenance 80%:
100.000h (L80B20).

3269 Granada 2 - CCT 1800K-2200K / POWER SWITCH - roto-symmetric

CLD ZHAGA			CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code		W tot	K - ϕ lm - CRI
RAL 7021	6,90	326968-0054		326968-40	25	1800K - 2755lm - CRI>80
						2200K - 2900lm - CRI>80
					45	1800K - 4940lm - CRI>80
						2200K - 5200lm - CRI>80
					60	1800K - 6650lm - CRI>80
						2200K - 7000lm - CRI>80

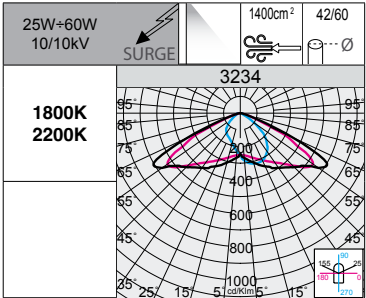
Ideal for lighting up historic town centres, residential areas, parks, and protected areas, while respecting the needs of nocturnal flora and fauna.



3234 Granada 2 - CCT 1800K-2200K / POWER SWITCH - asymmetric

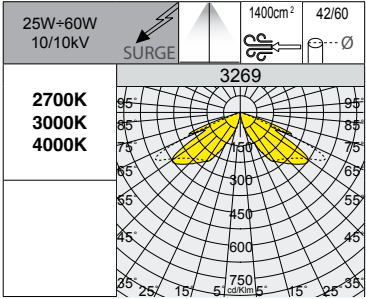
CLD ZHAGA			CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code		W tot	K - ϕ lm - CRI
RAL 7021	6,90	326966-0054		326966-40	25	1800K - 2715lm - CRI>80
						2200K - 2855lm - CRI>80
					45	1800K - 4865lm - CRI>80
						2200K - 5125lm - CRI>80
					60	1800K - 6550lm - CRI>80
						2200K - 6895lm - CRI>80

Ideal for lighting up historic town centres, residential areas, parks, and protected areas, while respecting the needs of nocturnal flora and fauna.



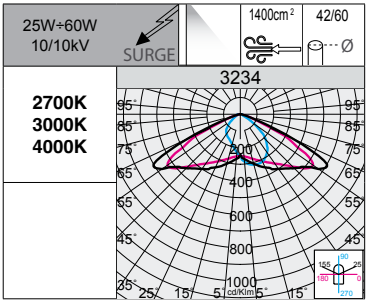
3269 Granada 1 - CCT 2700K-3000K-4000K / POWER SWITCH - roto-symmetric

CLD ZHAGA			CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code		W tot	K - ϕ lm - CRI
RAL 7021	6,90	326967-0054		326967-40	25	2700K - 3385lm - CRI>80
						3000K - 3563lm - CRI>80
						4000K - 3750lm - CRI>80
					45	2700K - 6092lm - CRI>80
						3000K - 6413lm - CRI>80
						4000K - 6750lm - CRI>80
					60	2700K - 8123lm - CRI>80
						3000K - 8550lm - CRI>80
						4000K - 9000lm - CRI>80



3234 Granada 1 - CCT 2700K-3000K-4000K / POWER SWITCH - asymmetric

CLD ZHAGA			CLD NEMA		LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code		W tot	K - ϕ lm - CRI
RAL 7021	6,90	326969-0054		326969-40	25	2700K - 3335lm - CRI>80
						3000K - 3510lm - CRI>80
						4000K - 3694lm - CRI>80
					45	2700K - 6000lm - CRI>80
						3000K - 6316lm - CRI>80
						4000K - 6649lm - CRI>80
					60	2700K - 8000lm - CRI>80
						3000K - 8422lm - CRI>80
						4000K - 8865lm - CRI>80



Vista 2.0, is a luminaire with a linear, minimalist design, created to enhance the modern aesthetics of cities and green spaces. Its sleek, contemporary form integrates seamlessly into urban and residential environments, contributing to the redevelopment of public areas. Equipped with high-efficiency LEDs, it delivers excellent performance, significant energy savings, and a long service life, substantially reducing management and maintenance costs. The optics with rotosymmetric and asymmetric distributions provide uniform, well-controlled, and glare-free lighting, improving visual and user safety.

Vista 2.0, the ideal luminaire for green spaces, urban and residential areas: in a single body frame, you have a fully equipped luminaire designed to meet any need, including the **possibility to select the desired colour temperature in 3 power wattages**, maintaining aesthetic continuity while differentiating the amount of light emitted. These features make it the ideal choice for lighting parks, pedestrian areas, residential zones and urban public spaces.





Exemple with
Zhaga Socket
(subcode -0054)

LUMINAIRE DESIGNED FOR INSTALLATION ON NEMA OR ZHAGA SOCKET: to monitor and manage public lighting centrally, lighting fixtures will always be more equipped with wireless controls that will allow their integration with the IoT. Today the market offers two solutions: **NEMA and ZHAGA**. Both solutions offer an electrical and mechanical connection between the control antenna and the lighting fixture.

Nema Socket order with **subcode -40** (sealing cap to be ordered separately)

Zhaga Socket order with **subcode -0054** (complete with sealing cap)

Mounted directly on the fixture's body, ideal for remote lighting management applications.

GENERAL CHARACTERISTICS

Housing/cover: made of die-cast aluminium.

Pole connection: pressed in die-cast aluminium. Suited for poles with a diameter 42-60 mm.

Optics : made of PMMA with high temperature resistance and UV rays.

Diffuser: in transparent, vandal-resistant and V2 self-extinguishing polycarbonate, UV-stabilized.

Coating: the fully automated powder-coating cycle involves a polyester-based, salt-spray corrosion-resistant and UV-stabilised paint.

OTHER CHARACTERISTICS

Standard supply: automatic temperature control inside the device with automatic resetting; dedicated electronic device to protect the LED module. Supplied with waterproof connector for quick installation and complete with an air-circulation valve; external screws and bolts in stainless steel. Supplied standard with double switch to choose the colour temperature between **1800K-2200K** or **2700K-3000K-4000K** and the type of lighting for up to 3 lighting levels.

Electronic safety device to protect the LED module and the related ballast compliant with EN 61547.

It works in two modes:

- differential mode: surge between power cables and between the phase and neutral.

- common mode: surge between power, L/N and ground cables or between the fixture's body if it is of class II and installed on a metal pole.

Vista 2.0: 10/10kV.



PHOTOBIOLOGICAL SAFETY

Risk Group 0 (RG0 Ethr): luminaires are exempt from photobiological risks in compliance with standard EN 62471. If necessary, contact our customer service for the observation distance.



LOW FLICKER

Product with a very low flicker; uniform light for greater eye protection.

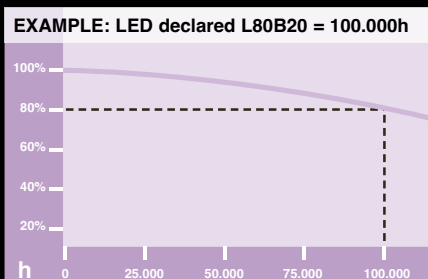


LIFE EXPECTANCY

The decrease of LED flux is defined by the working life and is represented by the L80 mark (see chart), which means that the flux is kept up to 80%. The "B" letter followed by a number ranging between 10 and 50 indicates the quality of the fixture and defines the LED percentage that keeps the declared characteristics when it reaches 100,000 working hours.

LED: power factor: $\geq 0,9$.

luminous flux maintenance 80%: **100.000h (L80B20)**



CCT SWITCH = with this integrated switch you can select the desired light colour, 2700K-3000K-4000K y 1800K-2200K.

POWER SWITCH = with this integrated switch you can select the fixture's total wattage, 25W-45W-60W.

VISTA 2.0 CCT / POWER SWITCH



The IK code indicates the fixture's degree of protection against mechanical impact and determines the degree of protection provided by the electrical equipment's enclosures against these impacts (EN 50102 - NF 20-015).

IK LEVEL OF PROTECTION



Minimum and maximum operating ambient temperature: -30°C ÷ +50°C.

AMBIENT TEMPERATURE



ENEC is a European Mark that demonstrates that fixture is compliant with applicable European safety standards and was manufactured by a company that applies a Quality System according to ISO 9000.

CERTIFICATIONS



PROG available functions:

- **Luminous flux setup:** This can be done by programming the drive current values requested when ordering/purchasing the fixture.
- **CLO** (Constant Light Output): the lighting fixture maintains a constant light output throughout its entire service life.

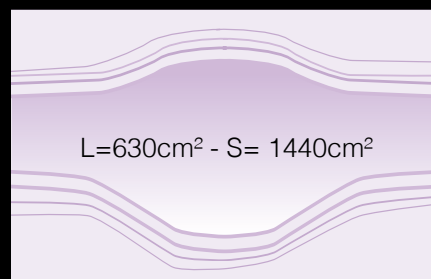
Possibility to choose different lighting point management systems according to the system's needs (see pages 94-95).

CLD PROG



The fixture's design is configured to minimise wind exposure surfaces.

SURFACE EXPOSED TO WIND





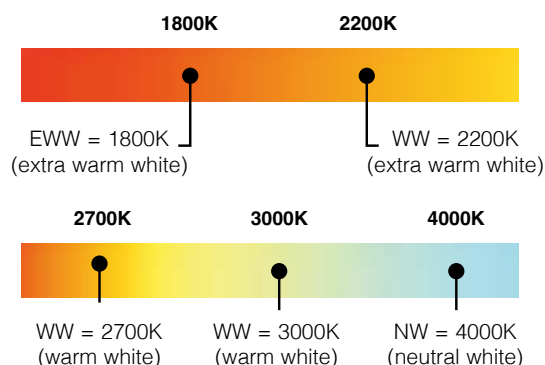
CCT SWITCH = with this integrated switch you can select the desired light colour, 2700K-3000K-4000K y 1800K-2200K.

POWER SWITCH = with this integrated switch you can select the fixture's total wattage, 25W-45W-60W.



The main feature of this fixture is the new colour-changing technology. With **two built-in switches** positioned on housing of the fixture, you can:

- select 5 different colour temperatures, adjusting to most installations:



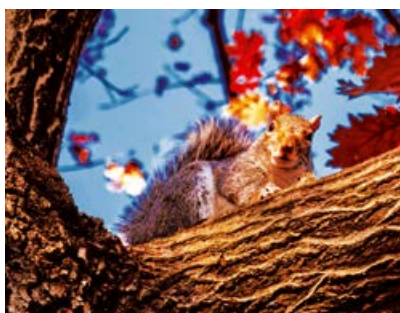
- select the type of luminous flux with 3 output power ranges :

LOW	MEDIUM	HIGH
25W	45W	60W

VISTA 2.0 is available as standard with a **1800K** and **2200K** colour temperature to reproduce a cosy ambient light associated with sunset. In this way, the artificial light becomes a less invasive element in the environment, **respecting the needs of the surrounding flora and fauna**.

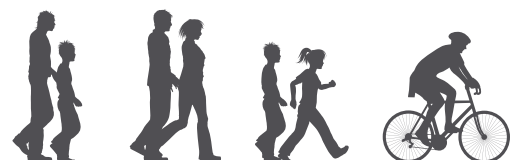
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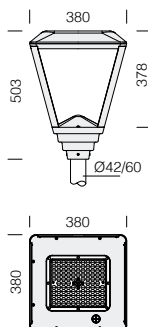


ISEO come with colour temperatures of **2700K**, **3000K** and **4000K**. These versions are ideal for urban spaces such as public parks, squares, and historic town centres that require an illumination that enhance architectural features while ensuring pedestrian safety, visual comfort, and minimising light pollution

2700K - 3000K - 4000K: lamps with 2700K-3000K-4000K white light, instead, is the best choice for lighting up urban areas, streets, residential centres and generally all areas where this type of light guarantees greater safety and visual comfort.



IP66 IK08

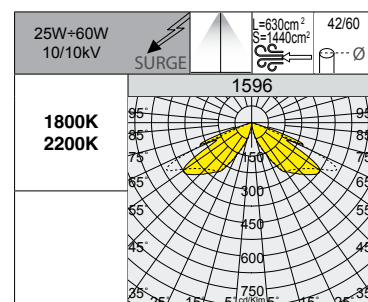


LED: power factor ≥ 0.9 .
Luminous flux maintenance 80%:
100.000h (L80B20).

1596 Vista 2.0 - CCT 1800K-2200K / POWER SWITCH - rotosymmetric

CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	5.50	422306-0054	422306-40	25	1800K - 2350lm - CRI>80
					2200K - 2890lm - CRI>80
				45	1800K - 4225lm - CRI>80
					2200K - 5200lm - CRI>80
				60	1800K - 5480lm - CRI>80
					2200K - 6700lm - CRI>80

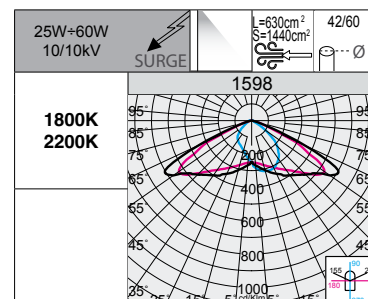
Ideal for lighting up historic town centres, residential areas, parks, and protected areas, **while respecting the needs of nocturnal flora and fauna.**



1598 Vista 2.0 - CCT 1800K-2200K / POWER SWITCH - asymmetric

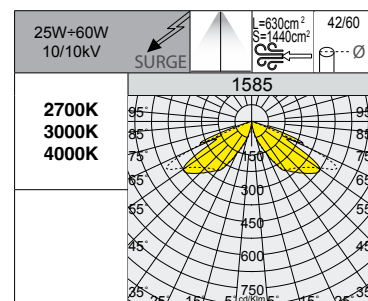
CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	5.50	422315-0054	422315-40	25	1800K - 2315lm - CRI>80
					2200K - 2845lm - CRI>80
				45	1800K - 4160lm - CRI>80
					2200K - 5120lm - CRI>80
				60	1800K - 5400lm - CRI>80
					2200K - 6600lm - CRI>80

Ideal for lighting up historic town centres, residential areas, parks, and protected areas, **while respecting the needs of nocturnal flora and fauna.**



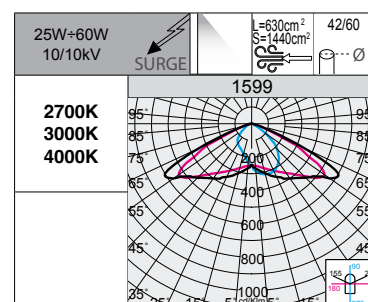
1585 Vista 2.0 - CCT 2700K-3000K-4000K / POWER SWITCH - rotosymmetric

CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	5.50	422305-0054	422305-40	25	2700K - 3450lm - CRI>80
					3000K - 3600lm - CRI>80
					4000K - 3750lm - CRI>80
				45	2700K - 6200lm - CRI>80
					3000K - 6500lm - CRI>80
					4000K - 6750lm - CRI>80
				60	2700K - 8200lm - CRI>80
					3000K - 8500lm - CRI>80
					4000K - 9000lm - CRI>80



1599 Vista 2.0 - CCT 2700K-3000K-4000K / POWER SWITCH - asymmetric

CLD ZHAGA			CLD NEMA	LUMEN OUTPUT (tq= 25 °C)	
colour	weight	code	code	W tot	K - ϕ lm - CRI
RAL 7021	5.50	422316-0054	422316-40	25	2700K - 3400lm - CRI>80
					3000K - 3545lm - CRI>80
					4000K - 3695lm - CRI>80
				45	2700K - 6110lm - CRI>80
					3000K - 6405lm - CRI>80
					4000K - 6650lm - CRI>80
				60	2700K - 8080lm - CRI>80
					3000K - 8375lm - CRI>80
					4000K - 8865lm - CRI>80



 **PROG FUNCTIONS** - Amenity lighting fixtures are equipped with the latest generation of programmable drivers that allow controlling different aspects and functions of a lighting system: **Basic Prog (CLD BASIC wiring)**: luminaires developed to grant great flexibility of use thanks to the possibility to vary luminous flux intensity by changing the LED drive current.

OPERATING MODE	DESCRIPTION	
Luminous flux setup	This can be done by programming the drive current values requested when ordering/purchasing the fixture	✓
CLO (Constant Light Output)	The lighting fixture maintains a constant light output throughout its entire service life	✓
Virtual Midnight order with subcode -30	Stand-alone system with automatic luminous flux reduction in 4 steps (up to max 5 steps available upon request)	✓

Smart control functions for light management can be implemented on a project-specific basis. *These features are not included in standard products and must be activated upon request (excluding COB LED versions).* They do not require any modification to the entire system. The product only needs to be connected to mains power supply (no pilot cable and/or control bus necessary).

Mains voltage regulation	This allows varying the luminous flux by adjusting the mains voltage between 170 and 250 V AC
DC power in EM	In centralized emergency systems, the LED Driver automatically detects when the power changes from AC to DC and adjusts the lights to a pre-set value (DC level)
Monitoring (default)	The driver is equipped with a micro-processor that records the operating conditions from the moment it is turned on
Setup via APP	The NFC technology allows users to set the different operating modes via an APP
Broadcast Prog	This allows the reconfiguration of the Virtual Midnight profile, including the enabling/disabling of all the fixtures installed on the same power line (broadcast function) via a sequence of electrical impulses.

LUMINOUS FLUX SETUP - With this function luminaires can adjust their **luminous flux to optimise design requirements** by varying LED drive current. A reduced luminous flux caused by a reduced current allows the LED to operate in better thermal conditions due to the reduction in power consumption. **NOTE:** an increase of the luminous flux must always be assessed by our technical staff.

CLO (CONSTANT LIGHT OUTPUT) - The LED's luminous flux is **kept constant throughout the luminaire's entire lifetime**. The Constant Light Output (CLO) function compensates for the natural decay of the luminous flux by progressively increasing LED driver current. This results in a slow and constant increase in the luminaire's power consumption.

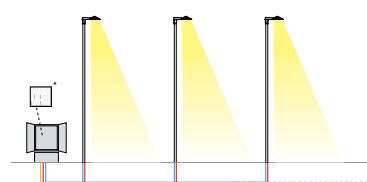
MAINS VOLTAGE REGULATION - This function allows the luminaire to be **dimmed when the mains voltage varies between 170 and 250 V AC**. It allows using LED luminaires with a dimmer that varies the mains voltage. It is used to dim the lights of older systems fitting traditional lamps. With the use of a software programme it is possible to set the maximum and minimum brightness levels that the luminaire must ensure when the mains voltage varies.

MONITORING - The driver records the **operating conditions throughout the entire service life** (operating hours, operating temperature, overvoltage). In the event of a product malfunction, the system will quickly and easily detect the problem.

SETUP VIA APP - Luminous flux, Virtual Midnight, power regulation and CLO values can be reprogrammed in accordance with the product's specifications and certificates only after agreeing them with our offices.

BROADCAST PROG - The Broadcast Prog function, **through a regular sequence of voltage interruptions**, allows modifying the driver programming of all the luminaires installed on the same power line by means of a **predefined sequence of ON/OFF cycles** that interrupt the phase without the need of additional cables. The Broadcast Prog function requires the use of an external device to be mounted in the luminaires' electrical supply panel. In addition to the **energy savings** that can be obtained with the "Virtual Midnight" function, there is the **possibility to vary the profile** of the entire system without having to use complex management systems

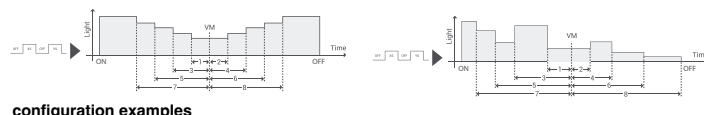
* device with integrated Broadcast Prog technology



The external device to be used in the supply panel allows the automatic reconfiguration of the entire line. With the use of additional accessories, it is also possible to control and monitor the system remotely.

With this technology it is possible:

- enable/disable the "Virtual Midnight" function
- reconfigure the luminaire's drivers, modifying each one of the 8 steps (4 pre- and 4 post-virtual midnight) in terms of time and luminous flux regulation.



configuration examples

Upon request: you can use a device equipped with SIM card to control the power line of lighting fixtures. By interfacing with a wireless device you can re-programme the LED driver.

OTHER LIGHTING POINT MANAGEMENT OPTIONS AVAILABLE ON REQUEST



1-10V DIMM ordered with **sub-code -12**: luminous flux adjustment range from 10%-100% with 1-10V.



DIMM DALI ordered with **sub-code -0041**: digital luminous flux control via DALI-2 protocol through a two-wire communication bus.



Fixture complete with stand-alone 0/10V motion sensor, order with **subcode -1219**: the sensor automatically regulates the luminous flux in the presence of people according to preset light levels and time settings.

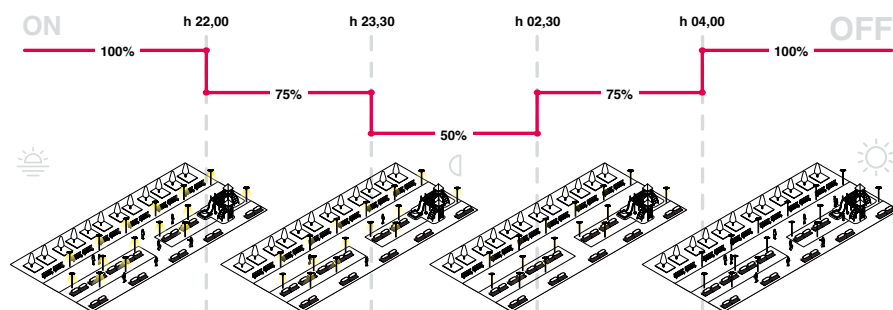


PLC remote control ordered with **sub-code -0078**: point-to-point and system management and diagnosis system.



VIRTUAL MIDNIGHT - To **INCREASE ENERGY SAVINGS** at night when there are fewer people and vehicles around, a lighting fixture can be programmed according to a specific profile (customizable on request). The fixture reduces its luminous flux through a self-learning process which, depending on the previous switching on and off times, will determine a hypothetical "virtual midnight". This is the average value between the time the fixture is switched on (sunset) and switched off (sunrise). The "virtual midnight" is the reference point for dimming lights according to the desired profile. The device is integrated in the LED driver and therefore does not require any modification to the system.

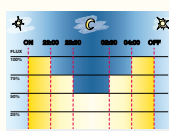
In order for the system to function correctly, the system must be adjusted by a device that turns the system on and off on a regular basis every day.



For example, in the central hours of the night, in areas where car and pedestrian traffic decreases significantly, a **reduction in luminous flux keeps the light within safety standards, while avoiding waste**. If we multiply this reduction by tens or hundreds of lamps, we get **significant savings**.

VIRTUAL MIDNIGHT subcode -30 - Stand-alone system with automatic luminous flux reduction in 4 steps

To increase energy savings at night when there are fewer people and vehicles around, a lighting fixture can be programmed according to a specific profile (customizable on request). The fixture reduces its luminous flux through a self-learning process which, depending on the previous switching on and off times, will determine a hypothetical "virtual midnight". This is the average value between the time the fixture is switched on (sunset) and switched off (sunrise). The "virtual midnight" is the reference point for dimming lights according to the desired profile. The device is integrated in the LED driver and therefore does not require any modification to the system.



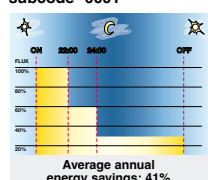
Factory settings	
Time	Flux
on + 22:00	100%
22:00 + 23:30	75%
23:30 + 02:30	50%
02:30 + 04:00	75%
04:00 + off	100%

Virtual Midnight: fixtures are equipped with a device to reduce flux in **4 steps** based on the calculation of the virtual midnight.

ATTENTION: original settings and time slots for the "virtual midnight" value can be customized in up to 5 steps upon request.

OTHER CONFIGURATION EXAMPLES

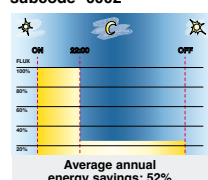
Virtual midnight GREEN AREAS subcode -0001



Settings upon request	
Time	Flux
on + 22:00	100%
22:00 + 24:00	60%
24:00 + off	30%

Ideal for green areas and parks, which are closed to the public at specific hours.

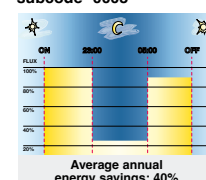
Virtual midnight SAFETY (PRIVATE PROPERTY) subcode -0002



Settings upon request	
Time	Flux
on + 22:00	100%
22:00 + off	25%

Ideal to maintain safety lights at workplaces, in which people/vehicles are not circulating after work hours.

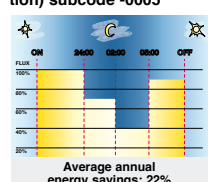
Virtual midnight PRIVATE PROPERTY AND COMMERCIAL subcode -0003



Settings upon request	
Time	Flux
on + 23:00	100%
23:00 + 05:00	25%
05:00 + off	90%

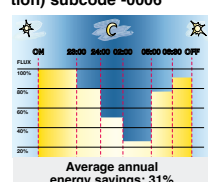
Ideal for private property and commercial areas after work hours.

Virtual midnight METROPOLI (500.000 population) subcode -0005



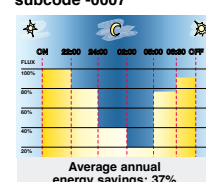
Settings upon request	
Time	Flux
on + 24:00	100%
24:00 + 02:00	70%
02:00 + 05:00	40%
05:00 + off	90%

Virtual midnight BIG CITY (200.000 population) subcode -0006



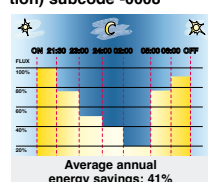
Settings upon request	
Time	Flux
on + 23:00	100%
23:00 + 24:00	80%
24:00 + 02:00	50%
02:00 + 05:00	30%
05:00 + 06:30	75%
06:30 + off	90%

Virtual midnight CITY (50.000 population) subcode -0007



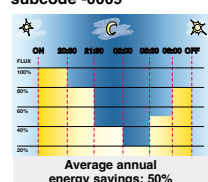
Settings upon request	
Time	Flux
on + 22:00	100%
22:00 + 24:00	80%
24:00 + 02:00	40%
02:00 + 05:00	20%
05:00 + 06:30	75%
06:30 + off	90%

Virtual midnight TOWN (5.000 population) subcode -0008



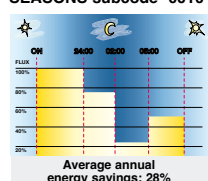
Settings upon request	
Time	Flux
on + 21:30	100%
21:30 + 23:00	75%
23:00 + 24:00	50%
24:00 + 02:00	40%
02:00 + 05:00	20%
05:00 + 06:00	75%
06:00 + off	90%

Virtual midnight VILLAGE (2.000 population) subcode -0009



Settings upon request	
Time	Flux
on + 20:30	100%
20:30 + 21:30	80%
21:30 + 02:00	40%
02:00 + 05:00	20%
05:00 + 06:00	50%
06:00 + off	80%

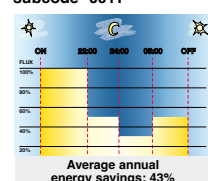
Virtual midnight HIGH SEASONS subcode -0010



Settings upon request	
Time	Flux
on + 24:00	100%
24:00 + 02:00	75%
02:00 + 05:00	25%
05:00 + off	50%

Ideal for tourist resorts during peak season periods (sea-summer; mountain-winter).

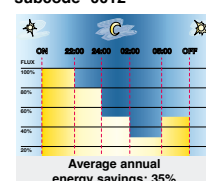
Virtual midnight LOW SEASONS subcode -0011



Settings upon request	
Time	Flux
on + 22:00	100%
22:00 + 24:00	50%
24:00 + 05:00	30%
05:00 + off	50%

Ideal for tourist resorts during low season periods.

Virtual midnight FOUR SEASONS subcode -0012



Settings upon request	
Time	Flux
on + 22:00	100%
22:00 + 24:00	80%
24:00 + 02:00	50%
02:00 + 05:00	30%
05:00 + off	50%

Ideal for tourist resorts that do not need to reschedule their lighting times (compromise between high and low season).

OUTDOOR SMART SOLUTION LED LUMINAIRES FOR URBAN LIGHTING EQUIPPED WITH NEMA OR ZHAGA SOCKET



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