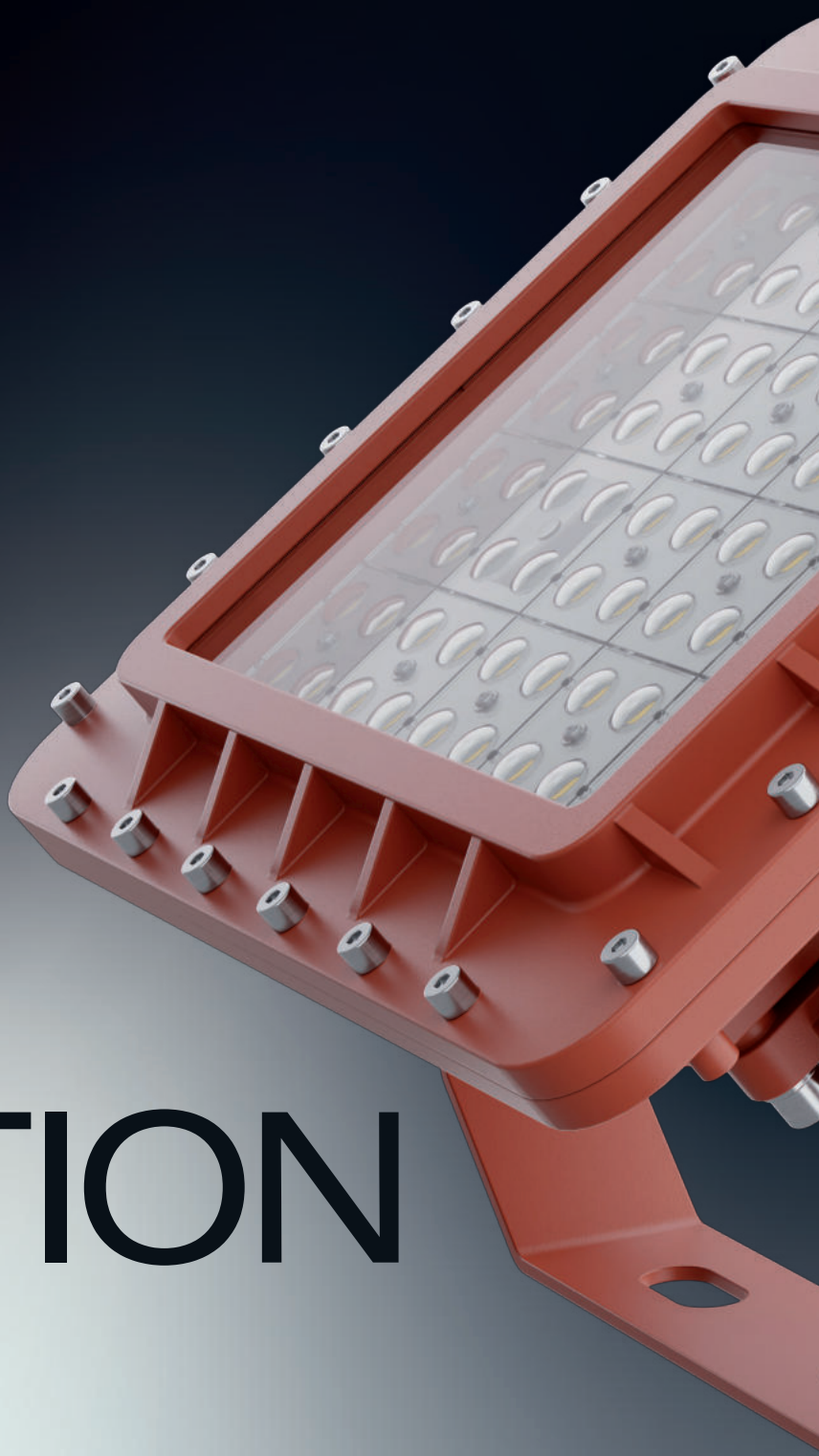
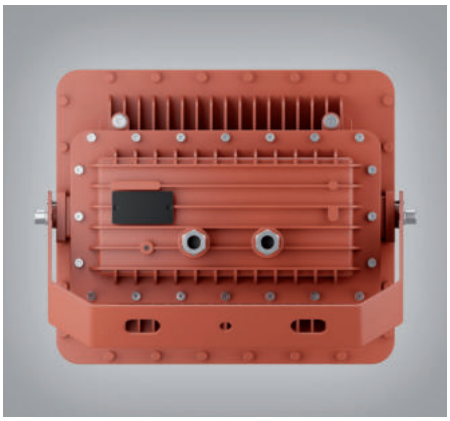
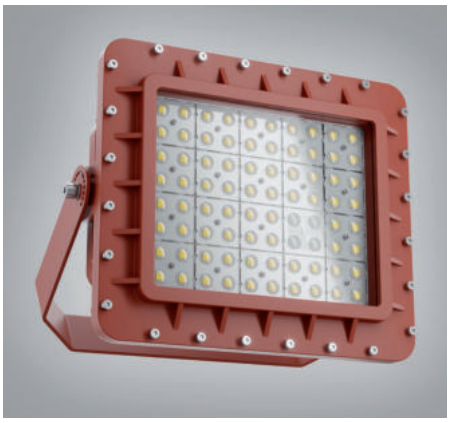
LINTER
LIGHTING

BASTION

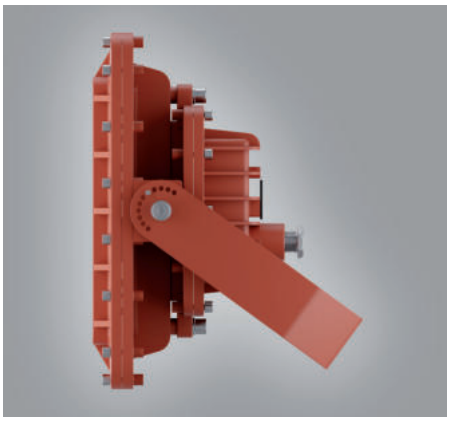


BASTION





BASTION is a modern LED luminaire with a rated power of 100–200 W and a luminous flux of 7,000–32,000 lm, designed for use in demanding conditions in potentially explosive atmospheres, such as mines, industrial installations or petrochemical facilities. High luminous efficacy of 160 lm/W and a wide range of colour temperatures (2200-6500 K) allow for optimal adjustment of light to the specific application.



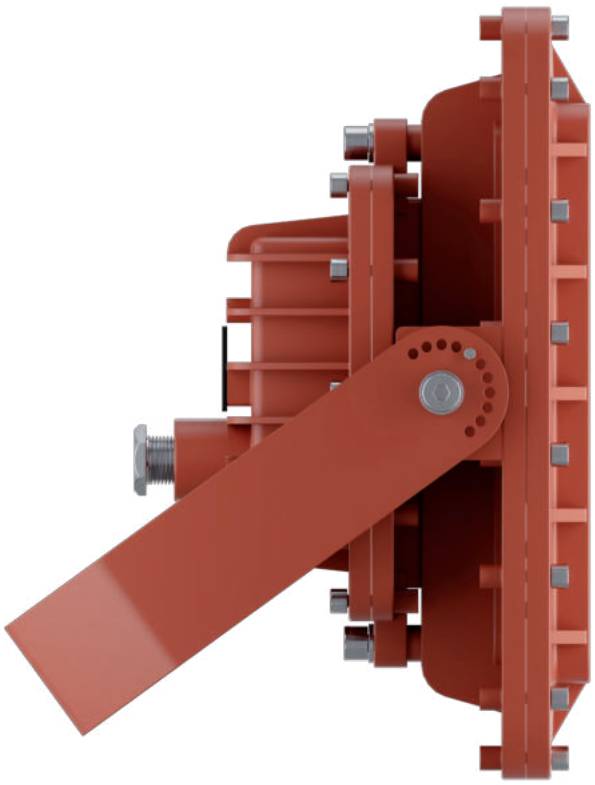
Key Competitive Advantages

ILUMI GUARD BODY

The luminaire is made of cast aluminium with a PVDF coating, ensuring maximum resistance to corrosion, UV radiation and extreme environmental conditions. The dual-chamber design separates the optical section from the power supply section, facilitating servicing and replacement of LED light sources. Compact dimensions, high mechanical resistance (IK09/IK10) and IP66/IP67 protection rating guarantee durability and reliability in all conditions.

SOLARION

The LED module provides high luminous flux with low energy consumption, with a lifetime of ≥100,000 hours L95B10. UV-resistant lenses guarantee stable and precise light distribution, minimising losses. The CLO system maintains constant brightness, while the compatibility with control systems (DALI, 1–10 V, D4i, NFC) allows for intelligent lighting management and adjustment of light to the user's needs.



Ilumi Guard Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

This luminaire has been designed to operate in the most demanding conditions, ensuring maximum safety and reliability. The robust housing made of cast aluminium, coated with PVDF, is resistant to corrosion, salt spray and UV radiation, as confirmed by corrosion class C3-H according to ISO 9227 standard. Thanks to its high IP66/IP67 protection rating and IK09/IK10 mechanical resistance, this luminaire guarantees durability even in harsh industrial environments. Built-in safety features – thermal, overvoltage, short-circuit and ESD protection – combined with an active LED temperature sensor that limits current in case of overheating, enhance safety during use. Servicing is made easier thanks to the use of a scissor-type, 3-pole power disconnector.

This luminaire is characterised by high durability and efficiency. L95B10 LED light sources offer a service life of ≥100,000 hours (confirmed by LM-80 testing and the TM-21 projection). The CLO (Constant Lumen Output) system maintains luminous flux throughout the entire service life, while low ripple (<6%) and high power factor (PF ≥0.98) guarantee stable operation. The luminaire is compatible with various control systems – 1-10 V, DALI, DALI-2, D4i and NFC – and, additionally, allows for programming autonomous dimming profiles (5 programmes, with 1 minute adjustment programme).

When it comes to design and use, the lamp offers flexibility of installation and ease of maintenance. Compact dimensions (43*41*27CM / 48*45*27 CM) and low weight (12-15.5 KG) allow for convenient installation on facades, beams or suspended from the ceiling. The dual-chamber design, separating the optical and power supply sections, ensures easy service access, while the use of solderless technology allows for quick replacement of LED sources.

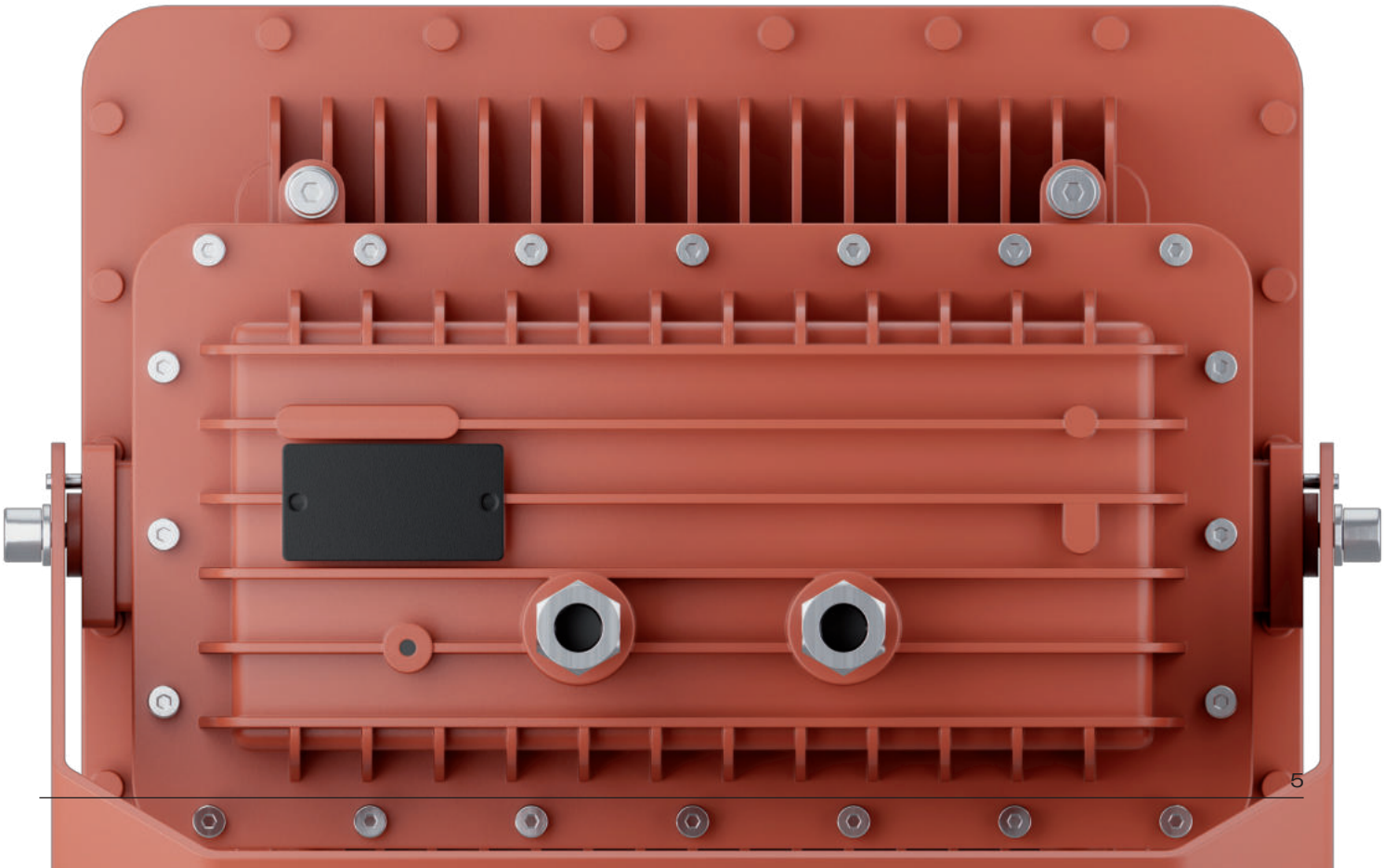
This luminaire has also been prepared for operation in IoT environments and intelligent lighting management systems. It enables full integration with GSM, NB-IoT, LoRaWAN, or Mesh 2.4 GHz communication systems, supports the TALQ standard and is ready for a “Plug & Play” installation. Equipped with ZhagaBook 18 or NEMAANSI C136.41 communication sockets, it offers various configurations for mounting communication modules. With the identification via a unique QR code, labels for pole recesses and the possibility of integration with mobile applications, the management and servicing of this luminaire becomes quick and intuitive.

Areas of Application

APPLICATION

The BASTION luminaire, designed for use in EX zones, is used in areas particularly exposed to the risk of explosion, where reliability and safety of lighting are of paramount importance.

- **Underground and opencast mines** – in areas with a high risk of methane or coal dust ignition.
- **Industrial plants** – production halls, warehouses and technological installations, with present flammable gases, dusts or vapours.
- **Petrochemical facilities** – refineries, oil processing plants, fuel terminals, storage tanks.
- **Gasworks and gas distribution stations** – rooms and areas with a risk of combustible gas leakage.
- **Drilling platforms and offshore installations** – sites for the extraction and processing of oil and gas at sea.
- **Power stations and power plants** – particularly in areas related to gas or combustible dust.
- **Chemical industry** – production lines, industrial laboratories, reactors, chemicals storage facilities.
- **Food industry** – areas with organic dust (e.g. sugar factories, mills, grain silos).
- **Ports and shipment terminals** – areas for handling liquid and gaseous fuels.



Network-based control

LoRaWAN / GSM / LTE / NB-IoT communicationtion

For local authorities and operators managing larger areas, the BASTION system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, BASTION can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/ Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each BASTION luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	100–200 W
Luminous flux	7,000-32,000 lm
Luminous efficacy	160 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	≥ 70
Durability	≥ 100,000 hours, L95B10, tested to LM 80 and TM 21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

Installation	facades, mounting beams, suspended from the ceiling
Dimensions of the luminaire	43*41*27 cm / 48*45*27 cm
Weight	12–15,5 kg
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +60 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

Standard colour options available.

RAL 2002 RAL 3001 RAL 3002 RAL 3003 RAL 3004 RAL 3005 RAL 3005

OPTIC DESCRIPTIONS

25°

25° – NARROW BEAM

Focused light distribution, ideal for precise spot lighting or highlighting selected objects. Ideal for situations where a strong beam focus is required.

45°

45° – MEDIUM-NARROW DISTRIBUTION

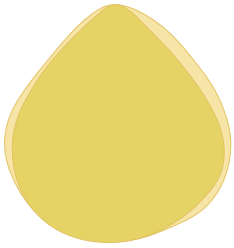
A balanced beam angle, combining a focused effect with wider illumination. Used in accent lighting and where it is necessary to highlight elements of a space while limiting light loss.

60°

60° – MEDIUM DISTRIBUTION

Universal beam angle, for uniform illumination over a larger area. Recommended for general applications such as lighting in rooms, on the streets or squares, where a balance between light intensity and range is important.

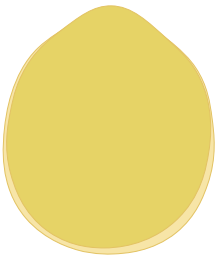
90°



90° – WIDE-ANGLE DISTRIBUTION

A wide beam of light, for effective illumination of large areas. Particularly useful in applications requiring uniform illumination of large, dispersed areas, such as car parks, squares or open spaces.

120°



120° – ULTRA-WIDE BEAM

Widest light distribution for maximum surface coverage. Ideal for illuminating spaces where even, soft light with minimal shadowing is required.


L N N
Lo1 Lo2 Cln Clp C2n C2p Cn_L Cp_L
chronoGSM
POWER MANUAL
LP1 ON LP2 ON
DATA SENSOR
MANUAL/AUTO
LP1 MANUAL
LP2 MANUAL
ANT
PRESS MANUAL
PRESS ON
PRESS ON
SMA
Attention:
1. Remote control failure in manual mode
2. Remote control takes effect in automatic mode
LINTER LIGHTING
+ - RS485
VDD GND A B
In GND Vo1 GND Vo2 GND NC NC NC NC

CHRONO GSM

CHRONO GSM

Automatic lighting control

This device combines the functions of an astronomical clock, circuit controller, measuring module and communication module. It operates independently or as a part of a distributed control system. It supports time, astronomy, local rules, remote control, and sensor integration.

Two circuits control

Two independent circuits, each with current measurement, load analysis, scheduling, and diagnostics. Zero-cross switching minimises current surges.

Real-time telemetry and diagnostics

The controller measures voltage, current, power, energy, power factor, leakage current, and circuit status. Automatic generation of alerts and reports.

Astronomical control

Automatic calculation of sunrise and sunset times, offsets, night break schedules, and seasonal modes.

Advanced rules and operation logic

Support for local and platform logic: IF / AND / OR / ELSE. Rules such as “if current < X - report a fault”, or “if sensor active – switch on circuit”.

Remote management and communication

LTE, LoRaWAN, ZigBee and Bluetooth for local configuration. Remote circuit switching, schedule changes, firmware OTA, parameter monitoring.

Integration with sensors and automation systems

CT, DI, AI 0-10V, PIT inputs and 0-10V/PWM control outputs enable cooperation with sensors, LED drivers and automation systems.

Safety and reliably

Watchdog, short-circuit protection, galvanic isolation, offline operation. Compliance with automation standards.

Fields of Application

This luminaire is designed for professional outdoor and urban lighting systems. It works well in street, park and residential installations, providing safe, even and energy-efficient lighting for public spaces.

Thanks to its ability to integrate with smart control systems, this luminaire can be used in modern Smart City infrastructure, enabling remote management, monitoring of operating parameters and optimisation of energy consumption.

This product can be used for lighting car parks, squares, pedestrian zones, footpaths and cycle paths, recreational areas and public facilities. The robust design and stable light parameters guarantee reliable operation in changing environmental conditions.

POWER SUPPLY

100-277 V AC, 50/60 Hz	
Self consumption < 2 W	
Protection	over-voltage. thermal, watchdog

CIRCUIT OUTPUTS (Lol / Lo2)

2 independent lighting circuits	
SSR/triac relays, zero-cross	
Max. load	2-5 A
Galvanic isolation	

MEASUREMENT INPUTS

CT – 5-10 A	current/power/energy measurement, fault detection
DI - NO/NC	NC/NC. sensors, alarms
AI - 0-10 V	0-10 V, brightness sensor
RT	RCCB leakage current

CONTROL OUTPUTS

PWM/0-10V	
DIAG / NRST service ports	

COMMUNICATION

LTE Cat-I	
LoRaWAN OTAA/ABP	
ZigBee	
Bluetooth	
Optionally RS485/Modbus	

TELEMETRY

Voltage, current, power, energy

Leakage current

Circuits status

Alarm history

ALARMS

Load decrease/loss

Overload, short circuit

Leakage current

No communication

Voltage loss

ASTRONOMY

Sunrise/sunset

Offset ±120 min

Night pauses

Seasonal modes

OPERATING CONDITIONS

-30°C to +70°C

Humidity 5-95% RH

IP20 (IP54-IP66 in a rack)

DESIGN

DIN installation

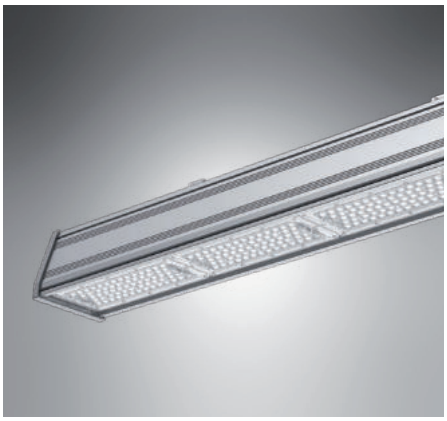
SMA antenna

AUTO / Lol / Lo2 / RESET buttons

Status LEDs

ARI

ARI



ARI is a modern LED luminaire designed for industrial and technical areas, such as production halls, warehouses, logistics centres and commercial facilities. It provides strong, even and comfortable lighting that supports work safety, precision of tasks and user comfort in everyday activities.

Thanks to the use of high-efficiency MST, TCI and BMTC LED modules, ARI offers impressive luminous efficacy of 170 lm/W and a luminous flux ranging from 7,000 to 40,000 lm. Stable operation, long service life ≥100,000 hours (L95B10) and high light quality with CRI >70/80 make this luminaire ideal for environments with high traffic of people and machines, ensuring good visibility and minimising glare (UgR <19).

The robust construction of PVDF-coated aluminium and IP69K protection rating guarantee resistance to dust, moisture, high temperatures, UV rays and salt spray. ARI operates reliably in temperatures ranging from -40 °C to +60 °C, and its IK09/IK10 resistance and compliance with IEC60068-2-6 vibration standards confirm its suitability for harsh industrial environments.

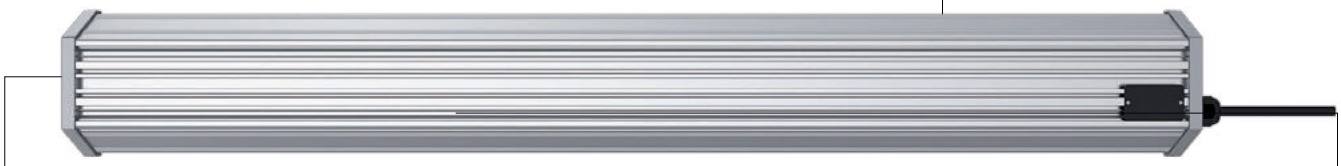
Multi-lens optics with five light distribution characteristics ensure precise adaptation to various applications – from workstation lighting to large warehouse spaces. No upward emission (0%) guarantees compliance with Dark Sky requirements, making the luminaire environmentally friendly. Advanced 1-10 V, DALI, DALI-2 control, autonomous dimming profiles, and support for PIR and microwave sensors, and IoT systems enable the creation of intelligent, energy-efficient lighting installations.

ARI is a solution that combines reliability, high energy efficiency and modern design. It provides a bright, safe and comfortable space, meeting the expectations of even the most demanding industrial and logistics facilities.

Key Competitive Advantages

LUMICO

Advanced multi-lens optics available in five light distribution variants, enabling perfect lighting adjustment to specific warehouse and production areas. Lenses with high UV resistance and transmission ≥86% ensure stable parameters and exceptional light efficiency of up to 185 lm/W, which significantly reduces energy consumption. This solution combines precision, durability and maximum performance in demanding industrial conditions.



DUALCORE BODY

The body is made of durable cast aluminium coated with a resistant PVDF coating that protects the luminaire against corrosion, UV radiation and harsh industrial conditions. The dual-chamber design, separating the optical section from the power supply section, increases component safety, improves heat dissipation, and facilitates servicing, ensuring many years of reliable operation.

LINTER STEERING

An advanced lighting management system that provides full control over luminaire operation in various industrial conditions. It supports 1-10 V, DALI and DALI-2 control, as well as autonomous dimming profiles, with settings adjustable for every minute. The system works with PIR and microwave sensors as well as with the IoT/CMS solutions, enabling intelligent adjustment of lighting to movement, operating time and energy demand. This ensures maximum efficiency, energy savings and stable operation in every facility.

Dualcore Body

STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

Ari DualCore is a durable, technologically advanced body made of precision-cast aluminium, coated with a resistant PVDF coating. This solution guarantees excellent protection against corrosion, UV radiation and adverse weather conditions, ensuring that the luminaire retains its full functionality and aesthetic appeal even in demanding industrial environments.

The luminaire has a dual-chamber design, separating the optical section from the power supply chamber, which effectively protects all components from external factors, facilitates heat dissipation and significantly simplifies servicing. This ensures that the luminaire maintains high efficiency for many years for minimum operating costs.

An integral part of the design is the Fix Hold fastening system, based on a three-point clamp, which ensures stable mounting and even force distribution. This solution protects the luminaire components from loosening and unwanted displacement, even during prolonged operation in environments exposed to vibrations or dynamic machine movements. An additional locking screw provides double security by locking the fastening mechanism and eliminating the risk of self-loosening.

Thanks to its well-thought-out design, Ari DualCore offers complete installation flexibility: it can be installed on mounting beams, steel structures, ceilings or in suspended systems. The dual-chamber design combined with the Fix Hold mechanism increases safety of use, facilitates maintenance and ensures full reliability in harsh industrial, technical and workshop conditions.

A combination of a durable body, advanced protection against external factors and a robust, innovative fastening mechanism makes Ari DualCore stand out in terms of reliability, safety and longevity. This is the ideal solution for facilities where durability, stable installation and ease of maintenance are priorities, as well as maximum protection of LED components and electronics against mechanical and environmental damage.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

Ari is a modern LED luminaire designed for full compatibility with modern lighting management systems. It works well in both simple standalone installations and complex Smart City ecosystems, where integration with smart platforms is of key importance.

The modular architecture of the luminaire and flexible approach to communication enable it to be freely scaled and adapted to local technical conditions, investor requirements and the preferences of lighting system operators. This allows the luminaire to be easily integrated into a variety of industrial, warehouse and technical environments while maintaining full functionality and lighting efficiency.

Advanced communication solutions – including DALI, DALI-2, D4i, 1-10 V, NFC, and compatibility with GSM, NB-IoT, LoRaWAN, and Mesh 2.4 GHz protocols – ensure full integration with various control platforms and open city standards, such as TALQ. This allows Ari SmartFrame to function as part of a larger energy monitoring, automation and optimisation system, offering intelligent lighting control and the ability to adjust operating parameters in real time to the actual needs of the facility.

Ari combines modern design, modularity and integration versatility, making it a reliable tool for lighting management in both industrial spaces and smart city networks.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the CIRI system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, ARI can be controlled from lighting cabinets using:

- clock-based (e.g. Astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

IoT / CMS controllers: PIR, microwave, remote control

An advanced luminaire control system that enables intelligent lighting management in industrial, warehouse and technical spaces. The luminaire works with PIR motion sensors, microwave sensors and remote controls, allowing the light level to be automatically adjusted to the presence of people, machine movement or the specific characteristics of a specific facility.

The system provides energy-efficient and flexible control, enabling the use of dimming scenarios, timed operating programmes, and integration with central management systems (CMS/IoT). This allows the light to be switched on and off exactly where and when it is needed, which increases comfort and safety and reduces energy consumption.

Ari stands out for its simple configuration, stable operation in harsh conditions, and compatibility with existing and modern control systems, creating an intelligent, fully automated lighting environment.

Areas of Application

APPLICATION

The Ari lamp has been designed for demanding spaces where reliability, efficiency and uniform lighting are priorities. It is ideal for:

- garages and underground car parks,
- production and industrial halls,
- warehouses and logistics centres,
- shopping centres and arcades,
- technical rooms and back rooms,
- corridors, tunnels and communication areas,
- open workspaces where intense and energy-efficient lighting is required.

Thanks to its flat, modern design and high-performance LED technology, the Ari lamp is ideal for both new projects and retrofitting in existing lighting installations. Its flexibility allows the lighting to be adjusted to different heights, spatial layouts and functional requirements, ensuring comfort at work and energy savings.

Efficiency

The CIRI luminaire is characterised by high luminous efficacy, ensuring optimal energy utilisation with minimal operating costs. Thanks to the use of modern LED technology, it offers stable operating parameters and a long service life of up to 100,000 hours, regardless of the power range, minimising maintenance and replacement costs.
The optimised housing design and dual-chamber layout promote effective heat dissipation, which translates into maintaining full light output even during prolonged operation in demanding environmental conditions.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	100–200 W
Luminous flux	7,000-40,000 lm
Luminous efficacy	170 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	>70 / >80
UGR	<19
Durability	≥ 100,000 hours, L95B10, tested to LM 80 and TM 21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

Installation	hook/chain + optional ceiling brackets BC-H27-01 i BC-H44-
Dimensions of the luminaire	Ø400 x 156 mm
Weight	5.3 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	PIR, microwave, remote control
Communication sockets	PIR, microwave, remote control
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP69K
Mechanical strength	IK 09 / IK 10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C4 according to ISO 9223:2012
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

ACCESSORIES

Bi-level PIR sensor
Bi-level microwave sensor
Sensor adaptor
Ceiling mount
Set of slings, 2 m
RC-100 remote control

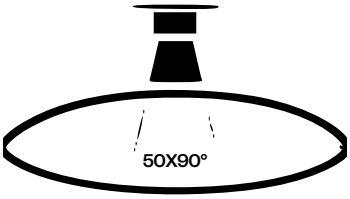
Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

OPTIC DESCRIPTIONS

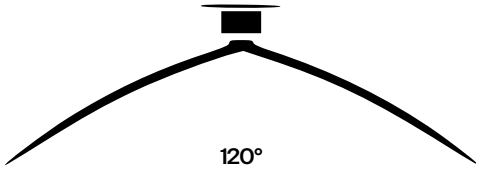
30x70° - Narrow elliptical beam (for corridors)

Extended, directional light distribution with a narrow transverse angle and a wider longitudinal angle. Designed for lighting warehouse aisles, passageways and high corridors where light must be directed parallel to the axis of the passageway.



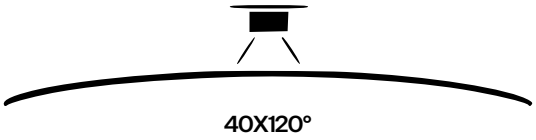
50x90° - Medium-wide elliptical distribution

A more open light profile that balances intensity along the longitudinal axis with extended lateral coverage. Ideal for production halls, warehouses and work areas where wider but still directional lighting is required. It works well wherever clarity of space is required while maintaining control over light dispersion. It ensures high efficiency and limited light loss, strongly concentrating the beam in the direction of use.



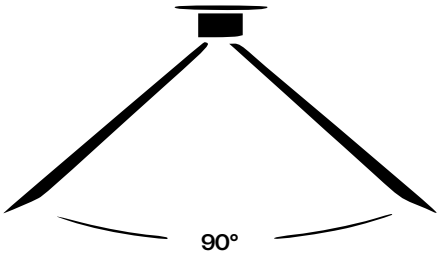
120° - Ultra-wide beam

Symmetrical, wide beam angle for high uniformity and maximum surface coverage. Recommended for open halls, sports halls, production spaces and low-mounted areas where uniform lighting without harsh shadows is important.



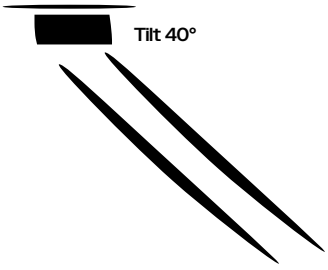
40x120° - Wide elliptical distribution (production / open halls)

The 40° angle in the transverse axis and as much as 120° in the longitudinal axis creates very wide coverage in one direction, while maintaining a narrower beam in the other. An ideal optics for production areas, assembly halls and wide zones where luminaires are mounted linearly or parallel to work lines. It ensures high uniformity and contrast reduction. It ensures high efficiency and limited light loss, strongly concentrating the beam in the direction of use.



90° - Broad, general distribution

Classic 90° distribution for wide and even illumination of the space. It works well in warehouses, logistics halls and open workspaces where wide coverage and comfortable vision are a priority.



Tilt 40° - an asymmetrical directional beam

Optics tilted at 40°, providing a clearly directional, asymmetrical light distribution that can be directed towards the area requiring illumination. Ideal for illuminating side work areas, storage shelves, walls, production lines, and areas where luminaires cannot be mounted centrally above the work area. Allows light to be directed without mechanically tilting the luminaire.


AURA

AURA

AURA is a modern luminaire designed for recreational and urban spaces such as parks, walking paths, squares and city gardens. It provides comfortable, even lighting that promotes safe walking and outdoor activities after dark, while enhancing the aesthetic appeal of the surroundings. Thanks to precisely selected LED technology, it is characterised by high luminous efficiency and reliability; its light is friendly for eyes, eliminating glare and improving visibility in public spaces. Its elegant and minimalist form allows the lamp to blend harmoniously into a variety of settings, from modern city parks to historic squares and urban gardens. AURA is not only functional, but also durable and energy-efficient, making it an environmentally friendly and economically viable solution over its long service life. Its design and lighting parameters allow for the creation of a safe, comfortable and aesthetic public space where residents and visitors can enjoy greenery and recreation both during the day and after dark.

50 Hz
60 Hz

200 V
260 V

IP 66
IP 67

IK 09
IK 10

Min
-40°C

Max
50°C

Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

OPTIFLAT

The lighting panel uses modern LEDs with a programmable rated power in the range of 15–80 W, adjustable in 1 W increments with NFC technology, which allows for precise adjustment of performance to the needs of a specific installation. It provides a luminous flux in the range of 2,400-12,800 lm with high luminous efficacy of 160 lm/W, which guarantees efficient energy use and minimises operating costs.

SLIM LINE BODY

The body is made of cast aluminium coated with PVDF, which ensures high resistance to corrosion, UV radiation and adverse weather conditions. The design is dual-chambered, with a clear division between the optical chamber and the power supply chamber, which facilitates installation, maintenance and servicing of the device. The service access is provided using tools, which increases security and protects against unauthorised access.
The body has been designed to be self-cleaning, with a smooth surface, without ribs or creases, which minimises the accumulation of dust and dirt and makes it easier to keep the device clean.

Slim Line Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The AURA luminaire has been designed for maximum durability, environmental resistance and operational safety. Its body is made of durable ADC12 cast aluminium, coated with PVDF fluoropolymer, which provides exceptional resistance to UV radiation, acid rain, urban pollution and salt mist. The PVDF coating also offers excellent adhesion, low abrasion and high colour stability over time, allowing AURA luminaires to be used safely even in demanding industrial or coastal environments.

The AURA design incorporates a modular approach to installation and servicing. The power supply chamber can be opened in two ways – without tools or with tools – depending on the investor's preferences or the operator's service policy. The tool-free version uses snap-on clips that allow the housing to be opened quickly in the field without having to dismantle the luminaire. Alternatively, the version with a tool lock guarantees controlled access – particularly recommended in public spaces exposed to unauthorised interference.

In both variants, the luminaire closure mechanism is equipped with the option of applying a warranty or inspection seal, which protects the interior of the luminaire against unauthorised interference and allows you to clearly determine whether the device has been opened since installation.

Another very important element of the AURA design is the five-point mounting system, which ensures stable and secure attachment of the luminaire to a pole or a boom. Additionally, the adjustable mounting bracket allows for precise positioning of the luminaire in two planes:

- the swivel joint allows rotation in the horizontal axis within a range of -90° to +90°,
- the base of the bracket, mounted directly to the luminaire, allows for tilt adjustment within a range of -15° to +15°.

This solution eliminates the need for additional angle adapters and significantly speeds up the installation process, regardless of terrain conditions, boom type or road inclination angle. The flexibility of the optics setting in relation to the illuminated surface translates into higher project efficiency and lower risk of execution errors.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

AURA luminaires are fully compatible with modern lighting management systems and meet the needs of investors in terms of both simple stand-alone installations and fully integrated Smart City networks. Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences. Three independent control models are available.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the AURA system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from local infrastructure).

Linter Control controllers can be factory-equipped with appropriate communication interfaces, and all data from the luminaires is sent to a central management platform, which enables:

- location mapping of luminaires (GPS),
- energy consumption analysis,
- checking of failures and alarm conditions,
- remote configuration changes (e.g. updating power profiles or sensor thresholds).

Thanks to its compatibility with open protocols, the system can be integrated with existing municipal platforms or expanded in a modular manner.

Control from lighting cabinets

Central group controllers

In classic installations, AURA can be controlled from lighting cabinets using:

- clock-based (e.g. Astronomical) controllers,
- time switches with relays,
- remote GPRS-based telemetry systems.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each AURA luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a modification.

- Luminaires with a built-in Linter Control controller can:
- implement power reduction profiles based on an astronomical clock or schedule,
- respond to presence sensors and environmental conditions,
- be remotely monitored and configured by a master system (e.g. via GSM/NB-IoT),

report energy data (including consumption, voltage, luminaire status, operating temperature).

Efficiency

This LED luminaire is characterised by high efficiency and flexibility of operation. The power range from 15 to 80 W (programmable in 1 W increments) allows for precise adjustment of parameters to the project requirements. It generates a luminous flux of 2,400–12,800 lm, achieving an efficiency of 160 lm/W. Thanks to the CLO function, it maintains a constant luminous flux throughout its entire service life, which is estimated at over 100,000 hours (L95B10).

LINTER LIGHTING

The luminaire supports advanced control systems (1-10 V, DALI, DALI-2, D4I, NFC), and built-in autonomous dimming profiles enable further optimisation of energy consumption. Additional electronic safeguards and active LED temperature control guarantee stable and trouble-free operation even in harsh conditions.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15–80 W, programmable in 1 W increments (NFC)
Luminous flux	2,400-12,800 lm
Luminous efficacy	160 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K
Colour Rendering Index (CRI)	≥ 70
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.99
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

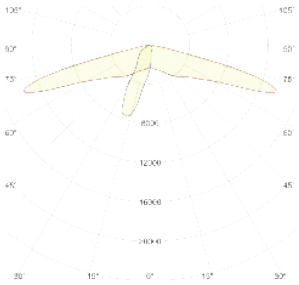
Installation	on a pole or boom, Ø 32-76 mm
Dimensions of the luminaire	500 x 300 mm
Weight	4.7 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Self-cleaning body	smooth, no ribs
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	23
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

LIGHT DISTRIBUTION

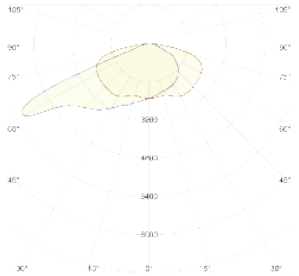


1. L-type optics – roadside distribution (asymmetrical longitudinal, narrow)

Designed for single-sided installation along motorways and local roads. Provides effective road lighting with large pole spacing, minimising side emissions.

APPLICATION

Single carriageway roads, residential areas, footpaths and cycle paths.

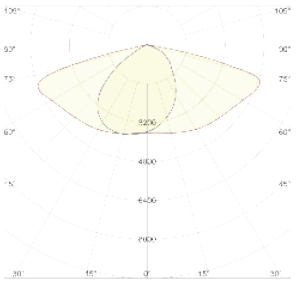


2. S-type optics – medium-wide distribution (asymmetrical with a wide angle)

Wide longitudinal distribution with extended lateral emission. It provides optimal illumination of the road and pavements on both sides of the road.

APPLICATION

City streets, Z and L class roads, transport routes with verges.

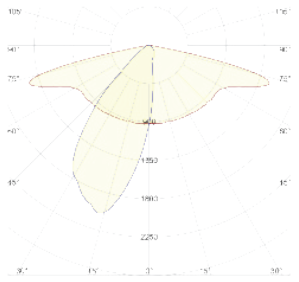


3. ME3 optics – symmetrical roadside distribution, medium-narrow

Suitable for central mounting, it provides uniform illumination of both lanes and the centre line.

APPLICATION

Main urban and suburban roads, pole arrangements in the centre of the road.

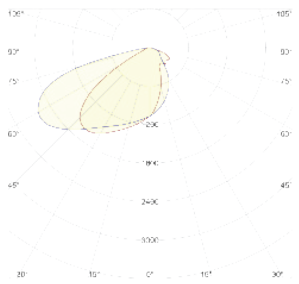


4. T-type optics – tunnel/wide cross-sectional distribution

Optics with focused emission in the transverse plane. Particularly effective for lighting areas with limited installation height.

APPLICATION

Tunnels, underpasses, infrastructure facilities.

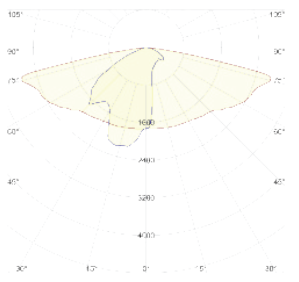


5. P6 optics – symmetrical, wide dispersion

Universal symmetrical optics for lighting squares, car parks and open areas.

APPLICATION

Car parks, bus bays, manoeuvring areas.



6. C2 optics – asymmetrical with rear emission (cut-off)

Provides high glare control and limited light emission outside the illuminated area.

APPLICATION

Industrial areas, roads with buildings on one side, minimisation of light pollution.

CIRI

CIRI

CIRI is a modern luminaire designed for demanding technical and utility spaces, such as car parks, production halls, warehouses, logistics centres and commercial facilities. It provides uniform, efficient and comfortable lighting that supports safety, precision and user comfort in any environment, regardless of the time of day.

Thanks to the use of high-class LED technology, CIRI is characterised by above-average light efficiency, stable operation and long service life. The emitted light is easy on the eyes, eliminates glare and improves visibility, which is crucial in spaces with constant movement of employees, vehicles and customers.

The minimalist, flat design of the lamp makes it a perfect fit for both modern industrial facilities and aesthetic commercial spaces. Its robust construction allows it to operate in harsh conditions, while its energy efficiency translates into real operating savings and reduced environmental impact.

CIRI is a solution that combines functionality, reliability and modern design to create a safe, well-lit and friendly space – both for work and everyday use. If you care about quality, durability and efficiency, CIRI will meet these requirements in every application.

Key Competitive Advantages

LINTER STEERING

An advanced lighting management system that provides full control over luminaire operation in various industrial conditions. It supports 1-10 V, DALI and DALI-2 control, as well as autonomous dimming profiles with adjustable settings for every minute. The system works with PIR and microwave sensors as well as with the IoT/CMS solutions, enabling intelligent adjustment of lighting to movement, operating time and energy demand. This ensures maximum efficiency, energy savings and stable operation in every facility.

FUEL

The OIRI lamp's luminous panel combines high efficiency with precise lighting for industrial, warehouse and commercial spaces. Equipped with modern LED sources (MST/TOI/BMTO), it offers a luminous flux of 7,000 to 40,000 lm with an efficiency of up to 170 lm/W, providing energy-efficient and bright lighting for large areas. parameters and maximum luminous efficacy of up to 185 lm/W, which significantly reduces energy consumption compared to traditional luminaires.

DOMINION BODY

The DOMINION body, made of cast aluminium with a PVDF coating, ensures high resistance (04, UV, salt mist, -40 °C to +60 °C). The compact, self-cleaning Ø400 x 156 mm housing is ideal for halls, warehouses and commercial facilities. The dual-chamber design increases durability and facilitates servicing, and installation is possible on a hook, chain or BC-H27-01 / BC-H44-01 brackets. Built-in protections (thermal, overvoltage, short circuit, ESD) and an LED temperature sensor increase reliability. Full IP69K, IK09/IK10 resistance and compatibility with Zhaga, CASAM-BI, PIR and microwave modules facilitate integration with smart lighting systems.

Domion Body

STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

The DOMINION body is made of cast aluminium with a PVDF coating, ensuring resistance to corrosion (C4), UV radiation, salt spray and high operating temperatures (-40 °C to +60 °C). The housing, measuring Ø 400 x 156 mm and weighing 5.3 kg, features a smooth, self-cleaning surface and a minimalist design, ideal for halls, warehouses and commercial spaces.

The dual-chamber design separates the optical and power supply sections, facilitating servicing and increasing durability. The body is designed for mounting on a hook or chain, with the option of using BC-H27-01 and BC-H44-01 ceiling brackets. It is equipped with a 3-pole scissor switch, active thermal, overvoltage, short-circuit and ESD protection, and an LED temperature sensor that limits the current in case of overheating.

The CIRI lamp provides full IP69K protection, IK09/IK10 mechanical resistance, as well as compatibility with Zhaga, CASAMBI, PIR, microwave communication modules and remote controls. This ensures that the body is reliable, durable and easy to integrate with smart lighting systems in industrial and commercial environments.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The CIRI lamp offers advanced and flexible control, enabling smooth adjustment of operation in both simple installations and smart lighting systems. It supports 1-10 V, DALI, DALI-2, D4i standards and NFC configuration, allowing you to easily adjust its brightness, schedules and operating parameters.

Built-in autonomous dimming profiles allow you to programme up to five independent modes, adjustable every minute, which is particularly useful in projects requiring automatic operation without additional controllers. The OLO function maintains a constant luminous flux throughout the entire service life, while the soft-start system and numerous safety features – thermal, overvoltage, short-circuit and ESD protection – guarantee safe and stable operation even in difficult conditions.

The lamp is also prepared for integration with IoT networks and lighting management systems (GSM, NB-IoT, LoRaWAN, Mesh), compatible with TALQ and equipped with Zhaga Book 18 connectors for easy connection of sensors and communication modules. This allows OIRI to be precisely controlled, monitored and configured, ensuring maximum efficiency and complete control over lighting.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the CIRI system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, CIRI can be controlled from lighting cabinets using:

- clock-based (e.g. Astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each CIRI luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration without the need for physical modification.

Areas of Application

APPLICATION

The lamp has been designed for demanding spaces, where reliability, efficiency and uniform lighting is important.

- garages and underground car parks,
- production and industrial halls,
- warehouses and logistics centres,
- shopping centres and arcades,
- technical rooms and back rooms,
- corridors, tunnels and communication areas,
- open workspaces where intense and energy-efficient lighting is required.

Thanks to its flat design and modern LED technology, this lamp is ideal for both new projects and retrofitting in existing lighting installations.

Efficiency

The CIRI lamp is characterised by very high efficiency, which results from the combination of powerful LED sources, advanced optics and stable electronics. With a rated power of 100 to 200 W, it generates a luminous flux of 7,000-40,000 lm, achieving an efficiency of up to 170 lm/W, which places it among the most efficient luminaires available on the market. A variety of colour temperatures – from 2200 K to 6500 K – allow you to select the light to suit the needs of the space, while maintaining a high colour rendering index (CRI >70/80). The high quality of LED sources (MST, TCI, BMTC) and the use of a dual-chamber design and effective heat dissipation translate into exceptional durability - ≥100,000 hours at L95B10, confirmed by LM80 tests and TM21 projection. Low ripple (<6%), power factor ≥0.98 and THD <10% ensure stable, energy-efficient operation without interference. The high optical efficiency of the luminaire also results from the use of multi-lens systems made of UV-resistant material with a transmission of ≥86%, available in five light distribution characteristics, which allows for precise management of efficiency depending on the application. All these elements make CIRI offer above-average performance, combining high power, high luminous efficacy and longevity in a single luminaire.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	100–200 W
Luminous flux	7,000-40,000 lm
Luminous efficacy	170 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K/
Colour Rendering Index (CRI)	>70 / >80
UGR	<19
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

Installation	hook/chain + optional ceiling brackets BC-H27-01 i BC-H44-01
Dimensions of the luminaire	Ø 400 x 156 mm
Weight	5.3 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
Light distribution characteristics	5
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP69K
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C4 according to ISO 9223:2012
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

OPTIC DESCRIPTIONS

25°

25° – NARROW BEAM

Focused light distribution, ideal for precise spot lighting or highlighting selected objects. Ideal for situations where a strong beam focus is required.

45°

45° – MEDIUM-NARROW DISTRIBUTION

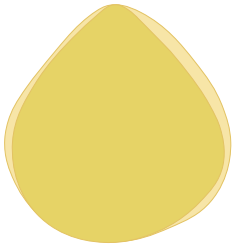
A balanced beam angle, combining a focused effect with wider illumination. Used in accent lighting and where it is necessary to highlight elements of a space while limiting light loss.

60°

60° – MEDIUM DISTRIBUTION

Universal beam angle, for uniform illumination over a larger area. Recommended for general applications such as lighting in rooms, on the streets or squares, where a balance between light intensity and range is important.

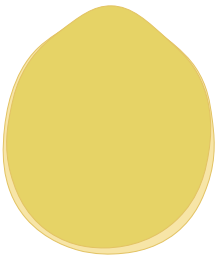
90°



90° – WIDE-ANGLE DISTRIBUTION

A wide beam of light, for effective illumination of large areas. Particularly useful in applications requiring uniform illumination of large, dispersed areas, such as car parks, squares or open spaces.

120°



120° – ULTRA-WIDE BEAM

Widest light distribution, for maximum surface coverage. Ideal for illuminating spaces where even, soft light with minimal shadowing is required.


DISC

DISC

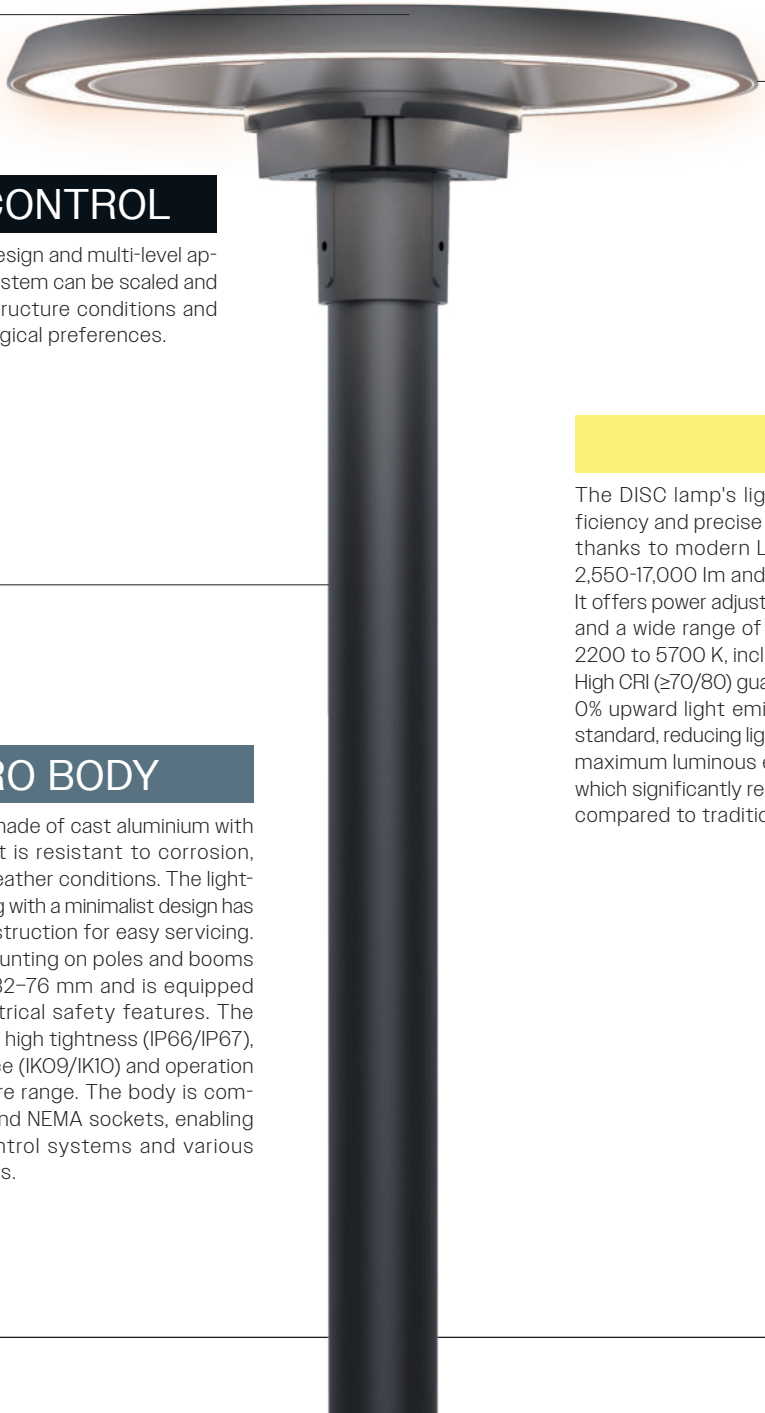
DISC is a modern luminaire designed specifically for street and road lighting, as well as for non-public residential roads, squares, internal areas and private spaces where safety, visibility and reliability are of key importance. The luminaire provides uniform, well-directed light that effectively improves comfort for pedestrians and drivers, minimises the risk of glare and increases the overall visibility of the space after dark.

Thanks to precisely selected LED technology, DISC is characterised by high luminous efficiency, low energy consumption and a long period of trouble-free operation, which translates into low operating costs and less environmental impact. Its light is stable, natural and easy on the eyes, which is particularly important in heavily used areas.

Its robust, weather-resistant construction makes DISC ideal for use on open roads as well as in semi-private and residential areas, offering safety and aesthetic, consistent lighting for the surroundings. The minimalist form of the lamp fits harmoniously into a variety of architectural environments, from modern housing estates to recreational areas and private properties.

DISC combines durability, efficiency and minimalist design to create safe, well-lit and aesthetically pleasing spaces that promote the comfort of residents and users both during the day and at night.

Key Competitive Advantages



LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

LIK

The DISC lamp's light panel ensures high efficiency and precise lighting of outdoor spaces thanks to modern LED sources with a flux of 2,550-17,000 lm and an efficiency of 170 lm/W. It offers power adjustment (3-step Power Select) and a wide range of colour temperatures from 2200 to 5700 K, including 2700/3000/4000 K. High CRI (≥70/80) guarantees natural colours, and 0% upward light emission meets the Dark Sky standard, reducing light pollution, parameters and maximum luminous efficacy of up to 185 lm/W, which significantly reduces energy consumption compared to traditional luminaires.

PETRO BODY

The PETRO body is made of cast aluminium with a PVDF coating that is resistant to corrosion, UV rays and harsh weather conditions. The lightweight, smooth casing with a minimalist design has a dual-chamber construction for easy servicing. It is designed for mounting on poles and booms with a diameter of 32–76 mm and is equipped with numerous electrical safety features. The DISC luminaire offers high tightness (IP66/IP67), mechanical resistance (IK09/IK10) and operation in a wide temperature range. The body is compatible with Zhaga and NEMA sockets, enabling integration with control systems and various optical configurations.

Petro Body

STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

The PETRO body is made of cast aluminium with a PVDF coating, ensuring resistance to corrosion (C3-H according to ISO 9227), UV radiation and harsh weather conditions. The enclosure, measuring Ø 503 x 169 mm and weighing 4.6 kg (N.W.), features a smooth, self-cleaning surface and minimalist design, ideal for public and private spaces.

The dual-chamber design separates the optical section from the power supply section, facilitating servicing. The body is designed for mounting on a pole or boom with a diameter of 32–76 mm, with a 3-pole scissor switch and active thermal, overvoltage, short-circuit and ESD protection.

The DISC luminaire provides full IP66/IP67 protection, IK09/IK10 mechanical resistance and an operating temperature range of -40 °C to +50 °C. The body is compatible with Zhaga Book 18 and NEMA ANSI C136.41 communication sockets, enabling integration with control systems and IoT networks, and the panel itself is prepared for various optical configurations (top/bottom/double).

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The DISO lamp's control system is versatile. It allows for precise adjustment of operating parameters to suit the conditions of the space and energy efficiency requirements. The luminaire supports 1-10 V, DALI, DALI-2, D4i and NFO control, allowing for both classic dimming and integration with advanced smart lighting systems. Autonomous dimming profiles (5 programmes with 1-minute adjustment) and the OLO function, which guarantees a constant light output throughout the entire service life, are also available.

Thanks to NFO technology, programmable power adjustment is possible in 1 W increments, and the 3-step Power Select version offers quick selection of 20/30/40 W or 30/45/60 W configurations. The lamp is designed to work in IoT and intelligent lighting management (OMS) systems, compatible with GSM, NB-IoT, LoRaWAN and Mesh 2.4 GHz networks and the TALQ protocol. Communication and integration are facilitated by Zhaga Book 18 and NEMA ANSI 0136.41 sockets (various configurations: top/bottom/double).

The control system is additionally supported by: soft start, electronic protection, a temperature sensor limiting the current in case of overheating, and a built-in 3-pole power switch, which ensures safe and long-lasting operation of the luminaire.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the DISC system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, DISC can be controlled from lighting cabinets using:

- clock-based (e.g. Astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each DISC luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7-pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration without the need for physical modification.

Areas of Application

APPLICATION

DISC is ideal for lighting a variety of outdoor spaces where safety, user comfort and high-quality light are key. The lamp is designed for:

- roads and transport routes
  Provides even, well-directed lighting, improving visibility for drivers and pedestrians and increasing safety after dark.
- alleys and footpaths
  It creates comfortable, eye-friendly light that enables safe movement and emphasises the character of recreational spaces.
- private residential roads
  It guarantees residents' sense of security, aesthetically complementing the architecture of housing estates and providing adequate lighting for pavements, driveways and car parks.
- squares, courtyards and internal areas
  It is ideal for heavily used areas, offering stable and uniform light that improves the legibility and functionality of the space.
- private land and property
  Provides elegant, discreet lighting for driveways, gardens and entrance areas, enhancing the safety and aesthetics of the surroundings.
- outdoor car parks and access zones
  Thanks to its high luminous efficacy, it improves visibility in areas with heavy traffic, facilitating orientation and vehicle manoeuvring.
- commercial and service areas
  It works well in commercial, office and manufacturing environments, providing adequate lighting for spaces with a variety of uses.

Efficiency

The DISC lamp has been designed for maximum energy efficiency and high-quality light. Thanks to modern LED sources (MST/TCI/BMTC), it achieves a luminous flux of 2,550 to 17,000 lm with a very high efficiency of 170 lm/W, which guarantees bright lighting with low energy consumption.

The luminaire offers a wide range of colour temperatures – from 2200 K to 5700 K, and in the version with CCT selection, three levels are available (2700 K / 3000 K / 4000 K), allowing you to adjust the character of the lighting to different types of spaces. High CRI ≥ 70/80 ensures natural colour rendering, which is important in public and recreational spaces.

In addition, the lamp has a lifetime of ≥ 100,000 hours (L95B10) confirmed according to LM80 and TM21, and CLO technology maintains a constant light level throughout its lifetime. No upward light emission (0%) and precise optical systems make the luminaire extremely efficient and compliant with Dark Sky standards, while minimising losses and light pollution.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15-100 W, programmable in 1 W increments (NFC) Model 3 step Power Select: • 20/30/40 W • 30/45/60 W
Luminous flux	2,550-17,000 lm
Luminous efficacy	170lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K • 3 CCT selectable: 2700K / 3000K / 4000K
Colour Rendering Index (CRI)	>70 / >80
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.99
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

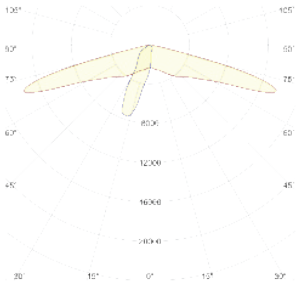
Installation	on a pole or boom, Ø 32-76 mm
Dimensions of the luminaire	Ø 503 x 169 mm
Weight	4.6 kg (N.W.) / 6.3 kg (G.W.)
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Fastening mechanism	3-point clamp with counter screw
Connector	IP68 with sealing gland
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
Light distribution characteristics	23
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	ENEC, ENEC+

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

LIGHT DISTRIBUTION

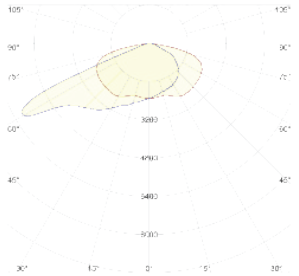


1. L-type optics – roadside distribution (asymmetrical longitudinal, narrow)

Designed for single-sided installation along motorways and local roads. Provides effective road lighting with large pole spacing, minimising side emissions.

APPLICATION

Single carriageway roads, residential areas, footpaths and cycle paths.

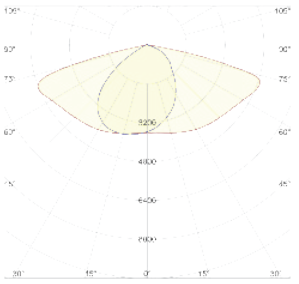


2. S-type optics – medium-wide distribution (asymmetrical with a wide angle)

Wide longitudinal dispersion with extended lateral emission. It provides optimal illumination of the road and pavements on both sides of the road.

APPLICATION

City streets, Z and L class roads, transport routes with verges.

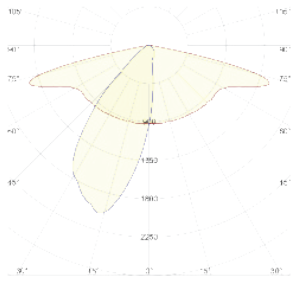


3. ME3 optics – symmetrical roadside distribution, medium-narrow

Suitable for central mounting, it provides uniform illumination of both lanes and the centre line.

APPLICATION

Main urban and suburban roads, pole arrangements in the centre of the road.

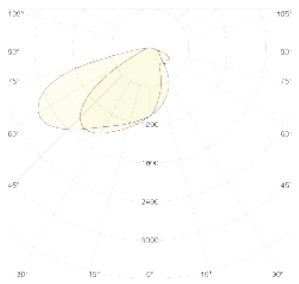


4. T-type optics – tunnel/wide cross-sectional distribution

Optics with focused emission in the transverse plane. Particularly effective for lighting areas with limited installation height.

APPLICATION

Tunnels, underpasses, infrastructure facilities.

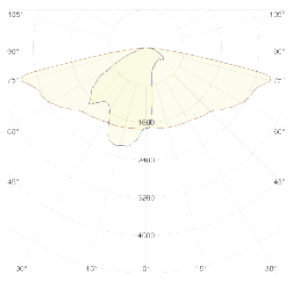


5. P6 optics – symmetrical, wide dispersion

Universal symmetrical optics for lighting squares, car parks and open areas.

APPLICATION

Car parks, bus bays, manoeuvring areas.



6. C2 optics – asymmetrical with rear emission (cut-off)

Provides high glare control and limited light emission outside the illuminated area.

APPLICATION

Industrial areas, roads with buildings on one side, minimisation of light pollution.


FENDA

FENDA

FENDA is a modern lighting solution designed for a variety of outdoor and industrial applications. Thanks to advanced LED technology and an aluminium casing with high resistance to weather conditions, the device not only ensures a long service life, but also excellent light efficiency and minimal operating costs.

The model is available in a wide range of power ratings – from 15 W to 300 W – allowing for precise selection of the variant to suit the needs of a specific project: from subtle decorative lighting to intense illumination of industrial areas, road infrastructure or sports facilities.

Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

LUXOR 3.0

A wide power range from 15 to 300 W allows for precise selection of the variant to suit specific needs. High luminous efficacy – up to 160 lm/W – ensures significant energy savings compared to traditional light sources.

ENDURO

The body is made of cast aluminium coated with PVDF, which ensures high resistance to corrosion, UV radiation and adverse weather conditions. The design features two chambers – a separate optical chamber and a power supply chamber – which guarantees effective protection of internal components and easier maintenance.

Enduro Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The casing is made of cast aluminium with a PVDF coating. This solution provides increased resistance to corrosion, UV radiation and weather conditions. The design features a dual-chamber layout – with a separate optical chamber and power supply chamber – which increases component durability and simplifies servicing.

The Fix Hold system is a robust and reliable solution for securing lamps. The 3-point clamp ensures stability and even distribution of force, which protects the element from loosening or shifting.

In addition, the locking screw acts as a safety feature – it prevents the entire assembly from unscrewing on its own, ensuring secure installation even under heavy use or vibration.

This type of mounting is ideal for technical, workshop and industrial lighting, where safety, durability and ease of maintenance are important.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

FENDA luminaires are fully compatible with modern lighting management systems and meet the needs of investors in terms of both simple stand-alone installations and fully integrated Smart City networks. Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences. Three independent control models are available.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the FENDA system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Linter Control controllers can be factory-equipped with appropriate communication interfaces, and all data from the luminaires is sent to a central management platform, which enables:

- location mapping of luminaires (GPS),
- energy consumption analysis,
- checking of failures and alarm conditions,
- remote configuration changes (e.g. updating power profiles or sensor thresholds).

Thanks to its compatibility with open protocols, the system can be integrated with existing municipal platforms or expanded in a modular manner.

Control from lighting cabinets

Central group controllers

In classic installations, FENDA can be controlled from lighting cabinets using:

- clock-based (e.g. Astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

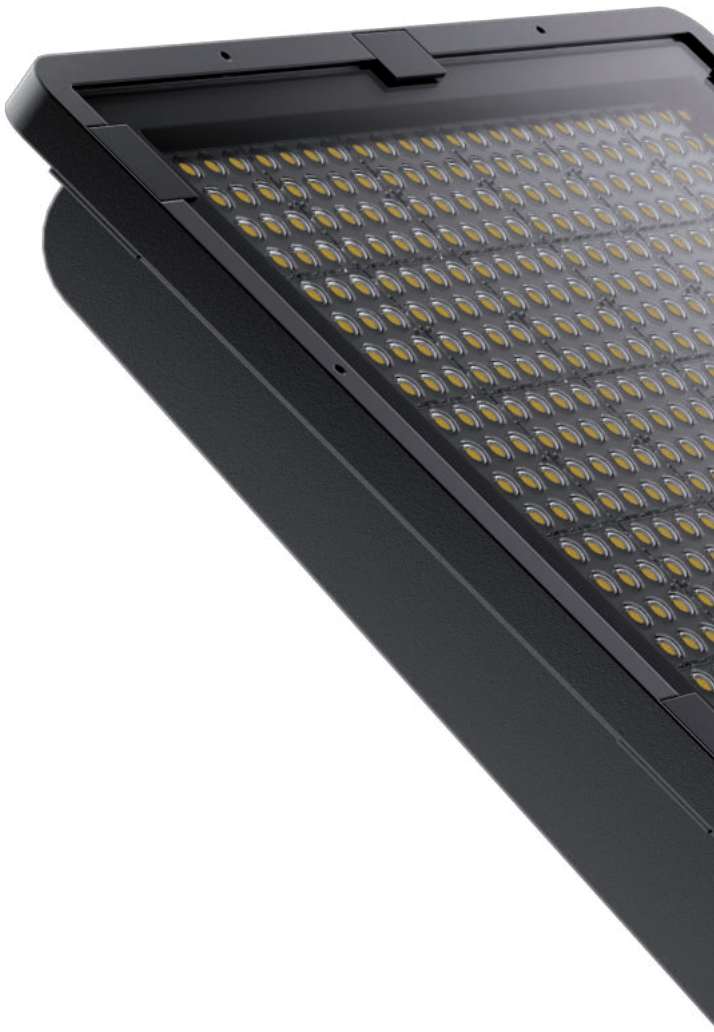
Each FENDA luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.

Luminaires with a built-in Linter Control controller can:

- implement power reduction profiles based on an astronomical clock or schedule,
- respond to presence sensors and environmental conditions,
- be remotely monitored and configured by a master system (e.g. via GSM/NB-IoT),
- report energy data (including consumption, voltage, luminaire status, operating temperature).



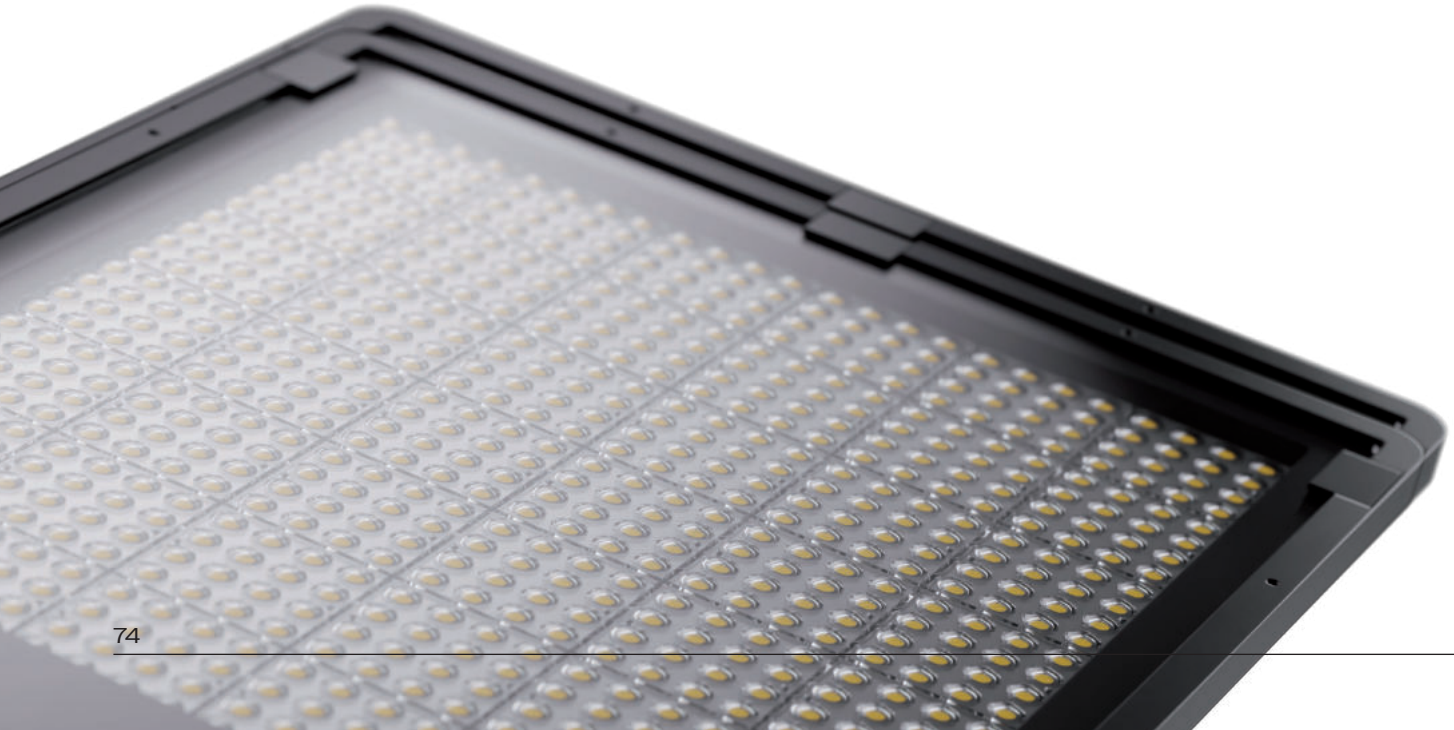
Areas of Application

Low Power, 15-50 W

APPLICATION

- Lighting for private properties, terraces, gardens, footpaths and garage access routes
- Decorative and accent lighting for architecture – illumination of facades, building details, sculptures and monuments
- Lighting for building entrances, entrance gates, small signs and advertisements
- Auxiliary interior lighting in technical areas of warehouses, workshops and back rooms

This is the ideal solution for applications requiring low power consumption and an aesthetic lighting effect.



Medium Power, 50-150 W

This range is applicable in areas where greater light intensity and wider coverage are required. It is the optimal compromise between performance and investment cost.

APPLICATION

- Lighting for medium-sized squares, school sports fields, residential car parks and communal areas
- Additional lighting for production halls, workshops
- and warehouses with medium traffic intensity
- Illumination of large advertisements, billboards and facades of commercial and institutional buildings
- Lighting for construction sites, loading/unloading areas, ramps, shipment areas

The 50-150 W versions are the most common choice for public administration, housing developers and manufacturing plants.

High Power, 150-300 W

The highest power range is designed for tasks requiring very high light intensity and operational reliability in harsh environmental conditions.

APPLICATION

- Lighting for medium-sized squares, school sports fields, residential car parks and communal areas
- Lighting for large car parks, industrial sites, logistics centres and container terminals
- Sports fields, sports halls, training halls, tennis courts – for amateur and semi-professional use
- Lighting for engineering infrastructure: bridges, viaducts, tunnels, flyovers and other road structures
- Temporary lighting for mass events, outdoor concerts, event zones
- Intensive lighting for overhead travelling crane structures, cranes, machinery and large-volume industrial halls

Highest luminous efficacy with maximum durability and resistance – recommended for industry and technical services.

Efficiency

The FENDA luminaire is characterised by high luminous efficacy, ensuring optimal energy utilisation with minimal operating costs. Thanks to the use of modern LED technology, it offers stable operating parameters and a long service life of up to 100,000 hours, regardless of the power range, minimising maintenance and replacement costs.

The optimised housing design and dual-chamber layout promote effective heat dissipation, which translates into maintaining full light output even during prolonged operation in demanding environmental conditions.

LINTER LIGHTING

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15-300 W, programmable in 1 W increments (NFC)
Luminous flux	2,400-48,000 lm
Luminous efficacy	160 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K/
Colour Rendering Index (CRI)	≥ 70
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating

GENERAL

Installation	on a pole or boom Ø 32-76 mm, mounting beam, vertical
Tilt adjustment	-180° to +180°, in 5° increments
Dimensions of the luminaire	261 x 193 x 126 mm
Weight	1,7-6,1 kg (depending on version; to be measured)
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Fastening mechanism	3-point clamp with counter screw
Connector	IP68 with sealing gland
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Cut-off optics	glare and backlight emission reduction
Lens material	UV resistant, transmission ≥ 86 %
Cut-off optics	backwards glare and emission reduction
Light distribution characteristics	5
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

OPTIC DESCRIPTIONS

25°

25° – NARROW BEAM

Focused light distribution, ideal for precise spot lighting or highlighting selected objects. Ideal for situations where a strong beam focus is required.

45°

45° – MEDIUM-NARROW DISTRIBUTION

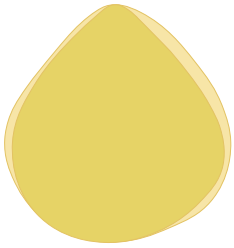
A balanced beam angle, combining a focused effect with wider illumination. Used in accent lighting and where it is necessary to highlight elements of a space while limiting light loss.

60°

60° – MEDIUM DISTRIBUTION

Universal beam angle, for uniform illumination over a larger area. Recommended for general applications such as lighting in rooms, on the streets or squares, where a balance between light intensity and range is important.

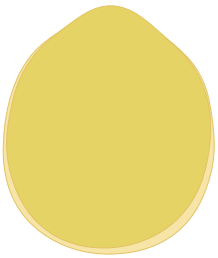
90°



90° – WIDE-ANGLE DISTRIBUTION

A wide beam of light, for effective illumination of large areas. Particularly useful in applications requiring uniform illumination of large, dispersed areas, such as car parks, squares or open spaces.

120°



120° – ULTRA-WIDE BEAM

Widest light distribution for maximum surface coverage. Ideal for illuminating spaces where even, soft light with minimal shadowing is required.

FLATORA

FLATORA

FLATORA is a modern luminaire designed to create safe, comfortable and aesthetic urban spaces. It is ideal for city markets, public spaces in the broad sense, recreational gardens and pedestrian walkways, where uniform lighting, durability and harmonious integration into the surroundings are key.

Thanks to the use of energy-efficient LED technology, the lamp provides high luminous efficiency, stable operating parameters and eye-friendly light, conducive to walking, relaxation and activity after dark. Its light highlights the architectural and natural qualities of the surroundings, while significantly increasing user safety.

The minimalist form of the FLATORA luminaire allows it to blend seamlessly with a variety of architectural styles, from modern city squares to traditional parks and green recreational areas. The durable, weather-resistant design guarantees long-term, trouble-free operation in demanding outdoor conditions.

FLATORA combines aesthetics, functionality and energy efficiency, making it ideal for both representative and everyday public spaces. Its characteristics allow for the creation of resident-friendly spaces that encourage spending time outdoors at any time of day.

Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

BASE

The Base is equipped with advanced multi-lens optics, available in five distribution variants, which allows the light character to be precisely adjusted to the needs of the facility – from uniform lighting of high halls to directional lighting of specific work areas. Lenses with high UV resistance and transmission ≥ 86% ensure stable and long-lasting light parameters, performance and maximum light efficiency of up to 185 lm/W, which significantly reduces energy consumption compared to traditional luminaires.

SILVER BODY

The Silver has a casing made of high-quality cast aluminium covered with a durable PVDF coating, providing excellent protection against corrosion, UV radiation and harsh weather conditions. The dual-chamber design, with separate optical and power supply sections, effectively protects components and facilitates servicing, ensuring long-term luminaire efficiency.

Silver Body

STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

The body of the Flatora lamp is made of cast aluminium with a PVDF coating, ensuring exceptional resistance to corrosion (class C3-H), UV radiation and changing weather conditions. The enclosure, measuring 550 x 550 x 505 mm and weighing 5 kg, features a smooth, self-cleaning surface and an elegant, minimalist design that fits perfectly into representative and urban spaces.

The dual-chamber design separates the optical part from the power supply, which facilitates servicing (tool-based access) and increases the lamp's durability. The body is designed for mounting on a pole or boom with a diameter of Ø 32–76 mm and is equipped with a 3-pole knife switch to increase operational safety.

The Flatora lamp provides complete protection in harsh conditions: IP66/IP67, mechanical resistance IK09/IK10, operating temperature range -40 °C to +50 °C. Thanks to modern thermal, overvoltage, short-circuit and ESD protection, as well as active current limitation in case of overheating, the body guarantees longevity and reliability in all conditions.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

FLATORA luminaires have been designed to ensure full compatibility with modern lighting management systems, both for simple stand-alone installations and complex solutions operating within Smart City infrastructure. Their modular architecture and flexible approach to communication enable easy scaling and adaptation of luminaires to local technical conditions, investor requirements and lighting system operator preferences.

The luminaires support a variety of control methods: 1-10 V wired standards, DALI, DALI-2 and D4i allow for precise dimming and real-time monitoring of the luminaires' status. With five autonomous dimming profiles, adjustable by the minute, it is possible to effectively adjust the light intensity to changing environmental conditions and usage schedules.

In addition, FLATORA offers local programming via NFC and integration with mobile applications, enabling quick configuration of luminaire parameters such as power, colour temperature and dimming profile without the need to connect to a central system.

The luminaires are also prepared for operation within the IoT network and are compatible with GSM, NB-IoT, LoRaWAN and Mesh 2.4 GHz protocols. They support the TALQ standard and are ready for Plug & Play operation, allowing integration with energy consumption monitoring, automation and optimisation platforms to create a coherent and smart urban lighting ecosystem.

In addition, the control system works with an LED temperature sensor, which limits the current in the event of overheating, while the soft-start and constant light output (CLO) functions extend the life of the luminaire and improve energy efficiency.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the FLATORA system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, FLATORA can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each FLATORA luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.

Areas of Application

APPLICATION

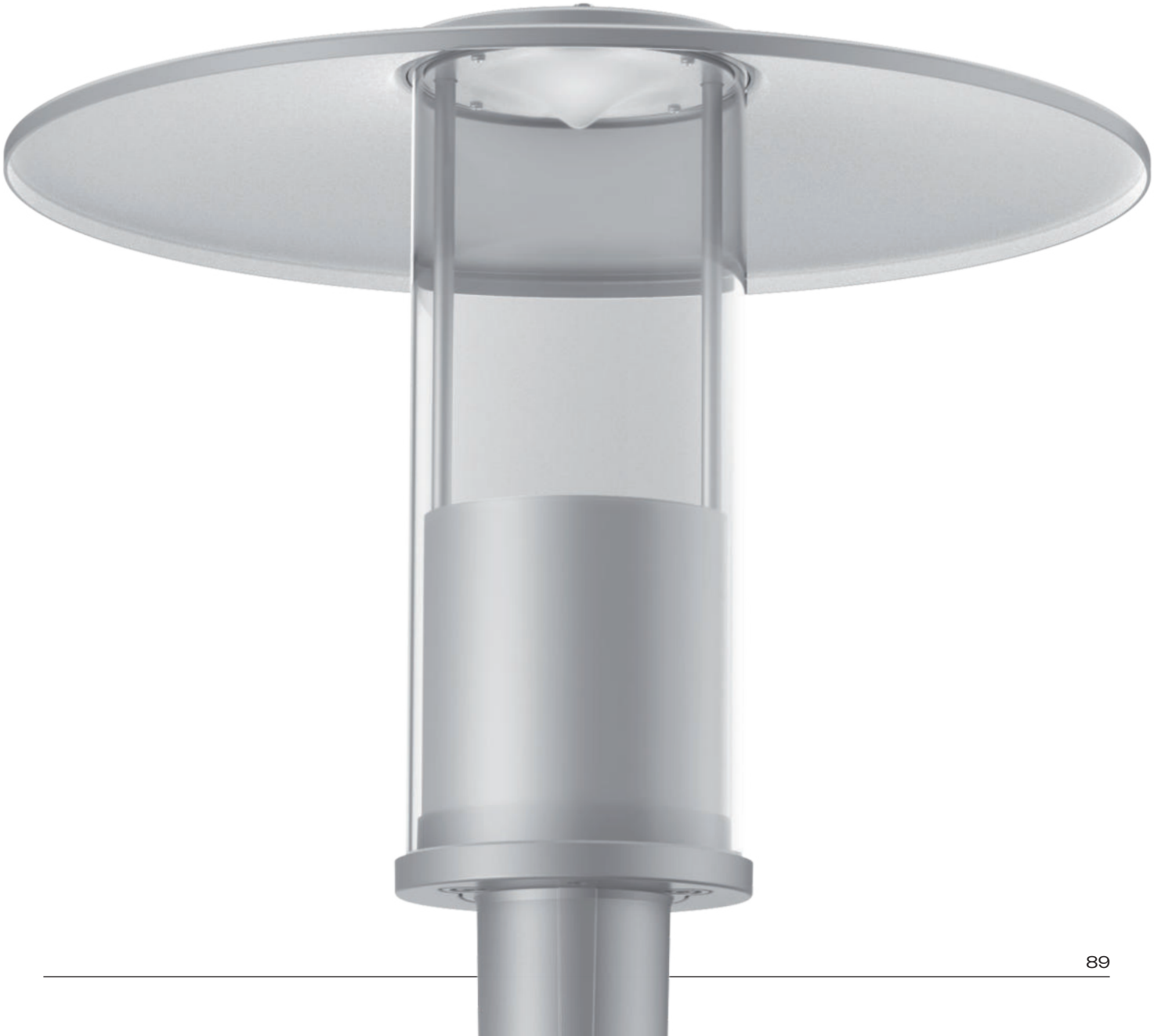
Thanks to its form, FLATORA can be used in spaces such as:

- town squares and representative spaces
- open public spaces and common areas
- recreational gardens and green areas
- walkways, boulevards and promenades
- recreation areas and meeting places
- surroundings of public buildings and cultural facilities
- residential areas and semi-private urban areas

Efficiency

The FLATORA luminaire is characterised by high luminous efficacy, ensuring optimal energy utilisation with minimal operating costs. Thanks to the use of modern LED technology, it offers stable operating parameters and a long service life of up to 100,000 hours, regardless of the power range, minimising maintenance and replacement costs.

The optimised housing design and dual-chamber layout promote effective heat dissipation, which translates into maintaining full light output even during prolonged operation in demanding environmental conditions.



ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15–80 W, programmable in 1 W increments (NFC)
Luminous flux	2,100-11,200 lm
Luminous efficacy	140lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	>70 / >80
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.99
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

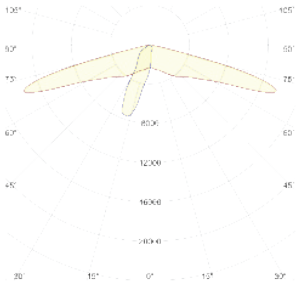
Installation	on a pole or boom, Ø 32-76 mm
Dimensions of the luminaire	550 x 550 x 505 mm
Weight	5.0 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Self-cleaning body	smooth, no ribs
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	23
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	ENEC, ENEC+

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

LIGHT DISTRIBUTION

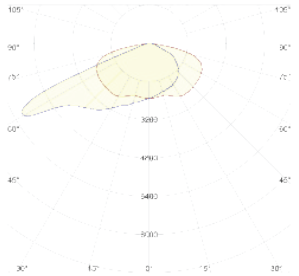


1. L-type optics – roadside distribution (asymmetrical longitudinal, narrow)

Designed for single-sided installation along motorways and local roads. Provides effective road lighting with large pole spacing, minimising side emissions.

APPLICATION

Single carriageway roads, residential areas, footpaths and cycle paths.

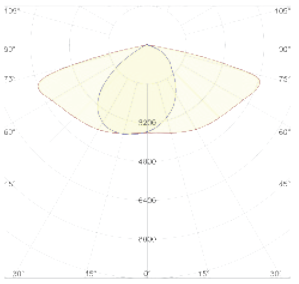


2. S-type optics – medium-wide distribution (asymmetrical with a wide angle)

Wide longitudinal distribution with extended lateral emission. It provides optimal illumination of the road and pavements on both sides of the road.

APPLICATION

City streets, Z and L class roads, transport routes with verges.

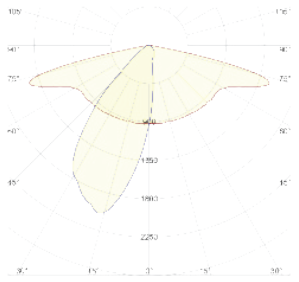


3. ME3 optics – symmetrical roadside distribution, medium-narrow

Suitable for central mounting, it provides uniform illumination of both lanes and the centre line.

APPLICATION

Main urban and suburban roads, pole arrangements in the centre of the road.

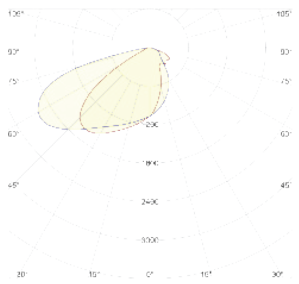


4. T-type optics – tunnel/wide cross-sectional distribution

Optics with focused emission in the transverse plane. Particularly effective for lighting areas with limited installation height.

APPLICATION

Tunnels, underpasses, infrastructure facilities.

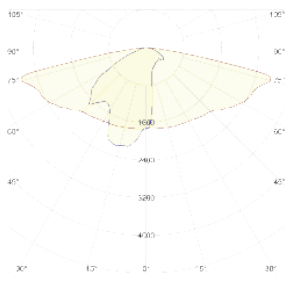


5. P6 optics – symmetrical, wide dispersion

Universal symmetrical optics for lighting squares, car parks and open areas.

APPLICATION

Car parks, bus bays, manoeuvring areas.



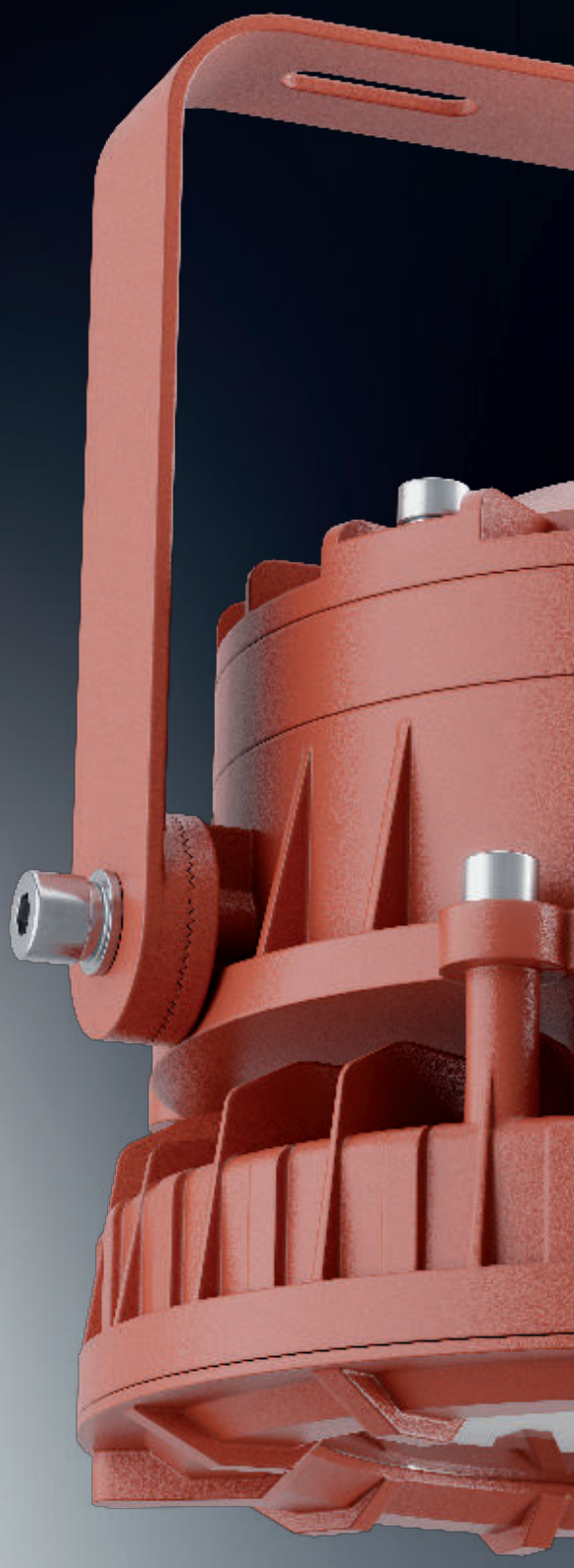
6. C2 optics – asymmetrical with rear emission (cut-off)

Provides high glare control and limited light emission outside the illuminated area.

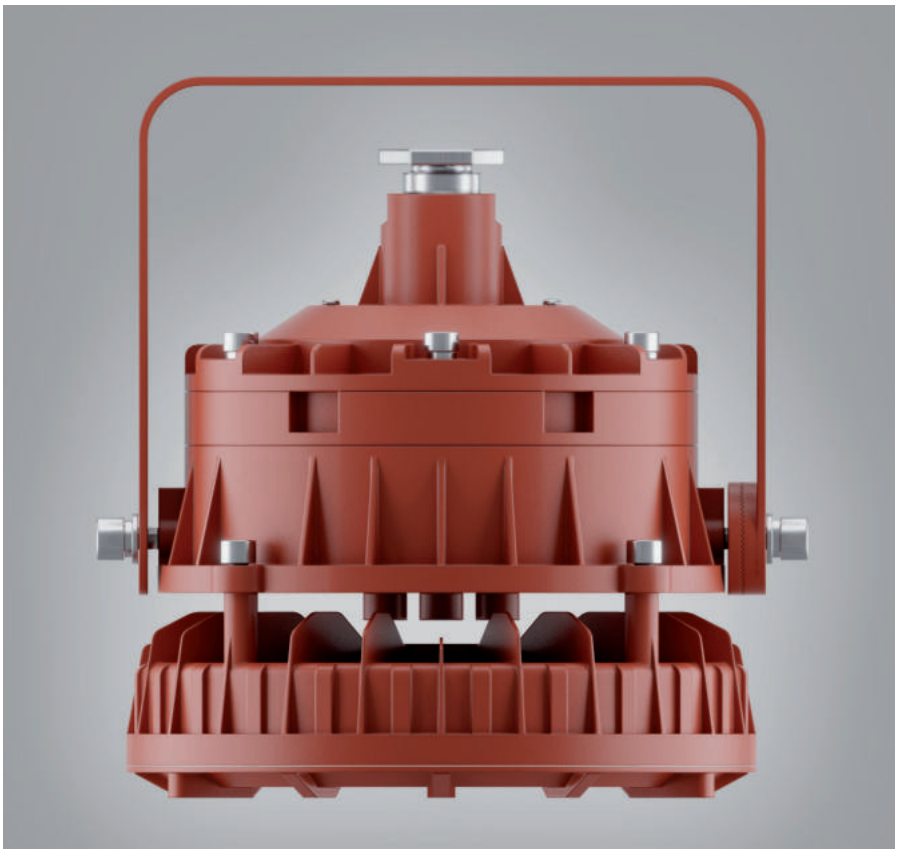
APPLICATION

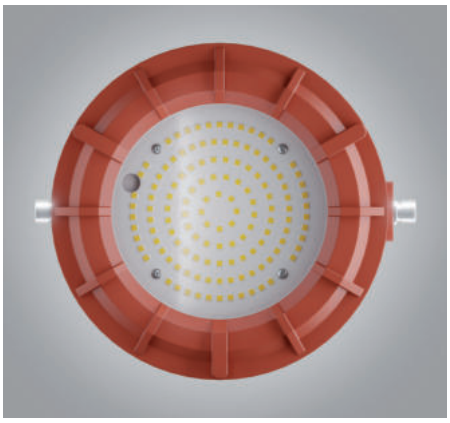
Industrial areas, roads with buildings on one side, minimisation of light pollution.

IRON



IRON





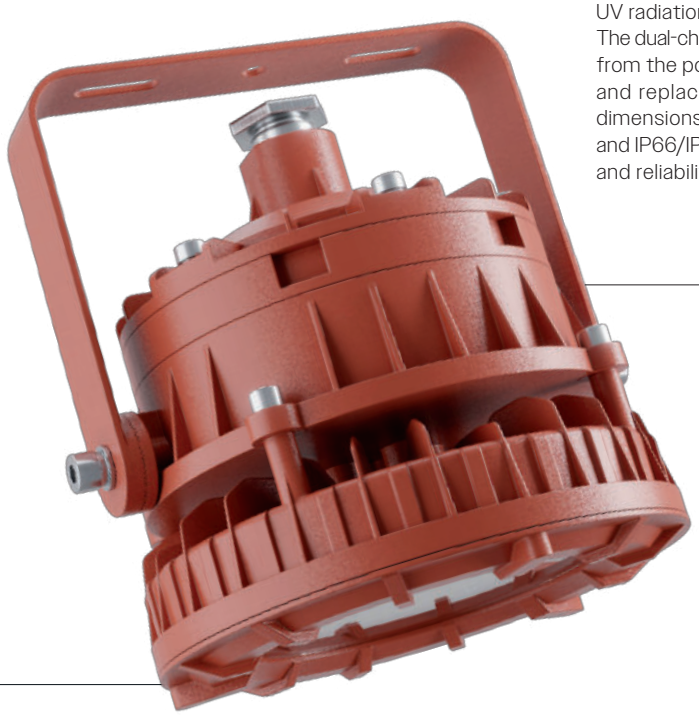
IRON is a modern LED luminaire with a rated power of 30-50 W and a luminous flux of 4,800-8,000 lm, designed for use in demanding conditions in potentially explosive atmospheres, such as mines, industrial installations or petrochemical facilities. High luminous efficacy of 160 lm/W and a wide range of colour temperatures (2200-6500 K) allow for optimal adjustment of light to the specific application.

50 Hz
60 Hz
200 V
260 V
IP 66
IP 67
IK 09
IK 10
Min
-40°C
Max
60°C

Key Competitive Advantages

GUARD BODY

The luminaire is made of cast aluminium with a PVDF coating, ensuring maximum resistance to corrosion, UV radiation and extreme environmental conditions. The dual-chamber design separates the optical section from the power supply section, facilitating servicing and replacement of LED light sources. Compact dimensions, high mechanical resistance (IK09/IK10) and IP66/IP67 protection rating guarantee durability and reliability in all conditions.



LUMEN CORE

The LED module provides high luminous flux with low energy consumption, with a lifetime of ≥100,000 hours L95B10. UV-resistant lenses guarantee stable and precise light distribution, minimising losses. The CLO system maintains constant brightness, while the compatibility with control systems (DALI, 1–10 V, D4i, NFC) allows for intelligent lighting management and adjustment of light to the user's needs.

Guard Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

This luminaire has been designed to operate in the most demanding conditions, ensuring maximum safety and reliability. The robust housing made of cast aluminium, coated with PVDF, is resistant to corrosion, salt spray and UV radiation, as confirmed by corrosion class C3-H according to ISO 9227 standard. Thanks to its high IP66/IP67 protection rating and IK09/IK10 mechanical resistance, this luminaire guarantees durability even in harsh industrial environments. Built-in safety features – thermal, overvoltage, short-circuit and ESD protection – combined with an active LED temperature sensor that limits current in case of overheating, enhance safety during use. Servicing is made easier thanks to the use of a scissor-type, 3-pole power disconnector.

This luminaire is characterised by high durability and efficiency. L95B10 LED light sources offer a service life of ≥100,000 hours (confirmed by LM-80 testing and the TM-21 projection). The CLO (Constant Light Output) system maintains luminous flux throughout the entire service life, while low ripple (<6%) and high power factor (PF ≥0.98) guarantee stable operation. The luminaire is compatible with various control systems – 1-10 V, DALI, DALI-2, D4i and NFC – and, additionally, allows for programming autonomous dimming profiles (5 programmes, with 1 minute adjustment programme).

When it comes to design and use, the lamp offers flexibility of installation and ease of maintenance. Compact dimensions (Ø182x173 mm) and low weight (2.8 kg) allow for convenient installation on facades, beams or suspended from the ceiling. The dual-chamber design, separating the optical and power supply sections, ensures easy service access, while the use of solderless technology allows for quick replacement of LED sources.

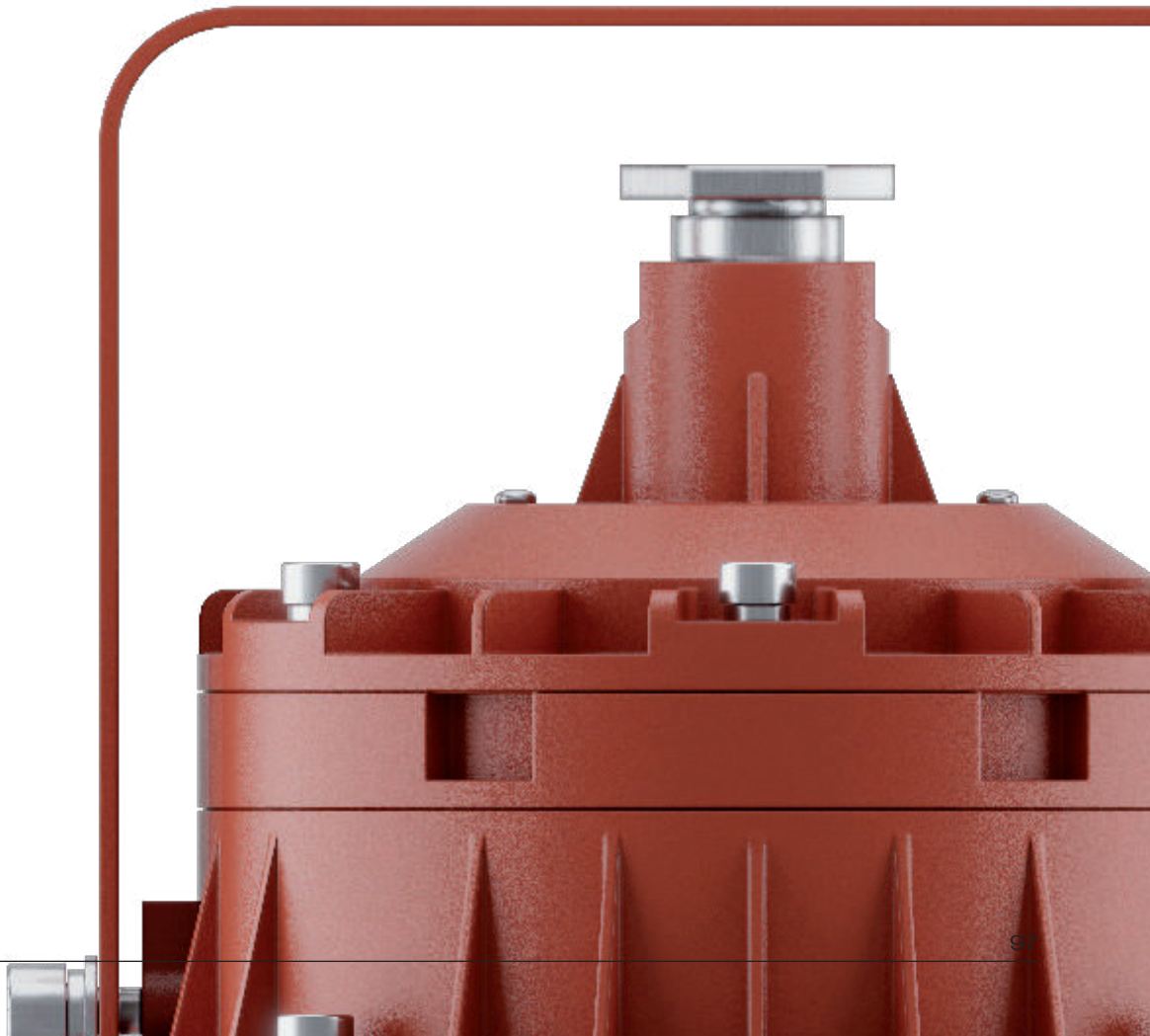
This luminaire has also been prepared for operation in IoT environments and intelligent lighting management systems. It enables full integration with GSM, NB-IoT, LoRaWAN, or Mesh 2.4 GHz communication systems, supports the TALQ standard and is ready for a “Plug & Play” installation. Equipped with ZhagaBook 18 or NEMAANSI C136.41 communication sockets, it offers various configurations for mounting communication modules. With the identification via a unique QR code, labels for pole recesses and the possibility of integration with mobile applications, the management and servicing of this luminaire becomes quick and intuitive.

Areas of Application

APPLICATION

The IRON luminaire, designed for use in EX zones, is used in areas particularly exposed to the risk of explosion, where reliability and safety of lighting are of paramount importance.

- **Underground and opencast mines** – in areas with a high risk of methane or coal dust ignition.
- **Industrial plants** – production halls, warehouses and technological installations, with present flammable gases, dusts or vapours.
- **Petrochemical facilities** – refineries, oil processing plants, fuel terminals, storage tanks.
- **Gasworks and gas distribution stations** – rooms and areas with a risk of combustible gas leakage.
- **Drilling platforms and offshore installations** – sites for the extraction and processing of oil and gas at sea.
- **Power stations and power plants** – particularly in areas related to gas or combustible dust.
- **Chemical industry** – production lines, industrial laboratories, reactors, chemicals storage facilities.
- **Food industry** – areas with organic dust (e.g. sugar factories, mills, grain silos).
- **Ports and shipment terminals** – areas for handling liquid and gaseous fuels.



Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the IRON system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, IRON can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

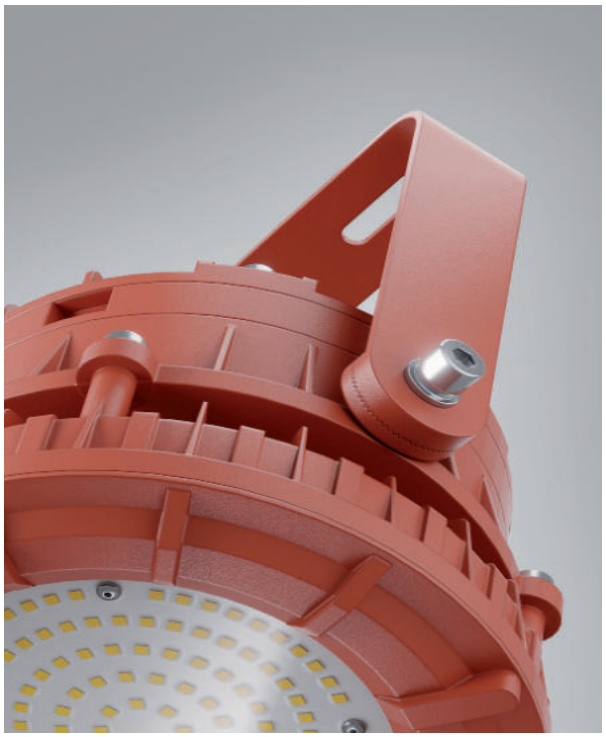
Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each IRON luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.



ELECTRICAL AND LIGHTING PARAMETERS

Rated power	30–80 W
Luminous flux	4,800-8,000 lm
Luminous efficacy	160 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	≥ 70
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

Installation	facades, mounting beams, suspended from the ceiling
Dimensions of the luminaire	Ø182 x 173mm
Weight	2.8 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +60 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

Standard colour options available.

RAL 2002 RAL 3001 RAL 3002 RAL 3003 RAL 3004 RAL 3005 RAL 3005

OPTIC DESCRIPTIONS

25°

25° – NARROW BEAM

Focused light distribution, ideal for precise spot lighting or highlighting selected objects. Ideal for situations where a strong beam focus is required.

45°

45° – MEDIUM-NARROW DISTRIBUTION

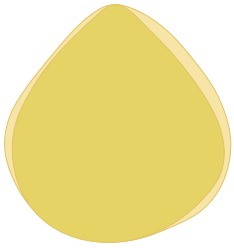
A balanced beam angle, combining a focused effect with wider illumination. Used in accent lighting and where it is necessary to highlight elements of a space while limiting light loss.

60°

60° – MEDIUM DISTRIBUTION

Universal beam angle, for uniform illumination over a larger area. Recommended for general applications such as lighting in rooms, on the streets or squares, where a balance between light intensity and range is important.

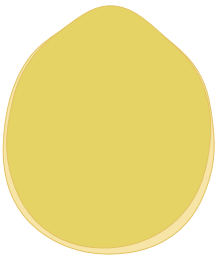
90°



90° – WIDE-ANGLE DISTRIBUTION

A wide beam of light, for effective illumination of large areas. Particularly useful in applications requiring uniform illumination of large, dispersed areas, such as car parks, squares or open spaces.

120°



120° – ULTRA-WIDE BEAM

Widest light distribution for maximum surface coverage. Ideal for illuminating spaces where even, soft light with minimal shadowing is required.

MILKY

MILKY

MILKY is a modern LED luminaire designed for industrial, warehouse and technical spaces where reliability, efficiency and uniform lighting are important. With a power of 30–80 W and a luminous flux of 5,000–13,600 lm, it provides energy-efficient and comfortable light with a high CRI (>70/80) and low glare rate (UGR<19).

The dual-chamber body made of PVDF-coated cast aluminium protects the components and facilitates servicing, while the multi-lens optics with five distribution characteristics and UV-resistant lenses guarantee precise light adjustment. The luminaire supports 1-10 V, DALI, DALI-2 control, PIR sensors, microwave sensors, remote controls and IoT/OMS systems, while the Power and OOT Selectable functions allow you to easily adjust the parameters to the needs of the facility.

MILKY is an efficient, durable and intelligent solution, ideal for both new projects and the modernisation of existing lighting installations.

Key Competitive Advantages

LINTER CONTROL

Intelligent lamp control system supporting 1-10 V, DALI, DALI-2 and dimming profiles. It works with PIR and microwave sensors and remote controls, automatically adjusting the light to the presence of people and environmental conditions. Ensures energy-efficient, stable and comfortable lamp operation, with the possibility of integration with IoT and CMS systems.

SHIELD BODY

MILKY SHIELD is a durable body made of cast aluminium coated with PVDF, resistant to corrosion, UV radiation and harsh weather conditions. The dual-chamber design with separate optical and power supply sections facilitates installation, servicing and maintenance, ensuring the lamp's longevity and reliability in any conditions.

MILKY BEAM

Milky Beam is a modern LED panel with programmable power ranging from 15 to 80 W, adjustable in 1 W increments using NFC technology. It generates a luminous flux of 2,325–14,400 lm with an efficiency of 155–180 lm/W, providing energy-efficient and precise lighting tailored to the needs of each installation.

Shield Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

Milky Shield is a robust, modern lamp body made of precision-cast aluminium, coated with a durable PVDF coating that protects the luminaire against corrosion, UV radiation and adverse weather conditions. This solution guarantees the reliability and longevity of the lamp, even in harsh industrial, warehouse or technical environments.

The dual-chamber design, with a clear division between the optical section and the power supply chamber, ensures full protection of the LED components and electronics, while facilitating installation, servicing and maintenance of the luminaire. The separation of chambers increases the safety and durability of the device, and also allows quick access to components in case of replacement or repair.

The Milky Shield body is designed to combine durability, functionality and aesthetics. The stable and resistant design works well in demanding spaces, guaranteeing secure installation and protection against mechanical damage. This allows the luminaire to maintain its full light output for many years, while minimising operating costs and facilitating the work of maintenance personnel.

Milky Shield is the ideal solution for investments where durability, reliability and ease of use are priorities, as well as high resistance to environmental and mechanical factors.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

MILKY luminaires feature an advanced luminaire control system designed to provide full control over lighting in demanding industrial, warehouse and technical spaces. The system enables precise adjustment of the lamp's operation to current needs, both in stand-alone installations and as part of more complex lighting management systems (IoT/CMS).

The control module supports 1-10 V, DALI and DALI-2 standards, as well as autonomous dimming profiles with 1-minute adjustment intervals within five programmes. This allows the light to be automatically adjusted to the presence of people, machine movement or other variable environmental conditions. The soft-start function ensures smooth switching on of the luminaire, minimising the risk of overvoltage and increasing the service life of the LEDs.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the PARK system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Linter Control controllers can be factory-equipped with appropriate communication interfaces, and all data from the luminaires is sent to a central management platform, which enables:

- location mapping of luminaires (GPS),
- energy consumption analysis,
- checking of failures and alarm conditions,
- remote configuration changes (e.g. updating power profiles or sensor thresholds).

Thanks to its compatibility with open protocols, the system can be integrated with existing municipal platforms or expanded in a modular manner.

Control from lighting cabinets

Central group controllers

In classic installations, it can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / Audio-Jack / CASAMBI / PIR / microwave controllers / remote controls

The Milky lamp has been designed for complete flexibility of control from the luminaire level, enabling integration with a variety of controllers and systems: Zhaga Book 18, Audio-Jack, CASAMBI, PIR, microwave controllers and remote controls. Each luminaire can be equipped with one or two standard control sockets, configured according to the installation requirements, allowing for the simultaneous installation of a motion sensor, twilight sensor or communication controller.

Milky Linter Control enables autonomous lighting functions, such as power reduction profiles based on an astronomical clock or work schedule. The system also responds to the presence of people, machine movement and changing environmental conditions, allowing the light to automatically adjust to actual needs.

Additionally, the luminaire can be remotely monitored and configured via a master system, e.g. GSM, NB-IoT, which allows real-time control of energy consumption, voltage, luminaire status and operating temperature. This allows Milky to operate completely autonomously, ensuring maximum energy efficiency, user comfort and reliability, both in new installations and when retrofitting in existing lighting systems.

Efficiency

Milky is a luminaire with high luminous efficacy and impressive electrical parameters. Equipped with modern LED modules and precisely selected power supply systems, it achieves a luminous efficacy of 155-180 lm/W, which ensures maximum energy utilisation and significantly reduces operating costs.

The luminaire has a high power factor (PF ≥ 0.98), which means minimal reactive power in the network load and stable operation in industrial and warehouse installations. In addition, Milky Beam comes standard with an advanced surge protection device (SPD) with 20 kV (L-FG) parameters, which protects the device from mains interference and atmospheric discharges, increasing the lamp's durability and reliability.

The control system and dimming profiles allow for optimal adjustment of power to current lighting needs, which, combined with high luminous efficacy, ensures energy-efficient and effective lighting in all conditions. This makes Milky a modern, reliable and economical lighting solution for industrial, warehouse, commercial and technical spaces.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	30–80 W
Luminous flux	5,000-13,600 lm
Luminous efficacy	170 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	>70/80
UGR	<19
Durability	≥ 100,000 hours, L95B10, tested to LM 80 and TM 21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

Installation	hook/chain + optional ceiling brackets BC-H27-01 i BC-H44-
Dimensions of the luminaire	Ø278 x 398 mm
Weight	2.8 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Self-cleaning body	smooth, no ribs
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	23
Control systems / IoT / CMS	36W / 48W / 60W (Power Selectable 3000K / 4000K / 5000K (CCT Selectable)
Communication sockets	Zhaga Book 18, Audio-Jack, CASAMBI modules, PIR, microwave controllers, remote controls
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP44
Mechanical strength	IK08
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

ACCESSORIES

Clear PC reflector
Milky PC reflector
Safety chain

Standard colour options available.

RAL 9003	RAL 9016	RAL 9002	RAL 7047	RAL 7035	RAL 7038	RAL 7040

OPTIC DESCRIPTIONS

25°

25° – NARROW BEAM

Focused light distribution, ideal for precise spot lighting or highlighting selected objects. Ideal for situations where a strong beam focus is required.

45°

45° – MEDIUM-NARROW DISTRIBUTION

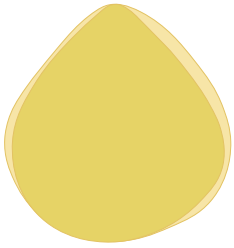
A balanced beam angle, combining a focused effect with wider illumination. Used in accent lighting and where it is necessary to highlight elements of a space while limiting light loss.

60°

60° – MEDIUM DISTRIBUTION

Universal beam angle, for uniform illumination over a larger area. Recommended for general applications such as lighting in rooms, on the streets or squares, where a balance between light intensity and range is important.

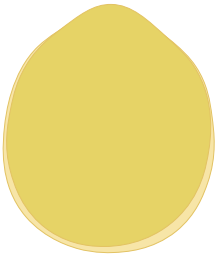
90°



90° – WIDE-ANGLE DISTRIBUTION

A wide beam of light, for effective illumination of large areas. Particularly useful in applications requiring uniform illumination of large, dispersed areas, such as car parks, squares or open spaces.

120°

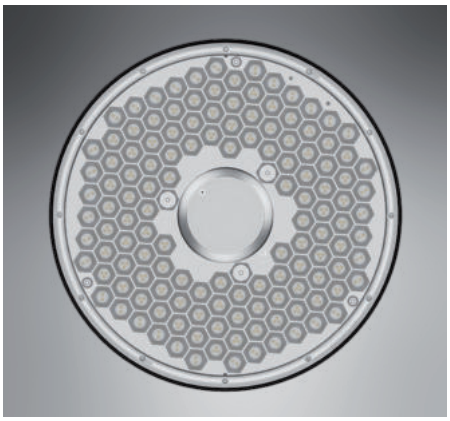


120° – ULTRA-WIDE BEAM

Widest light distribution for maximum surface coverage. Ideal for illuminating spaces where even, soft light with minimal shadowing is required.

NEO

NEO



The NEO lamp is an ideal solution for lighting production halls, logistics centres, sports facilities and shopping arcades. Thanks to its high efficiency, uniform light distribution and low glare rate (UGR <19), it ensures visual comfort and safety at work in large areas.

Multi-lens optics allow for precise adjustment of light characteristics – from spot accentuation to wide, even illumination of the entire space, which makes NEO ideal for both heavily used industrial facilities and sports and commercial spaces.

Key Competitive Advantages

LINTER STEERING

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

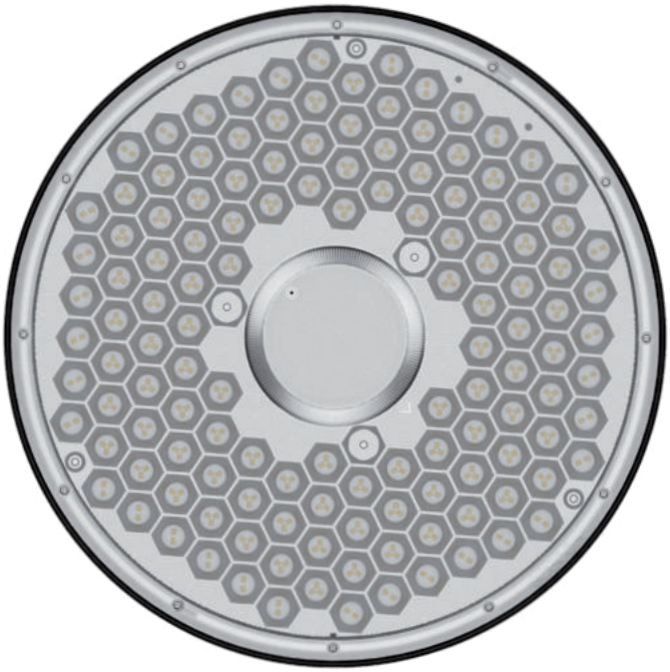
LUMO

The NEO lamp's light panel has been designed for intensive use in industrial, sports and commercial spaces. Equipped with modern LED sources (MST/TOI/BMTO), it offers a luminous flux of 7,000 to 32,000 lm with an efficiency of 160 lm/W, providing uniform, bright and energy-efficient lighting for large areas, parameters and maximum luminous efficiency of up to 185 lm/W, which significantly reduces energy consumption compared to traditional luminaires.

HILO BODY

The NEO lamp body is made of cast aluminium with a PVDF coating that is resistant to corrosion, UV rays and harsh weather conditions. The lightweight, smooth casing with a minimalist design is ideal for halls, logistics centres, sports facilities and shopping arcades. The dual-chamber design facilitates servicing, while flexible mounting options — hook, chain, or ceiling brackets — enhance installation convenience. The lamp has electrical safety features, an LED temperature sensor and a 3-pole switch. It offers IP66/IP67 protection, IK09/IK10 resistance, operation at temperatures ranging from -40 °C to +60 °C, and compatibility with control and IoT systems such as Zhaga, CASAMBI, and PIR modules.

Hilo Body



STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

The body of the NEO lamp is made of cast aluminium with a PVDF coating that is resistant to corrosion, UV rays and harsh environmental conditions. The housing, measuring Ø446 x 162–177 mm and weighing 3.9 kg, has a smooth, self-cleaning surface and a minimalist design, ideal for production halls, logistics centres, sports facilities and shopping arcades.

The dual-chamber design facilitates servicing, while mounting on a hook, chain, or ceiling brackets provides flexibility. The body is equipped with a 3-pole disconnector, thermal, overvoltage and ESD protection, and an LED temperature sensor.

NEO offers full IP66/IP67 protection, IK09/IK10 resistance and an operating temperature range of −40 °C to +60 °C. Compatibility with Zhaga, CASAMBI, PIR and other modules enables integration with modern control systems and IoT.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The NEO lamp offers advanced and flexible control options, allowing the lighting to be adapted to various industrial and facility applications. It supports 1-10 V, DALI, DALI-2, NFC standards, as well as integration with CASAMBI, Zhaga, PIR and other IoT modules, enabling remote management and smart lighting scenarios.

The luminaire has autonomous dimming profiles with 1-minute adjustment, a CLO function that maintains a constant luminous flux, and a soft-start function for smooth start-up. Thermal, overvoltage, short-circuit and ESD protection, together with an active LED temperature sensor, guarantee safe and reliable operation of the lamp.

Additionally, the NEO lamp enables programmable power adjustment, integration with IoT/CMS systems, and thanks to communication sockets, it can be easily implemented in smart lighting networks.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the NEST system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, NEST can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

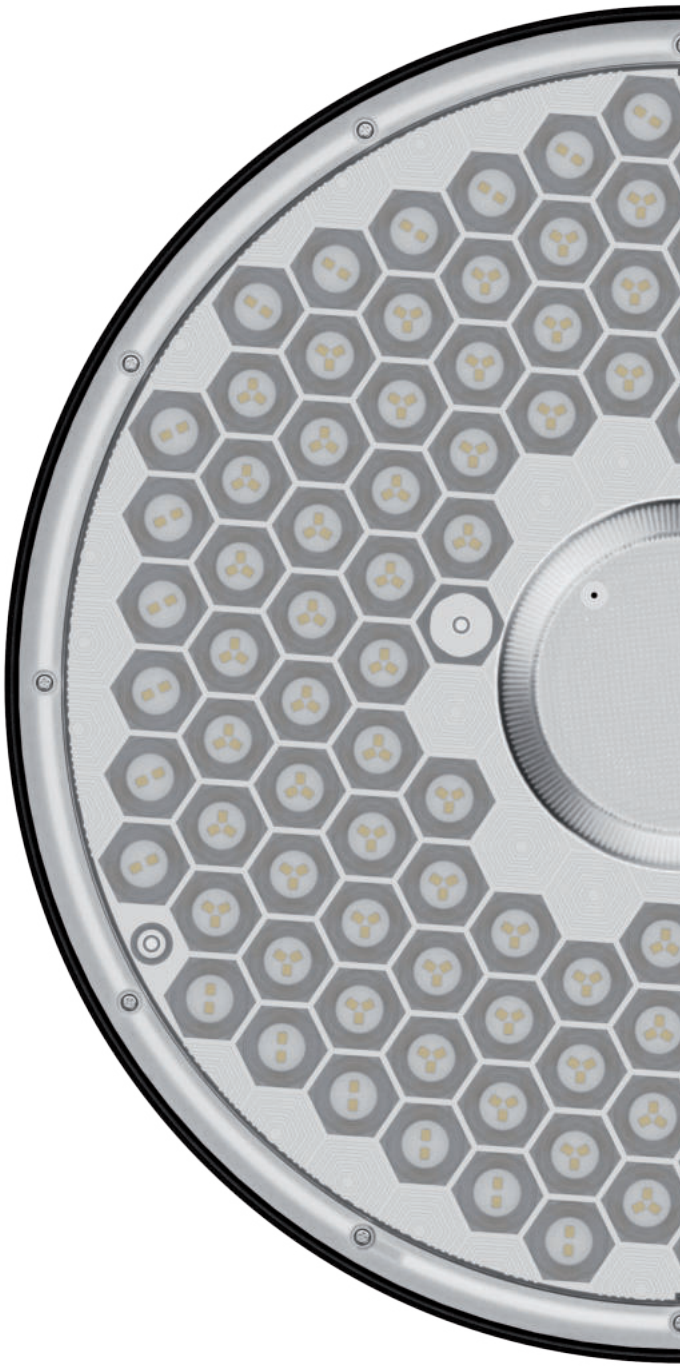
Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each NEST luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7-pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.



Areas of Application

APPLICATION

- industrial and manufacturing plants
- workshops and service areas
- sorting facilities and shipment hubs
- underground garages and multi-storey car parks
- small and medium-height sports facilities
- production halls
- warehouses

Efficiency

The NEO lamp provides high luminous efficacy and reliable lighting in industrial facilities, halls, logistics centres and sports venues. Thanks to modern LED sources, it generates bright, stable light with high luminous flux while minimising energy consumption.

The luminaire offers a wide range of colour temperatures (CCT), allowing the light character to be adjusted to the type of space and user needs. The high colour rendering index (CRI ≥70/80) guarantees natural colour reproduction, and CLO technology maintains a constant luminous flux throughout the entire service life, which translates into a long lamp life (≥100,000 hours L95B10).

In addition, the NEO lamp is highly resistant to environmental conditions (IR66/IP67), operating temperatures from -40 °C to +60 °C and no upward light emission (0%), making it an effective and environmentally friendly light source.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	100-200W (Power DIP switch: 100%, 80%, 60%). In 200W mode: 200W / 160W / 120W (±10%)
Luminous flux	7,000-32,000 lm
Luminous efficacy	160 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	>70
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

Installation	hook/chain + optional ceiling brackets BC-H27-01 i BC-H44-
Dimensions of the luminaire	Ø446 x 177 / 176 / 162 mm (depending on the version: Zhaga / Audio-Jack / DALI).
Weight	3.9 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Cut-off optics	glare and backlight emission reduction
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	Compatibility with GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play Zhaga Book 18 ready, Audio Jack, CASAMBI, PIR, microwave modules, remote controls
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

OPTIC DESCRIPTIONS

25°

25° – NARROW BEAM

Focused light distribution, ideal for precise spot lighting or highlighting selected objects. Ideal for situations where a strong beam focus is required.

45°

45° – MEDIUM-NARROW DISTRIBUTION

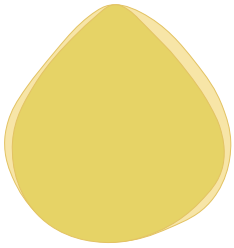
A balanced beam angle, combining a focused effect with wider illumination. Used in accent lighting and where it is necessary to highlight elements of a space while limiting light loss.

60°

60° – MEDIUM DISTRIBUTION

Universal beam angle, for uniform illumination over a larger area. Recommended for general applications such as lighting in rooms, on the streets or squares, where a balance between light intensity and range is important.

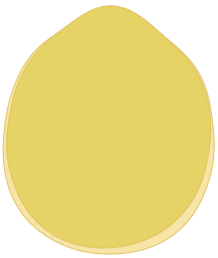
90°



90° – WIDE-ANGLE DISTRIBUTION

A wide beam of light, for effective illumination of large areas. Particularly useful in applications requiring uniform illumination of large, dispersed areas, such as car parks, squares or open spaces.

120°



120° – ULTRA-WIDE BEAM

Widest light distribution for maximum surface coverage. Ideal for illuminating spaces where even, soft light with minimal shadowing is required.


NEST

NEST

NEST is an efficient LED luminaire designed for halls, warehouses, logistics centres, laboratories and agricultural facilities. With a power output of 20–80 W and a luminous flux of 3,400–13,600 lm, it provides stable, energy-efficient and comfortable lighting in difficult working conditions.

The luminaire stands out with its high luminous efficacy of 170 lm/W, a wide range of colour temperatures (2200 K-6500 K) and a low glare rating (UGR < 19), ensuring optimal visual comfort. The dual-chamber design, steel housing with PVDF coating and PMMA tube ensure durability and resistance to corrosion, UV rays, salt mist and aggressive industrial environments.

NEST has advanced safety features: thermal, overvoltage, short-circuit and ESD protection, while active current limiting in case of overheating and CLO and soft-start functions guarantee safety and long lamp life.

The luminaire can be mounted on the ceiling, suspended, or connected in light chains. 120° optics provide an even, wide beam of light, ideal for production, storage, breeding or office spaces.

Key Competitive Advantages

HYPERLIGHT

The advanced NEST LumenOore multi-lens optics, available in five distribution variants, allow the light characteristics to be precisely adjusted to the requirements of a given facility – from uniform illumination of high halls to directional lighting of specific work areas. Lenses with high UV resistance and transmission ≥ 86% guarantee stable parameters and maximum light efficiency of up to 185 lm/W, which significantly reduces energy consumption compared to traditional luminaires.

TITANFRAME BODY

The NEST ArmorShell enclosure is made of high-quality cast aluminium coated with a durable PVDF coating, which provides excellent resistance to corrosion, UV radiation and demanding environmental conditions. The dual-chamber design – separate optical and power supply sections – effectively protects components from external factors, while facilitating servicing and maintaining full luminaire efficiency for many years.

TitanFrame Body

STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

The NEST TitanFrame enclosure has been designed for maximum strength and reliability in demanding industrial environments. Made of high-quality cast aluminium and coated with a durable PVDF coating, it guarantees excellent resistance to corrosion, UV radiation and aggressive environments such as salt spray, ammonia and industrial dust.

The dual-chamber TitanFrame structure separates the optical section from the power supply section, effectively protecting the components from external factors, facilitating servicing and ensuring that the luminaire remains fully functional for many years. The construction system also ensures mechanical stability and vibration resistance (IEC 60068-2-6), which is crucial in production halls or warehouses with intensive machine traffic.

The TitanFrame body also offers protection against external damage (IK09), and its resistance to extreme temperatures from -40 °C to +60 °C allows for installation in the most challenging operating conditions. The combination of durable materials, thoughtful design and high-quality coatings ensures that NEST luminaires remain reliable for tens of thousands of hours of operation, even in the most demanding industrial and warehouse environments.

With NEST TitanFrame, users not only get exceptional component protection, but also the assurance that the lamp will operate stably and efficiently in all conditions – from high production halls to agricultural facilities, laboratories and centres.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The NEST luminaire has been designed as an efficient and reliable light source that can work with external control systems, making it ideal for modern lighting automation needs. Although the lamp itself does not have a built-in IoT system or fully autonomous control, its design allows for easy integration with any lighting management systems in industrial, warehouse and commercial installations.

Key control and monitoring functions:

- Remote control of lamp groups – possibility of connecting NEST lamps into light chains and controlling them via central controllers.
- Compatibility with 1-10 V and DALI protocols – allows for smooth dimming and precise adjustment of light intensity to the user's needs.
- Autonomous protection features – a built-in LED temperature sensor actively limits the current in case of overheating, protecting the LED modules from damage.
- CLO (consistent lumen output) – guarantees consistent brightness over time, regardless of LED ageing, which facilitates lighting management and minimises operating costs.
- Soft start – gentle lamp activation reduces sudden current surges, extending service life.

Thanks to these features, the NEST lamp can be part of smart lighting systems where efficiency, safety and precise light control are key. Even in the most demanding industrial and logistics facilities, NEST not only ensures reliability and comfort of work, but also easy integration with modern lighting control systems.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the NEST system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, NEST can be controlled from lighting cabinets using:

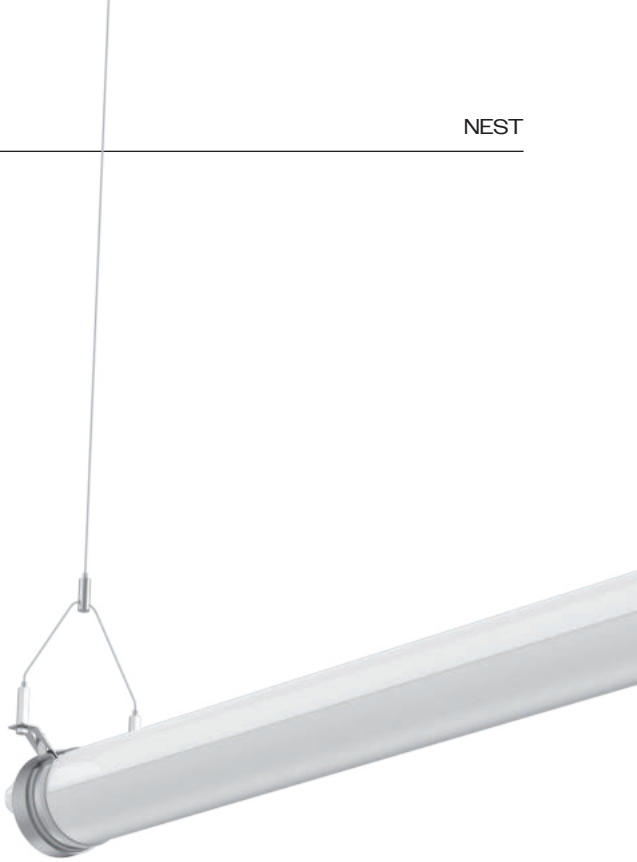
- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers



Each NEST luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.

Areas of Application

APPLICATION

- food industry,
- breeding farms and agricultural holdings,
- rooms with an aggressive atmosphere (ammonia),
- warehouses and auxiliary areas,
- offices and technical facilities.

Efficiency

The NEST luminaire has been designed for maximum energy efficiency while maintaining high lighting quality. Thanks to the use of modern LED modules (MST/TOI/BMTO) and high transmission optics (≥ 86%), the lamp achieves a luminous efficacy of up to 170 lm/W, which significantly reduces energy consumption compared to traditional luminaires.

NEST offers a wide range of power ratings (20–80 W) and luminous flux values from 3,400 to 13,600 lm, allowing the installation to be tailored to the requirements of both large industrial halls and smaller workspaces. The use of the CLO (Constant Light Output) function guarantees consistent brightness over time, regardless of LED ageing, ensuring that the luminaire maintains optimal performance throughout its entire service life.

In addition, low ripple factor (<6%) and high power quality (THD <10%, PF ≥ 0.98) ensure stable, comfortable light without flickering or unwanted electrical interference. The NEST luminaire therefore combines energy efficiency with reliability and comfort, offering efficient lighting at minimal operating costs.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	20–80 W
Luminous flux	3,400-13,600 lm
Luminous efficacy	170 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K/
Colour Rendering Index (CRI)	>70/80
UGR	<19
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	n/a
Autonomous dimming profiles	n/a
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	n/a

GENERAL

Installation	ceiling / suspended / possibility of connecting lamps in a chain
Dimensions of the luminaire	20 W - 600 x 120 x 86 mm 40 W - 1128 x 120 x 86 mm 50 W - 1128 x 120 x 86 mm 75 W - 1390 x 120 x 86 mm
Weight	20 W - 1.2 kg 40 W - 1.8 kg 50 W - 2.1 kg 75 W - 2.2 kg
Enclosure	PMMA + stainless steel
Chamber	tubular design

Service access	with tools
Fastening mechanism	3-point clamp with counter screw
Connector	IP68 with sealing gland
Optics type	pmma
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Cut-off optics	glare and backlight emission reduction
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	n/a
Communication sockets	n/a
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

ACCESSORIES

2 m suspension

Ceiling mount

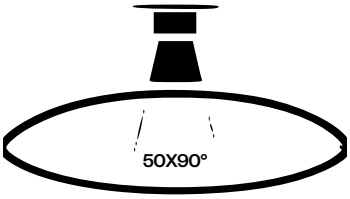
Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

OPTIC DESCRIPTIONS

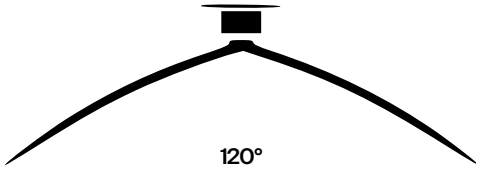
30x70° - Narrow elliptical beam (for corridors)

Extended, directional light distribution with a narrow transverse angle and a wider longitudinal angle. Designed for lighting warehouse aisles, passageways and high corridors where light must be directed parallel to the axis of the passageway.



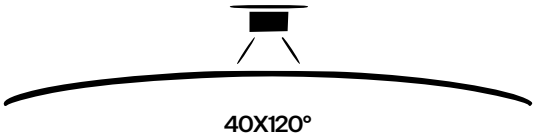
50x90° - Medium-wide elliptical distribution

A more open light profile that balances intensity along the longitudinal axis with extended lateral coverage. Ideal for production halls, warehouses and work areas where wider but still directional lighting is required. It works well wherever clarity of space is required while maintaining control over light dispersion. It ensures high efficiency and limited light loss, strongly concentrating the beam in the direction of use.



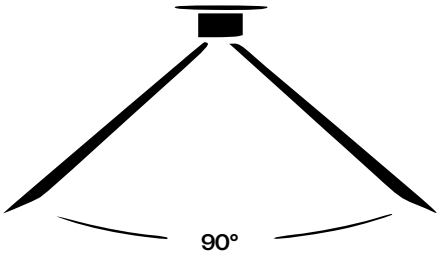
120° - Ultra-wide beam

Symmetrical, wide beam angle for high uniformity and maximum surface coverage. Recommended for open halls, sports halls, production spaces and low-mounted areas where uniform lighting without harsh shadows is important.



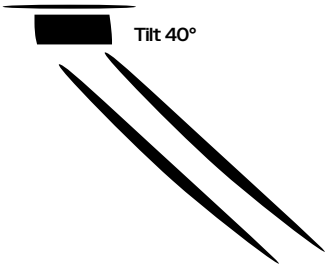
40x120° - Wide elliptical distribution (production / open halls)

The 40° angle in the transverse axis and as much as 120° in the longitudinal axis creates very wide coverage in one direction, while maintaining a narrower beam in the other. An ideal optics for production areas, assembly halls and wide zones where luminaires are mounted linearly or parallel to work lines. It ensures high uniformity and contrast reduction. It ensures high efficiency and limited light loss, strongly concentrating the beam in the direction of use.



90° - Broad, general distribution

Classic 90° distribution for wide and even illumination of the space. It works well in warehouses, logistics halls and open workspaces where wide coverage and comfortable vision are a priority.



Tilt 40° - an asymmetrical directional beam

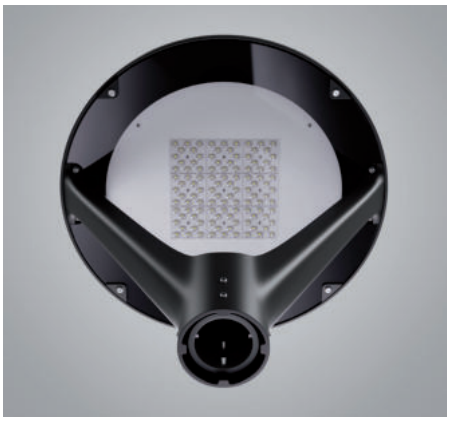
Optics tilted at 40°, providing a clearly directional, asymmetrical light distribution that can be directed towards the area requiring illumination. Ideal for illuminating side work areas, storage shelves, walls, production lines, and areas where luminaires cannot be mounted centrally above the work area. Allows light to be directed without mechanically tilting the luminaire.


PARK

PARK

The PARK lamp is a high-quality LED luminaire designed for green areas, recreational spaces and pedestrian zones. It combines modern technology with aesthetic design that blends harmoniously into park surroundings, city squares and other public spaces.

Thanks to the use of energy-efficient LED light sources and appropriately selected optical systems, the lamp provides pleasant, diffused lighting that is comfortable for the eyes. Available in variants ranging from 15 W to 80 W, it allows you to adjust the light intensity to specific needs – from subtle lighting of alleys to more intense illumination of squares or leisure areas.



Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

ARC

The body is made of cast aluminium coated with PVDF, which ensures high resistance to corrosion, UV radiation and adverse weather conditions. The design is dual-chambered, with a clear division between the optical chamber and the power supply chamber, which facilitates installation, maintenance and servicing of the device.

LIGHTCORE

The lighting panel uses modern LEDs with a programmable rated power in the range of 15–80 W, adjustable in 1 W increments with NFO technology, which allows for precise adjustment of performance to the needs of a specific installation. It provides a luminous flux in the range of 2,325-14,400 lm with high luminous efficacy of 155-180 lm/W, which guarantees efficient energy use and minimises operating costs.

Arc Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The device housing is made of high-quality cast aluminium, coated with a specialised PVDF coating. The use of this material guarantees exceptional resistance to corrosion, UV radiation and aggressive atmospheric factors, which significantly extends the product's service life and allows for its reliable operation in a variety of environmental conditions.

The enclosure design is based on a dual-chamber system, with a clear separation between the optical space and the power supply chamber. Such arrangement not only facilitates installation and maintenance, but also increases operational safety and streamlines the servicing process. Access to the interior is only possible with tools, which effectively protects the device against unauthorised interference and minimises the risk of accidental damage.

An additional advantage of the design is its self-cleaning nature. A smooth, uniform surface without ribs, creases or other elements that promote the accumulation of dirt reduces the build-up of dust, dirt or atmospheric deposits. This means that the enclosure requires minimal maintenance, and keeping it clean is quick and easy, which reduces operating costs in the long term.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

PARK luminaires are fully compatible with modern lighting management systems and meet the needs of investors in terms of both simple stand-alone installations and fully integrated Smart City networks. Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences. Three independent control models are available.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the PARK system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Linter Control controllers can be factory-equipped with appropriate communication interfaces, and all data from the luminaires is sent to a central management platform, which enables:

- location mapping of luminaires (GPS),
- energy consumption analysis,
- checking of failures and alarm conditions,
- remote configuration changes (e.g. updating power profiles or sensor thresholds).

Thanks to its compatibility with open protocols, the system can be integrated with existing municipal platforms or expanded in a modular manner.

Control from lighting cabinets

Central group controllers

In classic installations, PARK can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each PARK luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.

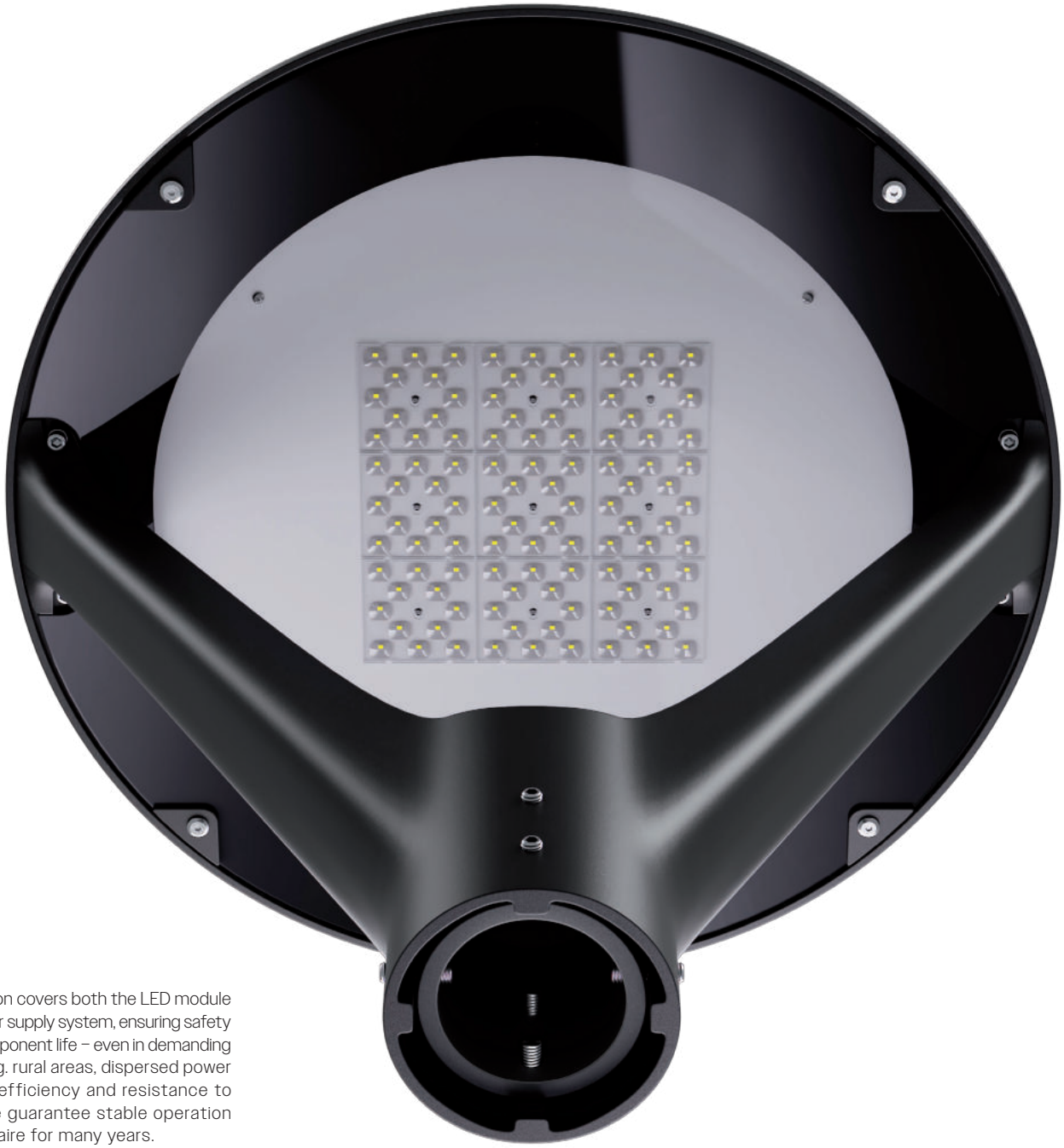
Luminaires with a built-in Linter Control controller can:

- implement power reduction profiles based on an astronomical clock or schedule,
- respond to presence sensors and environmental conditions,
- be remotely monitored and configured by a master system (e.g. via GSM/NB-IoT),
- report energy data (including consumption, voltage, luminaire status, operating temperature).

Efficiency

PARK is a luminaire with impressive photometric and electrical parameters. Thanks to the use of modern LED modules and carefully selected power supply systems, it achieves a luminous efficacy of up to 185 lm/W, while maintaining a very high power factor (Power Factor ≥ 0.99), which means minimal reactive power in the network load. As standard, the luminaire is equipped with a high-class surge protection device (SPD) with parameters of 20 kV (L-FG), ensuring resistance to interference from the power grid and atmospheric discharges.

LINTER LIGHTING



The protection covers both the LED module and the power supply system, ensuring safety and long component life – even in demanding locations (e.g. rural areas, dispersed power grids). High efficiency and resistance to interference guarantee stable operation of the luminaire for many years.

The combination of advanced electronics, passive cooling and configurability makes PARK a great tool optimised for long-term energy savings and operation.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15–80 W, programmable in 1 W increments (NFC)
Luminous flux	2,325-14,400 lm
Luminous efficacy	155-180 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K
Colour Rendering Index (CRI)	≥ 70
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.99
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

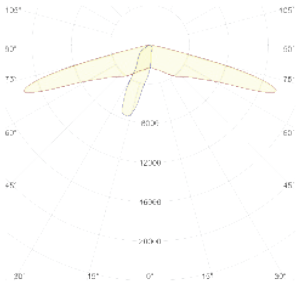
Installation	on a pole or boom, Ø 32-76 mm
Dimensions of the luminaire	500 x 460mm
Weight	5.1 KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Self-cleaning body	smooth, no ribs
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	23
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	ENEC, ENEC+

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

LIGHT DISTRIBUTION

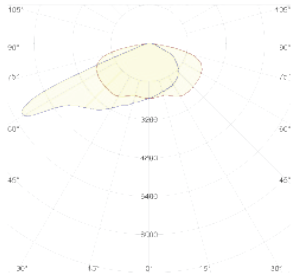


1. L-type optics – roadside distribution (asymmetrical longitudinal, narrow)

Designed for single-sided installation along motorways and local roads. Provides effective road lighting with large pole spacing, minimising side emissions.

APPLICATION

Single carriageway roads, residential areas, footpaths and cycle paths.

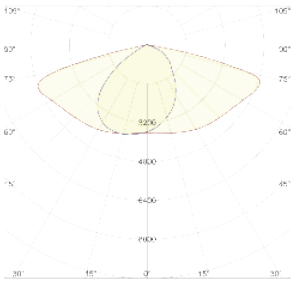


2. S-type optics – medium-wide distribution (asymmetrical with a wide angle)

Wide longitudinal distribution with extended lateral emission. It provides optimal illumination of the road and pavements on both sides of the road.

APPLICATION

City streets, Z and L class roads, transport routes with verges.

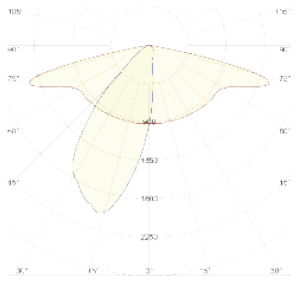


3. ME3 optics – symmetrical roadside distribution, medium-narrow

Suitable for central mounting, it provides uniform illumination of both lanes and the centre line.

APPLICATION

Main urban and suburban roads, pole arrangements in the centre of the road.

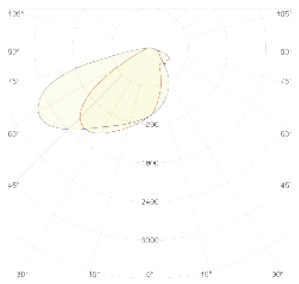


4. T-type optics – tunnel/wide cross-sectional distribution

Optics with focused emission in the transverse plane. Particularly effective for lighting areas with limited installation height.

APPLICATION

Tunnels, underpasses, infrastructure facilities.

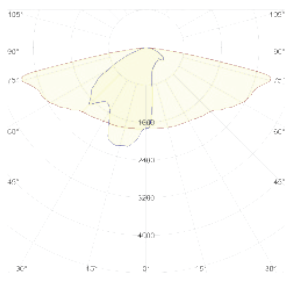


5. P6 optics – symmetrical, wide dispersion

Universal symmetrical optics for lighting squares, car parks and open areas.

APPLICATION

Car parks, bus bays, manoeuvring areas.



6. C2 optics – asymmetrical with rear emission (cut-off)

Provides high glare control and limited light emission outside the illuminated area.

APPLICATION

Industrial areas, roads with buildings on one side, minimisation of light pollution.

RAY

RAY

The RAY lamp is ideal for city squares, park paths, outdoor car parks and pedestrian walkways. Thanks to a wide range of optics (L, S, ME3, T, P6, C2), the light distribution can be precisely adjusted to the function of the space: from narrow roads and footpaths/cycle paths to wide squares, car parks and light emission-restricted areas. RAY lamps provide visual comfort, effective lighting and minimal glare in public spaces.

Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

OBR BODY

The housing is made of cast aluminium with a PVDF coating, ensuring resistance to corrosion, UV rays and harsh weather conditions. Its dual-chamber design with a self-cleaning housing, IP66/IP67 protection rating, and wide range of power and colour temperatures make it ideal for mounting on poles and booms, with the option of integration with IoT systems and various optical configurations.

LENS

The LENS panel provides a luminous flux of 2,550–17,000 lm with an efficiency of 170 lm/W, offering bright and comfortable lighting for urban spaces. Colour temperature adjustable within the range of 2200-5700 K and ORI ≥ 70/80 guarantee natural colour reproduction. Thanks to multi-lens optics and interchangeable light distribution configurations (23 characteristics), the panel allows the light to be adjusted to various scenarios: from one-sided road lighting to symmetrical distribution in squares and car parks. The panel supports 1-10 V, DALI, DALI-2, D4i and NFC control systems and works with IoT networks (GSM, NB-IoT, LoRaWAN, Mesh).

Obr Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The body of the RAY lamp is made of high-quality cast aluminium with a PVDF coating, which provides excellent resistance to corrosion (C3-H according to ISO 9227), UV radiation and harsh weather conditions, including moisture, salt mist and temperature fluctuations. The PVDF coating protects the enclosure from material ageing and loss of aesthetics, which is important in outdoor applications, both in urban and industrial locations.

It has a dual-chamber design – an optical chamber and a power supply chamber – which allows for safe and convenient placement of LED modules and control electronics. The casing is self-cleaning, with a smooth surface without ribs, which makes it easy to keep clean and minimises the accumulation of dust and dirt.

The body features a high degree of protection (IP66/IP67), mechanical resistance (IK09/IK10) and the ability to operate in a wide temperature range from -40 °C to +50 °C. It can be mounted on poles or booms with a diameter of Ø32-76 mm. The housing supports dual, top or bottom configurations and integration with IoT systems, enabling advanced lighting control within smart cities and infrastructure.

Service access is tool-based, and the design allows for easy replacement of LED modules without soldering. The body is adapted to various types of optics – from narrow road distributions to wide and symmetrical ones, which allows for precise adjustment of the light to the specific characteristics of the road, square or tunnel.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The RAY lamp offers advanced control options, allowing full control over lighting and its parameters. It supports 1-10 V, DALI, DALI-2, D4i standards and NFC programming, allowing for precise power and dimming profiles adjustment. The lamp has 5 built-in, autonomous dimming programmes with 1-minute adjustment, and the CLO (Constant Light Output) function ensures consistent light output throughout its entire service life.

The control system supports integration with modern IoT and CMS networks, including GSM, NB-IoT, LoRaWAN and Mesh 2.4 GHz, with TALQ protocol support and Plug & Play readiness. The lamp has Zhaga Book 18 and/or NEMA ANSI C136.41 communication sockets for easy connection to external monitoring and lighting management systems.

In addition, the RAY lamp is equipped with an LED temperature sensor that actively limits the current in case of overheating, as well as thermal, overvoltage, short-circuit and ESD protection, ensuring safety and reliability in all operating conditions.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the PARK system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Linter Control controllers can be factory-equipped with appropriate communication interfaces, and all data from the luminaires is sent to a central management platform, which enables:

- location mapping of luminaires (GPS),
- energy consumption analysis,
- checking of failures and alarm conditions,
- remote configuration changes (e.g. updating power profiles or sensor thresholds).

Thanks to its compatibility with open protocols, the system can be integrated with existing municipal platforms or expanded in a modular manner.

Control from lighting cabinets

Central group controllers

In classic installations, RAY can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each RAY luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.

Luminaires with a built-in Linter Control controller can:

- implement power reduction profiles based on an astronomical clock or schedule,
- respond to presence sensors and environmental conditions,
- be remotely monitored and configured by a master system (e.g. via GSM/NB-IoT),
- report energy data (including consumption, voltage, luminaire status, operating temperature).

Efficiency

The RAY lamp has been designed for maximum light efficiency and energy savings, offering a wide range of luminous flux from 2,550 lm to 17,000 lm, with an efficiency of up to 170 lm/W. These parameters allow for optimal lighting of city streets, residential areas and open spaces, while reducing energy consumption.

The luminaire offers a wide range of colour temperatures (CCT) – from 2200 K to 5700 K, including a 3CCT function that allows quick selection between 3000 K, 4000 K or 5000 K, enabling the light to be adjusted to the nature of the environment, user requirements and the specific characteristics of the designed space. The Colour Rendering Index (CRI) is ≥ 70 or ≥ 80, guaranteeing accurate colour reproduction and visual comfort.

The LED modules used in the RAY luminaire are characterised by exceptional durability – ≥ 100,000 hours L95B10, tested in accordance with LM-80 standards and TM-21 projection, which ensures long-lasting, stable and consistent lighting quality throughout the entire service life. Additionally, the lamp is equipped with a CLO (constant luminous output) function, which automatically compensates for drops in LED module performance, maintaining a constant level of illumination.

The RAY lamp enables precise control of power and lighting profiles thanks to its advanced control system. Control is via 1-10 V, DALI, DALI-2, D4i, and NFC standards, and built-in autonomous dimming programmes allow for flux adjustment every 1 minute. Such solutions not only increase user comfort, but also allow for additional energy savings and extend the service life of the device.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15-100 W, programmable in 1 W increments (NFC) power selectable models (3 step): • 40/60/80 W • 60/80/100 W
Luminous flux	2,550-17,000 lm
Luminous efficacy	170lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K 3000K / 4000K / 5000K (3CCT selectable) Single CCT: 3000 / 4000 / 5000 K
Colour Rendering Index (CRI)	>70 / >80
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.99
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

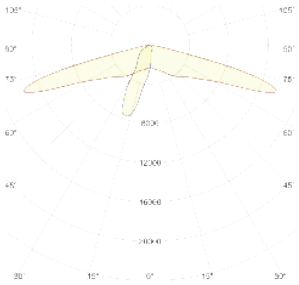
Installation	on a pole or boom, Ø 32-76 mm
Dimensions of the luminaire	direct lighting: Ø450 x 510 mm / indirect + direct combo: Ø450 x 580 mm
Weight	direct: 5.2 kg ±0.3 kg / direct + Indirect: 5.8 kg ±0.3 kg
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Self-cleaning body	smooth, no ribs
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	23
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	ENEC, ENEC+

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

LIGHT DISTRIBUTION

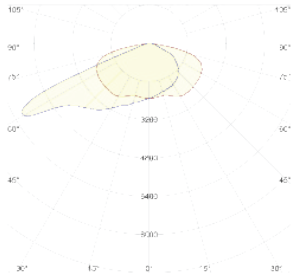


1. **L-type optics – roadside distribution (asymmetrical longitudinal, narrow)**

   Designed for single-sided installation along motorways and local roads. Provides effective road lighting with large pole spacing, minimising side emissions.

   APPLICATION

   Single carriageway roads, residential areas, footpaths and cycle paths.

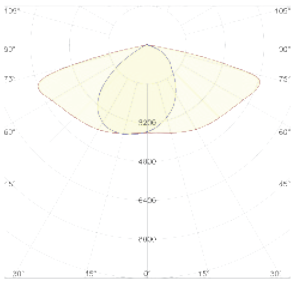


2. **S-type optics – medium-wide distribution (asymmetrical with a wide angle)**

   Wide longitudinal distribution with extended lateral emission. It provides optimal illumination of the road and pavements on both sides of the road.

   APPLICATION

   City streets, Z and L class roads, transport routes with verges.

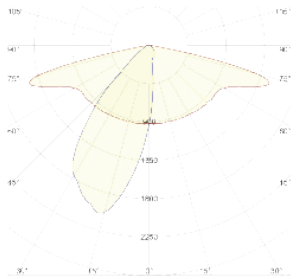


3. **ME3 optics – symmetrical roadside distribution, medium-narrow**

   Suitable for central mounting, it provides uniform illumination of both lanes and the centre line.

   APPLICATION

   Main urban and suburban roads, pole arrangements in the centre of the road.

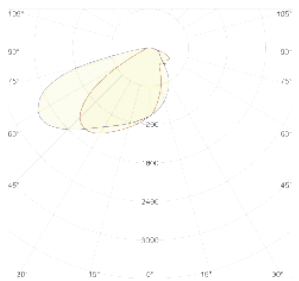


4. **T-type optics – tunnel/wide cross-sectional distribution**

   Optics with focused emission in the transverse plane. Particularly effective for lighting areas with limited installation height.

   APPLICATION

   Tunnels, underpasses, infrastructure facilities.

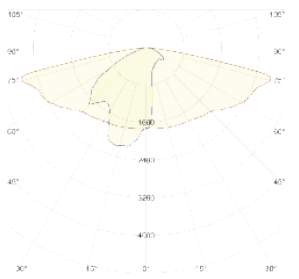


5. **P6 optics – symmetrical, wide dispersion**

   Universal symmetrical optics for lighting squares, car parks and open areas.

   APPLICATION

   Car parks, bus bays, manoeuvring areas.



6. **C2 optics – asymmetrical with rear emission (cut-off)**

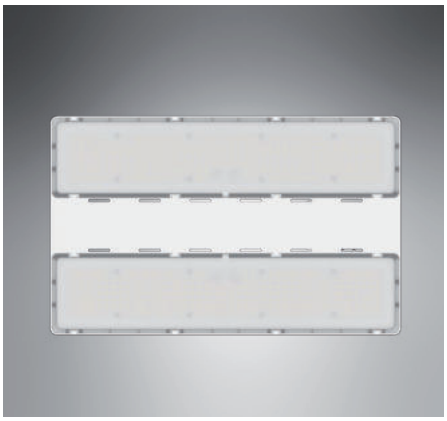
   Provides high glare control and limited light emission outside the illuminated area.

   APPLICATION

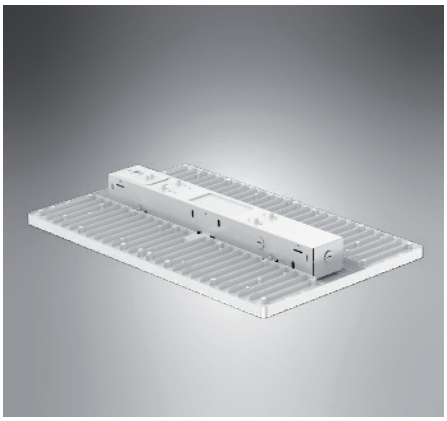
   Industrial areas, roads with buildings on one side, minimisation of light pollution.

SLIM

SLIM



The SLIM lamp is ideal for warehouses, large-area shops, corridors and passageways where bright, even and stable lighting is required. Thanks to a variety of optics, including elliptical 30X85°, light can be precisely directed along warehouse aisles and workstations, minimising shadows and ensuring maximum lighting efficiency.



50 Hz
60 Hz
200 V
260 V
IP 66
IP 67
IK 09
IK 10
Min
- 40°C
Max
50°C

Key Competitive Advantages

GLOW

The SLIM panel offers a luminous flux of 7,000 to 54,000 lm with an efficiency of 180 lm/W, providing bright, uniform and comfortable lighting for large areas. Colour temperature adjustable in the range of 2200 K–6500 K, colour rendering index CRI >70/80 and low glare rate (UGR) <19 guarantee natural colour reproduction and visual comfort. parameters and maximum luminous efficacy of up to 185 lm/W, which significantly reduces energy consumption compared to traditional luminaires.

VOX BODY

The SLIM body is made of cast aluminium with a PVDF coating, which ensures resistance to corrosion (C4), UV rays and harsh environmental conditions. The enclosure, measuring 486–548 x 306–344 x 78 mm and weighing 3.5–4.1 kg, has a dual-chamber design for easy servicing and mounting on a sling, ceiling or in a hanging version.

Vox Body

STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

The VOX lamp is a modern LED luminaire designed for high performance, reliability and comfortable lighting of outdoor and industrial spaces. Thanks to its wide light beam, high efficiency (170 lm/W) and colour temperature selection (2200-6500 K), it provides bright, energy-efficient and stable lighting while maintaining natural colour rendering (CRI >70/80). The luminaire is characterised by LED durability ≥100,000 hours (L95B10) and a CLO function that maintains a constant light level throughout its entire service life.

The VOX body is made of cast aluminium with a PVDF coating and PMMA and stainless steel components, ensuring resistance to corrosion (C4), UV rays and harsh environmental conditions. The compact, lightweight design allows for mounting on a bracket, boom or wall, and the dual-chamber construction facilitates servicing. Tempered textured glass with glare control, IP66 protection and IK09 mechanical resistance ensure reliable operation in a wide temperature range (-40 °C to +60 °C). Upward light emission is 0%, in accordance with Dark Sky guidelines, and the wide F00A80 optics guarantee uniform and comfortable lighting.

The VOX lamp combines modern design, high performance and durability, making it ideal for industrial, sports and public space applications.

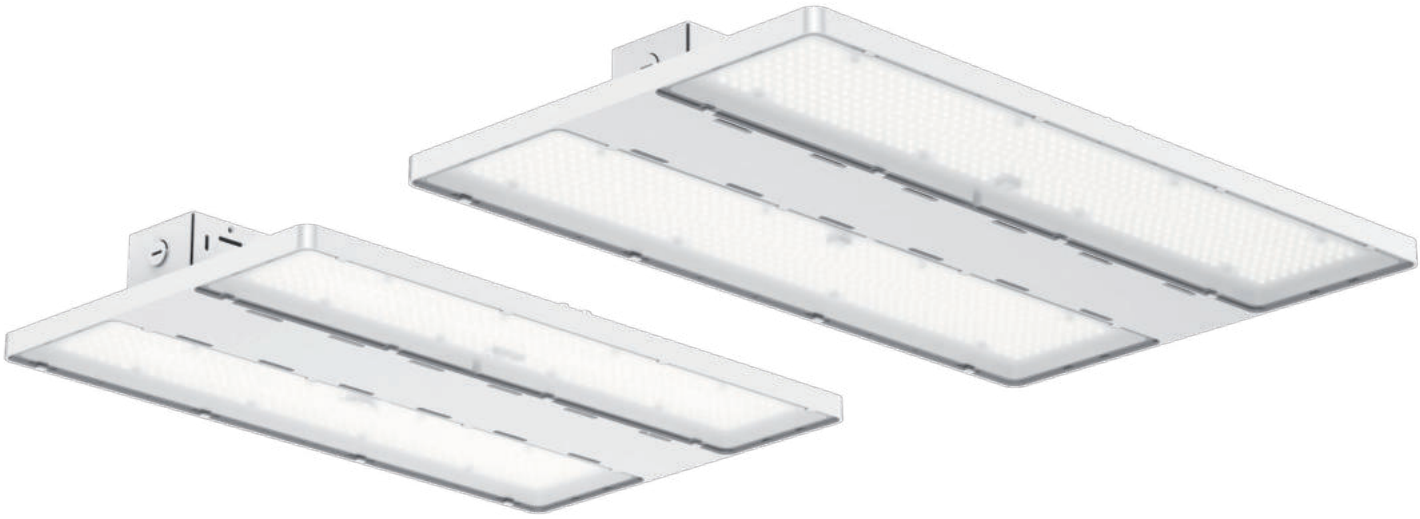
Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The VOX lamp does not have built-in control systems or integration with IoT/CMS – control is not provided for. Despite the lack of external control, the luminaire ensures reliable and stable operation thanks to built-in protection and light output control functions:

CLO (consistent light output) – ensures consistent brightness throughout the entire service life.
Soft start – gentle lamp start-up, protecting electronics and LEDs.
Protections – thermal, overvoltage, short circuit and ESD, including an active LED temperature sensor to limit the current in case of overheating.

Thanks to these features, the lamp operates reliably in a wide temperature range (-40 °C to +60 °C) and harsh environmental conditions, despite the lack of an external control system.



Areas of Application

APPLICATION

The SLIM lamp is ideal for warehouses, large-area shops, corridors and passageways where bright, even and stable lighting is required. Thanks to a variety of optics, including elliptical 30X85°, light can be precisely directed along warehouse aisles and workstations, minimising shadows and ensuring maximum lighting efficiency.

Efficiency

The THIN lamp provides high luminous efficacy thanks to modern LED sources, generating bright and energy-efficient lighting in industrial and sports facilities and open spaces. A wide range of colour temperatures (CCT) is available, allowing the light character to be adjusted to the type of space and the needs of users.

The luminaire is characterised by LED durability ≥ 100,000 hours (L95B10) and a CLO function that maintains a constant luminous flux throughout its entire service life. Tempered textured glass ensures even light distribution with reduced glare, and the lack of upward light emission (0%) makes the lamp compliant with Dark Sky guidelines and highly effective in outdoor and industrial applications.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	100–300 W
Luminous flux	7,000-54,000 lm
Luminous efficacy	180 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	>70/80
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	n/a
Autonomous dimming profiles	n/a
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	n/a

GENERAL

Installation	slings / ceiling mounting / hanging mounting
Dimensions of the luminaire	• 100- 200W - 486 x 306 x 78 mm • 300W - 548 x 344 x 78 mm
Weight	• 100-200W - 3.5 kg • 300W - 4,1 kg
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	tempered textured glass – high mechanical resistance and glare control
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	n/a
Communication sockets	n/a
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66
Mechanical strength	IK09
Operating temperature	-40 °C to +60 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

ACCESSORIES

High transparency PC lenses
Ceiling mount
Sling
Wire cover

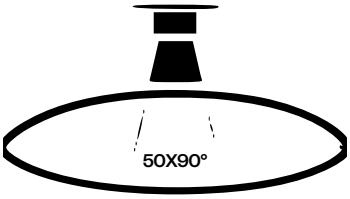
Standard colour options available.

RAL 9003	RAL 9016	RAL 9002	RAL 7047	RAL 7035	RAL 7038	RAL 7040

OPTIC DESCRIPTIONS

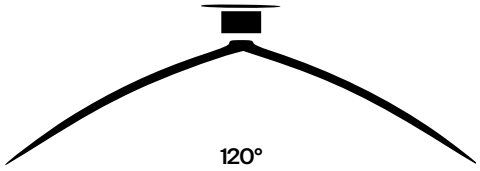
30x70° - Narrow elliptical beam (for corridors)

Extended, directional light distribution with a narrow transverse angle and a wider longitudinal angle. Designed for lighting warehouse aisles, passageways and high corridors where light must be directed parallel to the axis of the passageway.



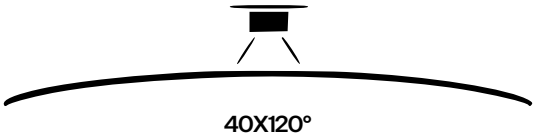
50x90° - Medium-wide elliptical distribution

A more open light profile that balances intensity along the longitudinal axis with extended lateral coverage. Ideal for production halls, warehouses and work areas where wider but still directional lighting is required. It works well wherever clarity of space is required while maintaining control over light dispersion. It ensures high efficiency and limited light loss, strongly concentrating the beam in the direction of use.



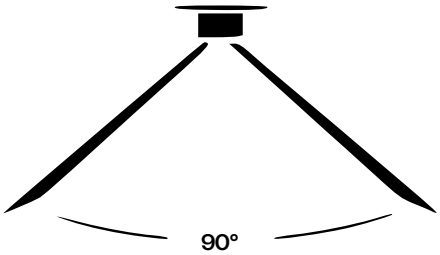
120° - Ultra-wide beam

Symmetrical, wide beam angle for high uniformity and maximum surface coverage. Recommended for open halls, sports halls, production spaces and low-mounted areas where uniform lighting without harsh shadows is important.



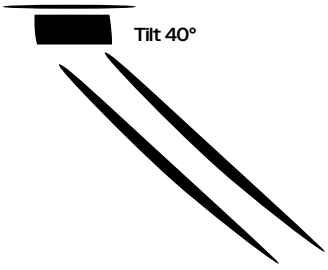
40x120° - Wide elliptical distribution (production / open halls)

The 40° angle in the transverse axis and as much as 120° in the longitudinal axis creates very wide coverage in one direction, while maintaining a narrower beam in the other. An ideal optics for production areas, assembly halls and wide zones where luminaires are mounted linearly or parallel to work lines. It ensures high uniformity and contrast reduction. It ensures high efficiency and limited light loss, strongly concentrating the beam in the direction of use.



90° - Broad, general distribution

Classic 90° distribution for wide and even illumination of the space. It works well in warehouses, logistics halls and open workspaces where wide coverage and comfortable vision are a priority.



Tilt 40° - an asymmetrical directional beam

Optics tilted at 40°, providing a clearly directional, asymmetrical light distribution that can be directed towards the area requiring illumination. Ideal for illuminating side work areas, storage shelves, walls, production lines, and areas where luminaires cannot be mounted centrally above the work area. Allows light to be directed without mechanically tilting the luminaire.

THIN

THIN

The THIN floodlight is ideal for lighting sports fields, warehouses and industrial spaces requiring uniform, wide light distribution with minimal glare. Thanks to its lightweight and compact design, it is suitable for mounting on masts, booms and building walls, ensuring visual comfort, safety of use and stable lighting over large areas.

50 Hz
60 Hz
200 V
260 V
IP 66
IP 67
IK 09
IK 10
Min
-40°C
Max
50°C

Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

GOBIK

The GOBIK light panel offers a luminous flux of 8,500 to 51,000 lm with an efficiency of 170 lm/W, guaranteeing wide, even and comfortable lighting. The colour temperature is widely adjustable (2200 K-6500 K), and the colour rendering index CRI >70/80 ensures natural colour reproduction.

VECTO

The THIN body is made of aluminium with a PVDF coating and and a PMMA lens, ensuring resistance to corrosion (C4), UV rays and harsh conditions. The lightweight, compact and minimalist housing (1.2–3.5 kg) has a dual-chamber design for easy servicing and mounting on a bracket, boom or wall. Tempered textured glass with glare control, IP66 or IP67 protection, IK09 or IK10 impact resistance and a wide temperature range (-40 °C to +60 °C) guarantee reliable operation in sports and industrial facilities.

Vecto Body

STRENGTH

AESTHETICS

FLEXIBLE TO INSTALL

The lamp body is made of cast aluminium with a PVDF coating and PMMA and stainless steel components, ensuring resistance to corrosion (C4), UV rays and harsh environmental conditions. The lightweight and compact design (weight 1.2–3.5 kg depending on power) allows for mounting on a bracket, boom or wall, as well as servicing with tools.

The lamp offers high luminous efficacy (170 lm/W) and a luminous flux ranging from 8,500 to 51,000 lm, with colour temperatures from 2,200 K to 6,500 K and CRI >70/80. Wide light distribution ensures visual comfort, glare control and no upward light emission (0%), in accordance with Dark Sky guidelines.

The housing is characterized by an IP66 or IP67 rating, IK09 or IK10 impact resistance, tempered textured glass, operating temperature from -40 °C to +60 °C and LED durability ≥ 100,000 hours (L95B10). The lamp is equipped with solderless LED modules, CLO, soft start, and thermal, overvoltage, short-circuit, and ESD protection.

Various mounting accessories are available (adapters, clamps and outrigger mounts), and identification is performed via a QR code and label, with the option of integration with a mobile application. The optics, made of tempered textured glass, provide uniform, wide light coverage with reduced glare, ideal for installation on masts, booms or walls.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

CLO (consistent light output) – ensures consistent brightness throughout the entire service life.
Soft start – gentle lamp start-up, protecting electronics and LEDs.
Protections – thermal, overvoltage, short circuit and ESD, including an active LED temperature sensor to limit the current in case of overheating.

Thanks to these features, the lamp operates reliably in a wide temperature range (-40 °C to +60 °C) and harsh environmental conditions.

Thin C

Thin Z

Areas of Application

APPLICATION

The THIN luminaire is ideal for lighting sports fields, warehouses and industrial spaces requiring uniform, wide light distribution with minimal glare. Thanks to its lightweight and compact design, it is suitable for mounting on masts, booms and building walls, ensuring visual comfort, safety of use and stable lighting over large areas.

Efficiency

The lamp offers high luminous efficacy of 170 lm/W and a luminous flux ranging from 8,500 to 51,000 lm, providing bright, energy-efficient lighting for industrial, sports and open space applications. A wide range of colour temperatures from 2200 to 6500 K and a high CRI >70/80 are available, ensuring natural colour rendering.

The luminaire has an LED lifetime of ≥ 100,000 hours (L95B10) and uses CLO technology, which maintains a constant luminous flux throughout its entire service life. Thanks to its wide light distribution and glare control, the lamp provides uniform, comfortable lighting with no upward light emission (0%), meeting Dark Sky requirements. It is an efficient and reliable solution for mounting on masts, booms and walls.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	50–300 W
Luminous flux	2,400-48,000 lm
Luminous efficacy	8,500-51,000 lm
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	>70/80
Durability	≥ 100 000 h L95B10, tested to LM-80 i and TM-21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	n/a
Autonomous dimming profiles	n/a
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	n/a

GENERAL

Installation	mounting bracket / boom mounting / wall mounting
Dimensions of the luminaire	50 - 269 x 208 x 46 mm 100 - 299 x 228 x 48 mm 150 - 329 x 258 x 48 mm 200 - 353 x 288 x 51 mm 300 - 413 x 338 x 51 mm
Weight	050 - 1.2 kg 100 - 1.5 kg 150 - 1.9 kg 200 - 2.6 kg
Chamber	aluminium casting with PVDF coating

Service access	with tools
Optics type	wide light distribution
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	tempered textured glass – high mechanical resistance and glare control
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	Linter control
Communication sockets	Zhaga socket
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 or IP67
Mechanical strength	IK09 or IK10
Operating temperature	-40 °C to +60 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

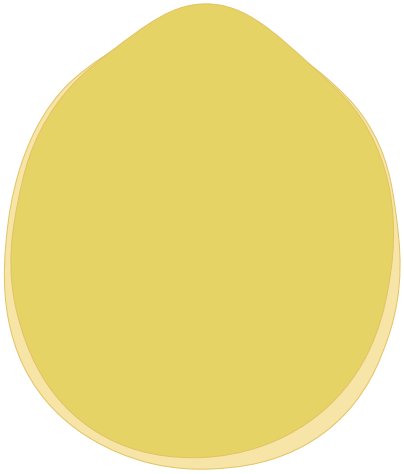
ACCESSORIES

42 mm adapter
60 mm adapter
76 mm adapter
Clamp mount 100 mm
Clamp mount 150 mm
Outrigger mount

Standard colour options available.

RAL 9011 RAL 7021 RAL 7016 RAL 7024 RAL 7043 RAL 7012 RAL 7005

OPTIC DESCRIPTIONS



Wide beam with glare control (textured glass)

The F00A80 optics use tempered textured glass that diffuses light in a controlled manner, providing a wide beam angle while reducing glare.

This solution is ideal for applications that require:

- a broad, even coverage,
- visual comfort,
- luminance reduction without loss of efficiency, stable light when mounted on masts, walls or booms.

VENTA

VENTA

VENTA is a compact and durable LED luminaire designed for urban spaces. It combines high energy efficiency with modern control systems, offering a long service life and minimal maintenance requirements. Designed based on the latest lighting technologies, the Venta luminaire ensures comfort and safety for users while saving energy and reducing CO_2 emissions throughout the product's life cycle. Venta is fully prepared for the Smart City concept, and its design and functionality are in line with the principles of the circular economy, enabling future upgrades and component recycling.

Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

GUARD BODY

The VENTA luminaire has been designed for maximum durability, environmental resistance and operational safety. Its Guard body is made of durable cast aluminium, coated with PVDF fluoropolymer, which provides exceptional resistance to UV radiation.

HALO

Thanks to modern LED modules and optimal power supply systems, the lamp achieves an efficiency of up to 180 lm/W with minimal reactive power consumption. Equipped with a 10 kV surge protector as standard, it ensures resistance to interference and long component life, even in harsh conditions. Such combination of advanced electronics and passive cooling guarantees stable operation and savings for many years.

Guard Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The VENTA luminaire has been designed for maximum durability, environmental resistance and operational safety. Its body is made of durable ADO12 cast aluminium, coated with PVDF fluoropolymer, which provides exceptional resistance to UV radiation, acid rain, urban pollution and salt mist. The PVDF coating also offers excellent adhesion, low abrasion and high colour stability over time, allowing VENTA luminaires to be used safely even in demanding industrial or coastal environments.

The VENTA design incorporates a modular approach to installation and servicing. The supply chamber can be opened without tools, using a proprietary locking system that allows easy and intuitive access to the supply chamber and the optical chamber (it is not possible to install tool-based access).

The luminaire closure mechanism is equipped with the option of applying a warranty seal from inside the body during the prefabrication stage, which protects the interior of the luminaire against unauthorised interference and allows you to clearly determine whether the device has been opened since installation.

Another very important element of the VENTA design is the two-point mounting system, which ensures stable and secure attachment of the luminaire to a pole or a boom. Additionally, the adjustable mounting bracket allows for precise positioning of the luminaire in two planes:

- the swivel joint allows rotation optionally in the horizontal axis within a range of -90° to +90°,
- the base of the bracket, mounted directly to the standard luminaire, allows for tilt adjustment within a range of -15° to +15°.

This solution eliminates the need for additional angle adapters and significantly speeds up the installation process, regardless of terrain conditions, boom type or road inclination angle. The flexibility of the optics setting in relation to the illuminated surface translates into higher project efficiency and lower risk of execution errors.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

VENTA luminaires are fully compatible with modern lighting management systems and meet the needs of investors in terms of both simple stand-alone installations and fully integrated Smart City networks. Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the perator's technological preferences. Three independent control models are available.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the PARK system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Linter Control controllers can be factory-equipped with appropriate communication interfaces, and all data from the luminaires is sent to a central management platform, which enables:

- location mapping of luminaires (GPS),
- energy consumption analysis,
- checking of failures and alarm conditions,
- remote configuration changes (e.g. updating power profiles or sensor thresholds).

Thanks to its compatibility with open protocols, the system can be integrated with existing municipal platforms or expanded in a modular manner.

Control from lighting cabinets

Central group controllers

In classic installations, BASTION can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

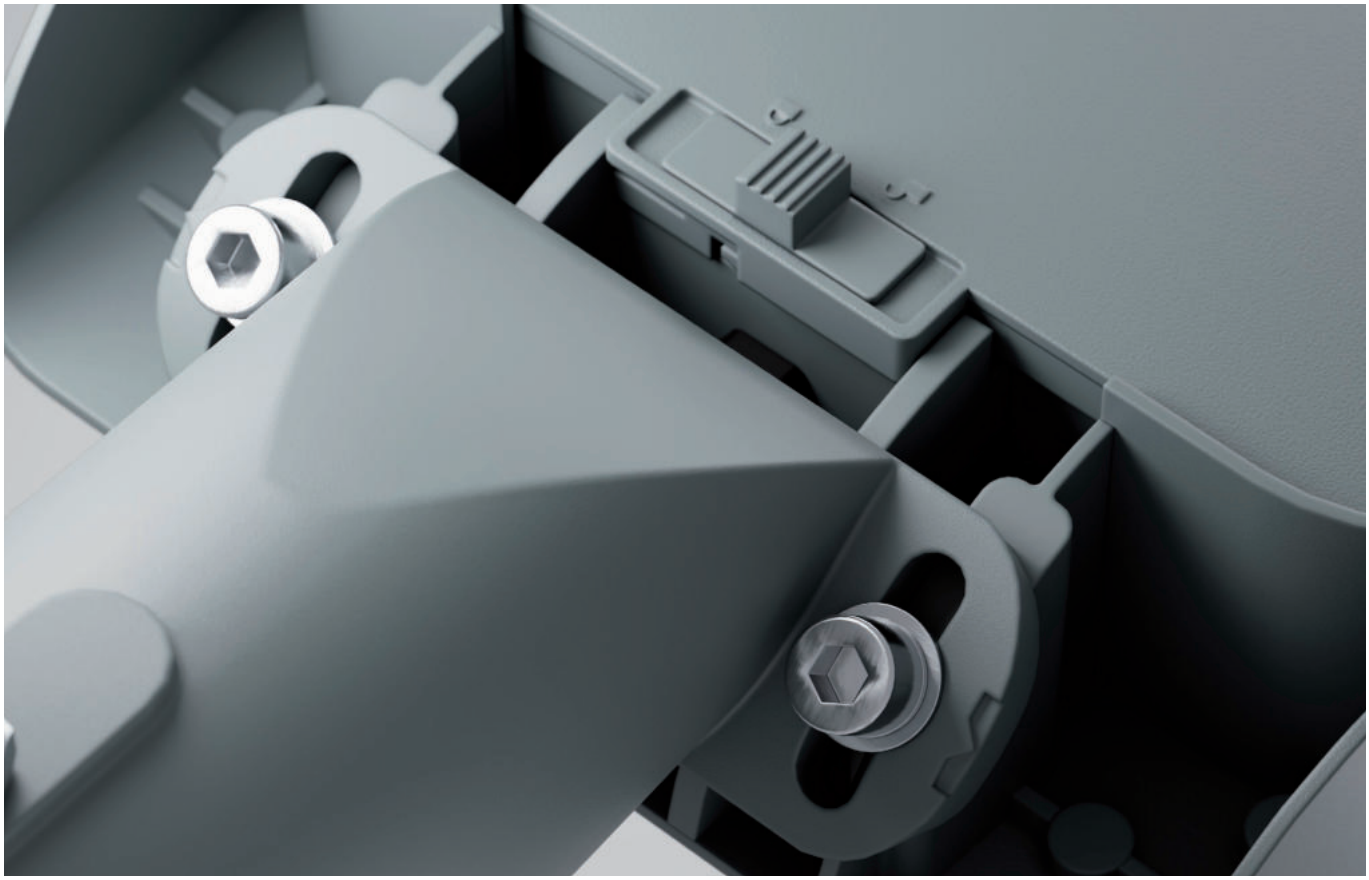
Each BASTION luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.

Luminaires with a built-in Linter Control controller can:

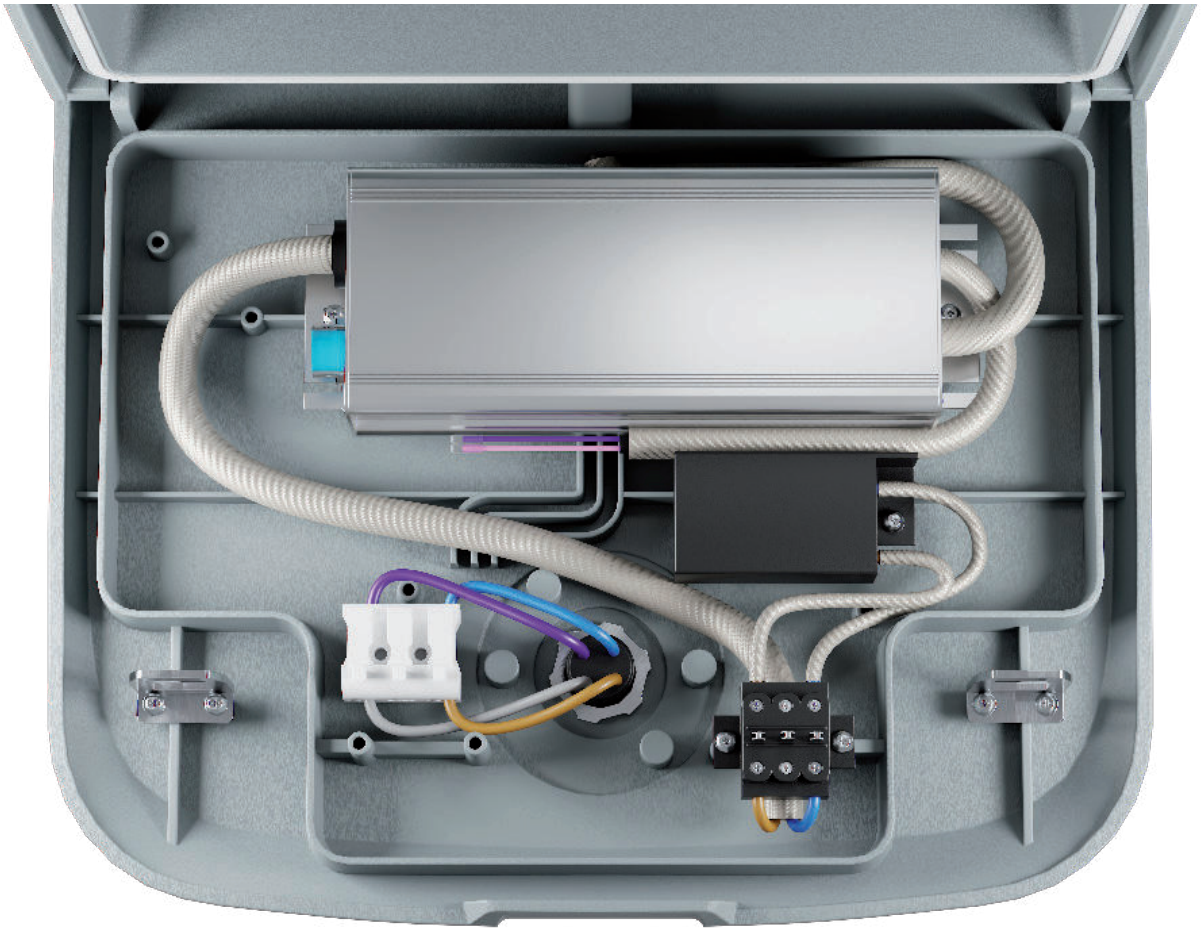
- implement power reduction profiles based on an astronomical clock or schedule,
- respond to presence sensors and environmental conditions,
- be remotely monitored and configured by a master system (e.g. via GSM/NB-IoT),
- report energy data (including consumption, voltage, luminaire status, operating temperature).



Efficiency

VENTA is a luminaire with impressive photometric and electrical parameters. Thanks to the use of modern LED modules and carefully selected power supply systems, it achieves a luminous efficacy of up to 180 lm/W, while maintaining a very high power factor (Power Factor ≥ 0.98), which means minimal reactive power in the network load. As standard, the luminaire is equipped with a high-class surge protection device (SPD) with parameters of 10 kV (L-FG), ensuring resistance to interference from the power grid and atmospheric discharges.

LINTER LIGHTING



The protection covers both the LED module and the power supply system, ensuring safety and long component life – even in demanding locations (e.g. rural areas, dispersed power grids). High efficiency and resistance to interference guarantee stable operation of the luminaire for many years.

The combination of advanced electronics, passive cooling and configurability makes VENTA a great tool optimised for long-term energy savings and operation.

The images depicting the interior of the lamp are for visualisation purposes only. They are for demonstration purposes only and may differ from the final product.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15-200 W (programmable in 1 W increments, NFC)
Luminous flux	2,700-36,000 lm
Luminous efficacy	180 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000 K / 6500 K
Colour Rendering Index (CRI)	≥ 70
Durability	≥ 100 000 h L95B10, tested to LM80 i and TM21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

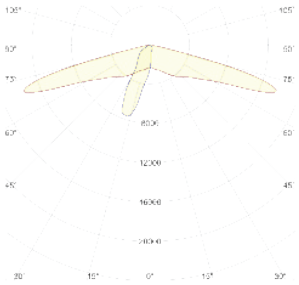
Installation	on a pole or boom, Ø 32-76 mm
Tilt adjustment	-90° to +90°, in 5° increments, or -15° to +15°
Dimensions of the luminaire	415 x 254 x 145mm
Weight	3,8 - 10,1 kg (depending on version)
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	tool-free
Self-cleaning body	smooth, no ribs
Fastening mechanism	2-point clamp
Connector	IP68 with sealing gland
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Cut-off optics	backwards glare and emission reduction
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	20
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67 (optional)
Mechanical strength	IK09 / IK10 (optional)
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, RoHS

Standard colour options available.

RAL 7000 RAL 7001 RAL 7004 RAL 7045 RAL 7046 RAL 1023 RAL 1021

LIGHT DISTRIBUTION

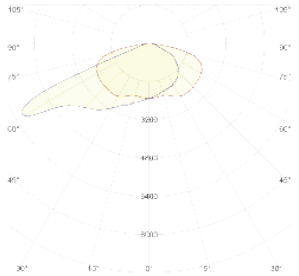


1. **L-type optics – roadside distribution (asymmetrical longitudinal, narrow)**

   Designed for single-sided installation along motorways and local roads. Provides effective road lighting with large pole spacing, minimising side emissions.

   APPLICATION

   Single carriageway roads, residential areas, footpaths and cycle paths.

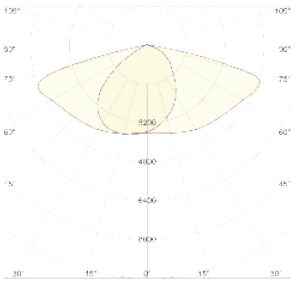


2. **S-type optics – medium-wide distribution (asymmetrical with a wide angle)**

   Wide longitudinal distribution with extended lateral emission. It provides optimal illumination of the road and pavements on both sides of the road.

   APPLICATION

   City streets, Z and L class roads, transport routes with verges.

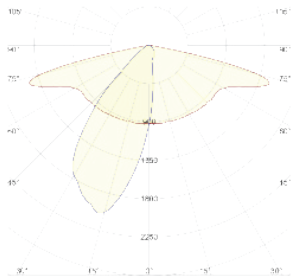


3. **ME3 optics – symmetrical roadside distribution, medium-narrow**

   Suitable for central mounting, it provides uniform illumination of both lanes and the centre line.

   APPLICATION

   Main urban and suburban roads, pole arrangements in the centre of the road.

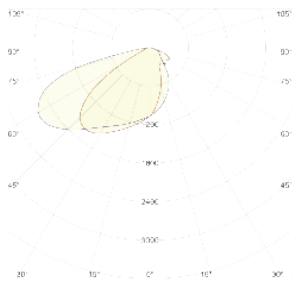


4. **T-type optics – tunnel/wide cross-sectional distribution**

   Optics with focused emission in the transverse plane. Particularly effective for lighting areas with limited installation height.

   APPLICATION

   Tunnels, underpasses, infrastructure facilities.

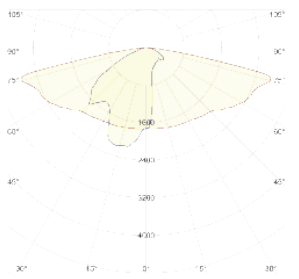


5. **P6 optics – symmetrical, wide dispersion**

   Universal symmetrical optics for lighting squares, car parks and open areas.

   APPLICATION

   Car parks, bus bays, manoeuvring areas.



6. **C2 optics – asymmetrical with rear emission (cut-off)**

   Provides high glare control and limited light emission outside the illuminated area.

   APPLICATION

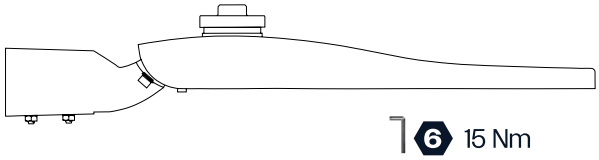
   Industrial areas, roads with buildings on one side, minimisation of light pollution.

INSTALLATION METHOD

1

2

SWITCH IT OFF!



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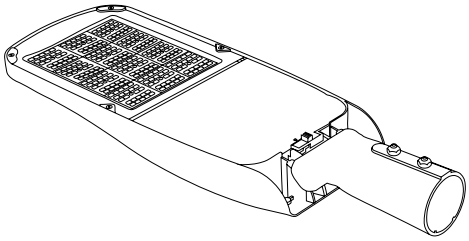

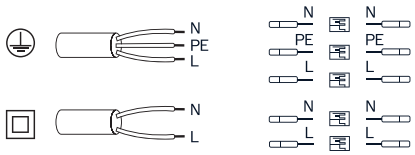

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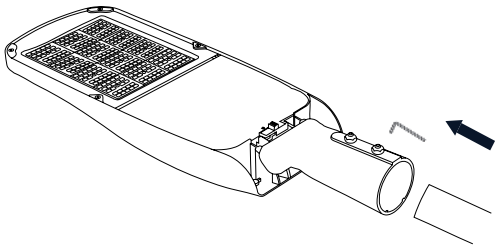

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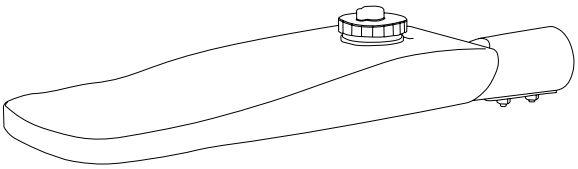
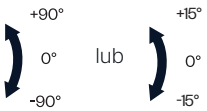
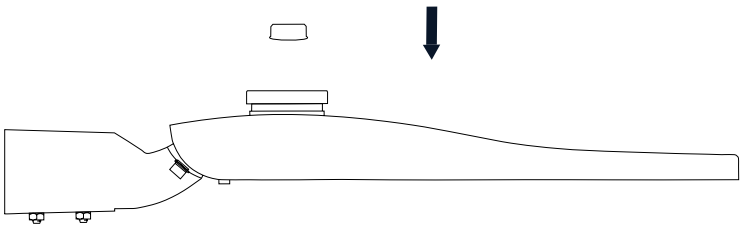




Full range tilt adjustment with five-step increments

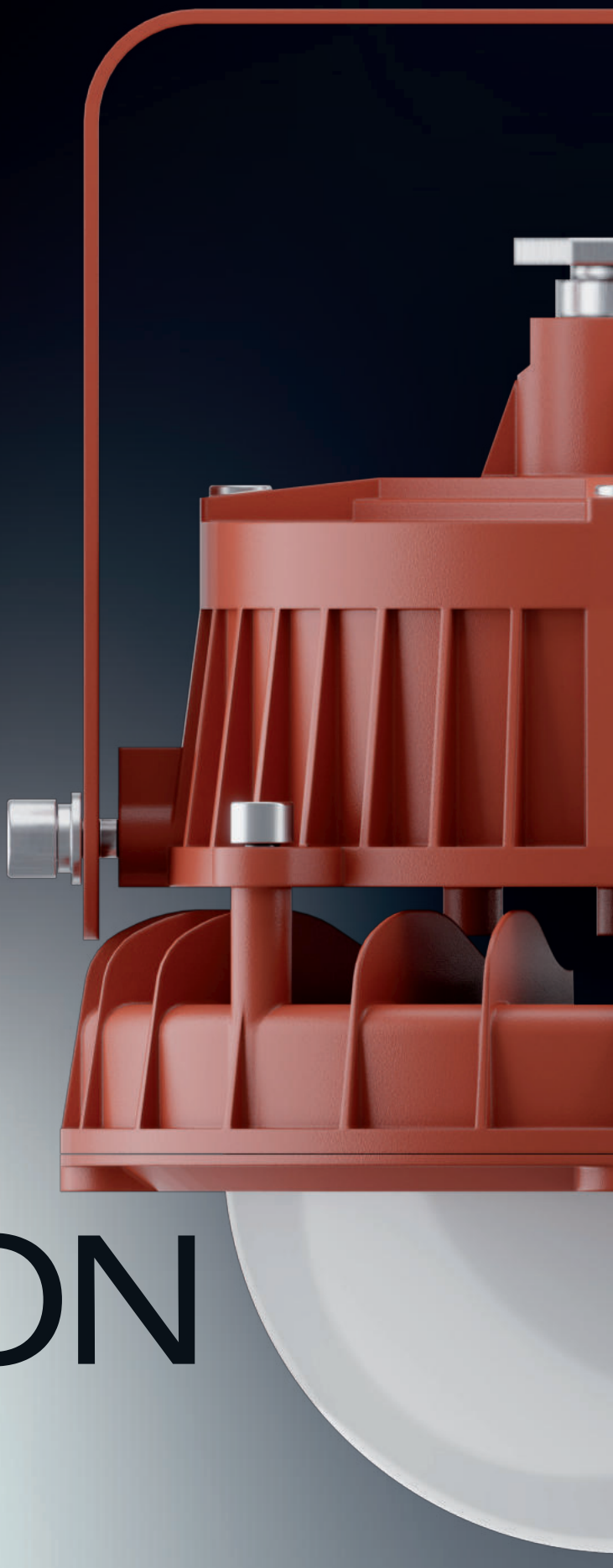
6



7

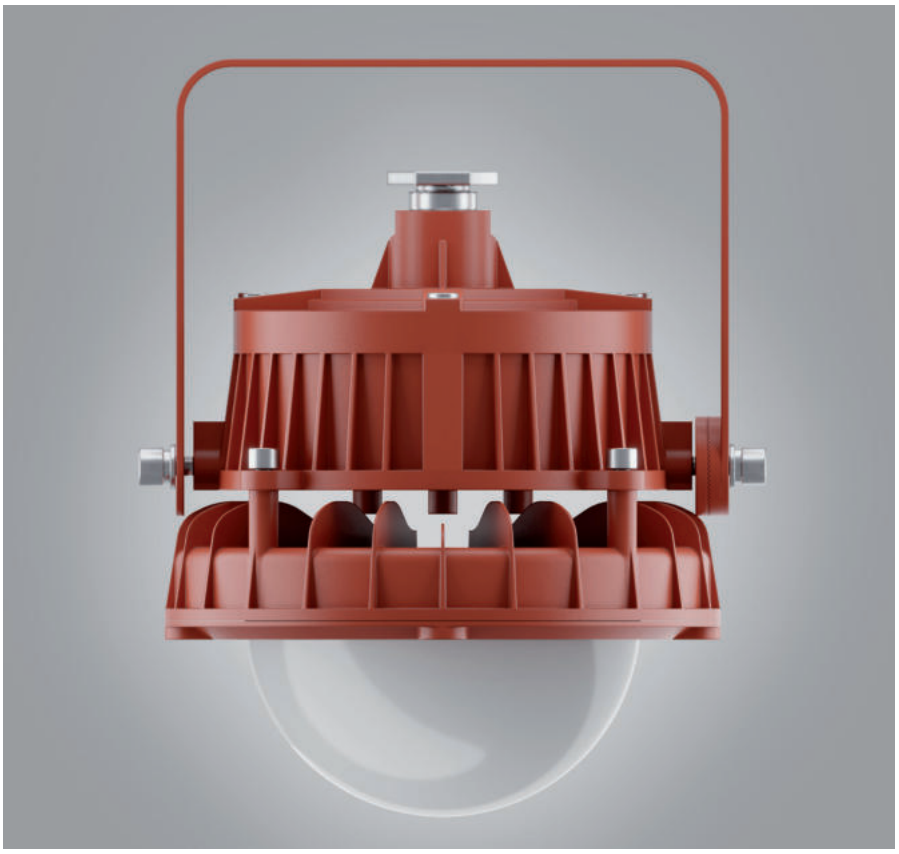
SWITCH IT ON!

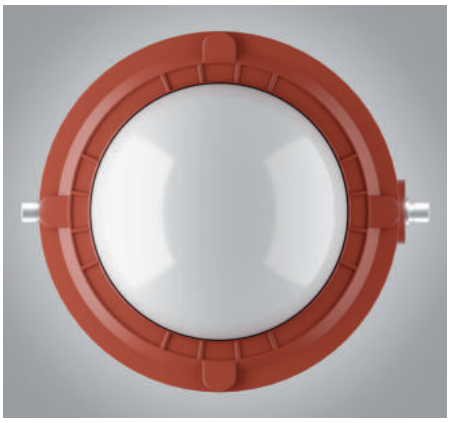

REKLAMA



PHOTON

PHOTON





PHOTON is a modern LED luminaire with a rated power of 30-50 W and a luminous flux of 4,800-8,000 lm, designed for use in demanding conditions in potentially explosive atmospheres, such as mines, industrial installations or petrochemical facilities. High luminous efficacy of 160 lm/W and a wide range of colour temperatures (2200-6500 K) allow for optimal adjustment of light to the specific application.

50 Hz
60 Hz

200 V
260 V

IP 66
IP 67

IK 09
IK 10

Min
-40°C

Max
60°C

Key Competitive Advantages

PHOTONBLOCK BODY

The luminaire is made of cast aluminium with a PVDF coating, ensuring maximum resistance to corrosion, UV radiation and extreme environmental conditions. The dual-chamber design separates the optical section from the power supply section, facilitating servicing and replacement of LED light sources. Compact dimensions, high mechanical resistance (IK09/IK10) and IP66/IP67 protection rating guarantee durability and reliability in all conditions.

COREBAM

The LED module provides high luminous flux with low energy consumption, with a lifetime of ≥100,000 hours L95B10. UV-resistant lenses guarantee stable and precise light distribution, minimising losses. The OLO system maintains constant brightness, while the compatibility with control systems (DALI, 1–10 V, D4i, NFC) allows for intelligent lighting management and adjustment of light to the user's needs.

Photonblock Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

This luminaire has been designed to operate in the most demanding conditions, ensuring maximum safety and reliability. The robust housing made of cast aluminium, coated with PVDF, is resistant to corrosion, salt spray and UV radiation, as confirmed by corrosion class C3-H according to ISO 9227 standard. Thanks to its high IP66/IP67 protection rating and IK09/IK10 mechanical resistance, this luminaire guarantees durability even in harsh industrial environments. Built-in safety features – thermal, overvoltage, short-circuit and ESD protection – combined with an active LED temperature sensor that limits current in case of overheating, enhance safety during use. Servicing is made easier thanks to the use of a scissor-type, 3-pole power disconnector.

This luminaire is characterised by high durability and efficiency. L95B10 LED light sources offer a service life of ≥ 100,000 hours (confirmed by LM-80 testing and the TM-21 projection). The CLO (Constant Light Output) system maintains luminous flux throughout the entire service life, while low ripple (<6%) and high power factor (PF ≥0.98) guarantee stable operation. The luminaire is compatible with various control systems – 1-10 V, DALI, DALI-2, D4i and NFC – and, additionally, allows for programming autonomous dimming profiles (5 programmes, with 1 minute adjustment programme).

When it comes to design and use, the lamp offers flexibility of installation and ease of maintenance. Compact dimensions (Ø182x141mm - Ø182*222mm) and low weight (2.8 kg - 4.2 kg) allow for convenient installation on facades, beams or suspended from the ceiling. The dual-chamber design, separating the optical and power supply sections, ensures easy service access, while the use of solderless technology allows for quick replacement of LED sources.

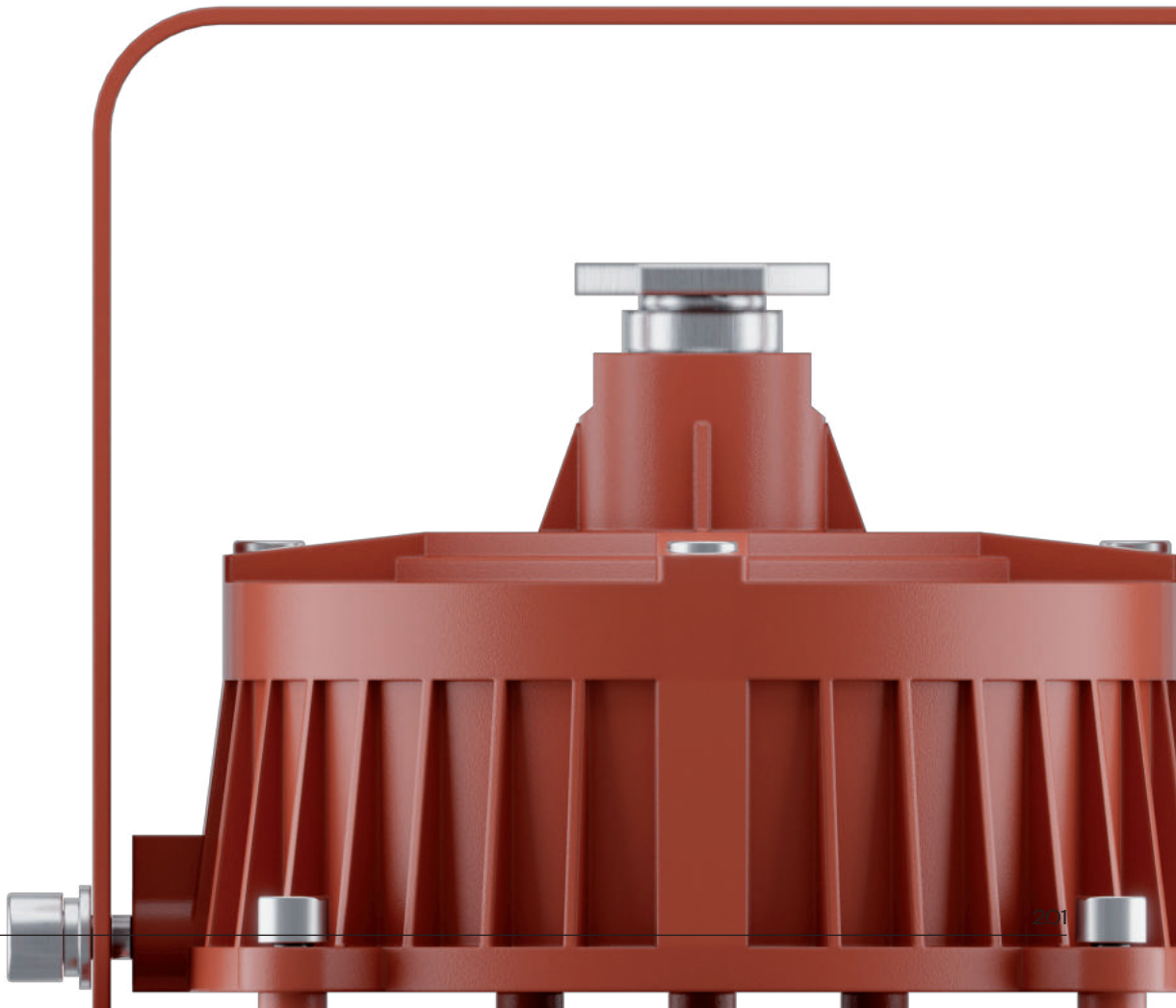
This luminaire has also been prepared for operation in IoT environments and intelligent lighting management systems. It enables full integration with GSM, NB-IoT, LoRaWAN, or Mesh 2.4 GHz communication systems, supports the TALQ standard and is ready for a “Plug & Play” installation. Equipped with ZhagaBook 18 or NEMAANSI C136.41 communication sockets, it offers various configurations for mounting communication modules. With the identification via a unique QR code, labels for pole recesses and the possibility of integration with mobile applications, the management and servicing of this luminaire becomes quick and intuitive.

Areas of Application

APPLICATION

The PHOTON luminaire, designed for use in EX zones, is used in areas particularly exposed to the risk of explosion, where reliability and safety of lighting are of paramount importance.

- **Underground and opencast mines** – in areas with a high risk of methane or coal dust ignition.
- **Industrial plants** – production halls, warehouses and technological installations, with present flammable gases, dusts or vapours.
- **Petrochemical facilities** – refineries, oil processing plants, fuel terminals, storage tanks.
- **Gasworks and gas distribution stations** – rooms and areas with a risk of combustible gas leakage.
- **Drilling platforms and offshore installations** – sites for the extraction and processing of oil and gas at sea.
- **Power stations and power plants** – particularly in areas related to gas or combustible dust.
- **Chemical industry** – production lines, industrial laboratories, reactors, chemicals storage facilities.
- **Food industry** – areas with organic dust (e.g. sugar factories, mills, grain silos).
- **Ports and shipment terminals** – areas for handling liquid and gaseous fuels.



Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the PHOTON system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Control from lighting cabinets

Central group controllers

In classic installations, PHOTON can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

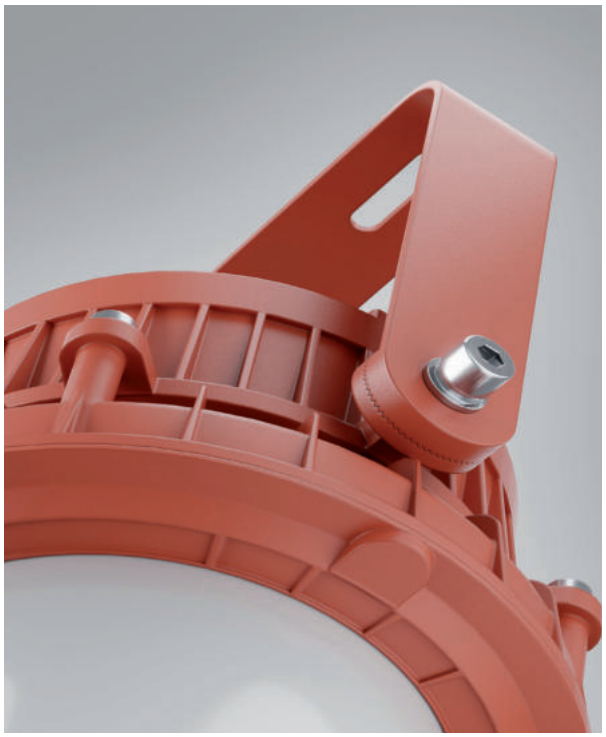
Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each PHOTON luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration with no need for a physical modification.



ELECTRICAL AND LIGHTING PARAMETERS

Rated power	30–50 W
Luminous flux	4,800-8,000 lm
Luminous efficacy	160 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K / 6000K / 6500K
Colour Rendering Index (CRI)	≥ 70
Durability	≥ 100,000 hours, L95B10, tested to LM 80 and TM 21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	≥ 0.98
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Emergency power	90 min
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating

GENERAL

Installation	facades, mounting beams, suspended from the ceiling
Dimensions of the luminaire	Ø182x141mm - 0182*222mm
Weight	2.8KG - 4.2KG
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	with tools
Optics type	multi-lens
Upward emission	0% (compliance with EC 245/2009 / Dark Sky)
Lens material	UV resistant, transmission ≥ 86 %
LED replacement	solderless
Light distribution characteristics	5
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +60 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	CE, UL

Standard colour options available.

RAL 2002 RAL 3001 RAL 3002 RAL 3003 RAL 3004 RAL 3005 RAL 3005

OPTIC DESCRIPTIONS

25°

25° – NARROW BEAM

Focused light distribution, ideal for precise spot lighting or highlighting selected objects. Ideal for situations where a strong beam focus is required.

45°

45° – MEDIUM-NARROW DISTRIBUTION

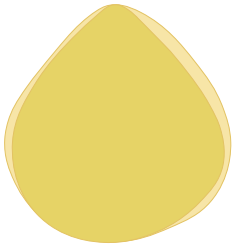
A balanced beam angle, combining a focused effect with wider illumination. Used in accent lighting and where it is necessary to highlight elements of a space while limiting light loss.

60°

60° – MEDIUM DISTRIBUTION

Universal beam angle, for uniform illumination over a larger area. Recommended for general applications such as lighting in rooms, on the streets or squares, where a balance between light intensity and range is important.

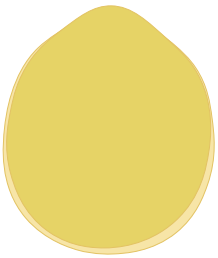
90°



90° – WIDE-ANGLE DISTRIBUTION

A wide beam of light, for effective illumination of large areas. Particularly useful in applications requiring uniform illumination of large, dispersed areas, such as car parks, squares or open spaces.

120°



120° – ULTRA-WIDE BEAM

Widest light distribution for maximum surface coverage. Ideal for illuminating spaces where even, soft light with minimal shadowing is required.

SOLID

SOLID

SOLID is a compact and durable LED luminaire designed for urban and spaces. It combines high energy efficiency with modern control systems, offering a fast mounted, long service life and minimal maintenance requirements. Designed based on the latest lighting technologies, the SOLID luminaire ensures comfort and safety for users while saving energy and reducing CO_2 emissions throughout the product's life cycle. SOLID is fully prepared for the Smart City concept, and its design and functionality are in line with the principles of the circular economy, enabling future upgrades and component recycling.

50 Hz
60 Hz
200 V
260 V
IP 66
IP 67
IK 09
IK 10
Min
-40°C
Max
50°C

Key Competitive Advantages

LINTER CONTROL

Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences.

FORTIS BODY

The SOLID luminaire has been designed for maximum durability, environmental resistance and operational safety. Its Fortis body is made of durable cast aluminium, coated with PVDF fluoropolymer, which provides exceptional resistance to UV radiation.

POWERLIGHT

Thanks to modern LED modules and optimal power supply systems, the lamp achieves an efficiency of up to 195 lm/W with minimal reactive power consumption. Equipped with a 20 kV surge protector as standard, it ensures resistance to interference and long component life, even in harsh conditions. Such combination of advanced electronics and passive cooling guarantees stable operation and savings for many years.

Fortis Body

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

The SOLID luminaire has been designed for maximum durability, environmental resistance and operational safety. Its body is made of durable ADC12 cast aluminium, coated with PVDF fluoropolymer, which provides exceptional resistance to UV radiation, acid rain, urban pollution and salt mist. The PVDF coating also offers excellent adhesion, low abrasion and high colour stability over time, allowing SOLID luminaires to be used safely even in demanding industrial or coastal environments.

The SOLID design incorporates a modular approach to installation and servicing. The power supply chamber can be opened in two ways – without tools or with tools – depending on the investor's preferences or the operator's service policy. The tool-free version uses snap-on clips that allow the housing to be opened quickly in the field without having to dismantle the luminaire. Alternatively, the version with a tool lock guarantees controlled access – particularly recommended in public spaces exposed to unauthorised interference.

In both variants, the luminaire closure mechanism is equipped with the option of applying a warranty or inspection seal, which protects the interior of the luminaire against unauthorised interference and allows you to clearly determine whether the device has been opened since installation.

Another very important element of the SOLID design is the five-point mounting system, which ensures stable and secure attachment of the luminaire to a pole or a boom. Additionally, the adjustable mounting bracket allows for precise positioning of the luminaire in two planes:

- the swivel joint allows rotation in the horizontal axis within a range of -90° to +90°,
- the base of the bracket, mounted directly to the luminaire, allows for tilt adjustment within a range of -15° to +15°.

This solution eliminates the need for additional angle adapters and significantly speeds up the installation process, regardless of terrain conditions, boom type or road inclination angle. The flexibility of the optics setting in relation to the illuminated surface translates into higher project efficiency and lower risk of execution errors.

Control

STRENGTH | AESTHETICS | FLEXIBLE TO INSTALL

SOLID luminaires are fully compatible with modern lighting management systems and meet the needs of investors in terms of both simple stand-alone installations and fully integrated Smart City networks. Thanks to its modular design and multi-level approach to control, the system can be scaled and adapted to local infrastructure conditions and the operator's technological preferences. Three independent control models are available.

Network-based control

LoRaWAN / GSM / LTE / NB-IoT communication

For local authorities and operators managing larger areas, the SOLID system can be integrated into distributed lighting control networks, based on:

- LoRaWAN – low-energy, long-range wireless network (e.g. one gateway for several hundred luminaires),
- GSM / LTE / NB-IoT – use of publicly available mobile networks (complete independence from a local infrastructure).

Linter Control controllers can be factory-equipped with appropriate communication interfaces, and all data from the luminaires is sent to a central management platform, which enables:

- location mapping of luminaires (GPS),
- energy consumption analysis,
- checking of failures and alarm conditions,
- remote configuration changes (e.g. updating power profiles or sensor thresholds).

Thanks to its compatibility with open protocols, the system can be integrated with existing municipal platforms or expanded in a modular manner.

Control from lighting cabinets

Central group controllers

In classic installations, SOLID can be controlled from lighting cabinets using:

- clock-based (e.g. astronomical) controllers,
- time switches with relays,
- remote telemetry systems that base on GPRS/GSM/Modbus technology.

Luminaires equipped with power supplies supporting autonomous operating profiles (5 to 8 power reduction points) can operate in stand-alone mode without an active remote system. Just initiate operation by applying voltage – the lighting profile is implemented automatically based on an internal schedule or measurement of night length (auto-adaptation of the cycle).

For investors that upgrade the existing infrastructure, this model offers significant savings without the need to build a complete communications network.

Luminaire-based control

Zhaga / NEMA + GSM/NB-IoT controllers

Each SOLID luminaire can be equipped with one or two standard control sockets:

- Zhaga Book 18 – miniaturised version, ideal for aesthetic applications (top or bottom of the luminaire),
- NEMA ANSI C136.41 (7 pin) – a classic version, used in fully externally powered systems.

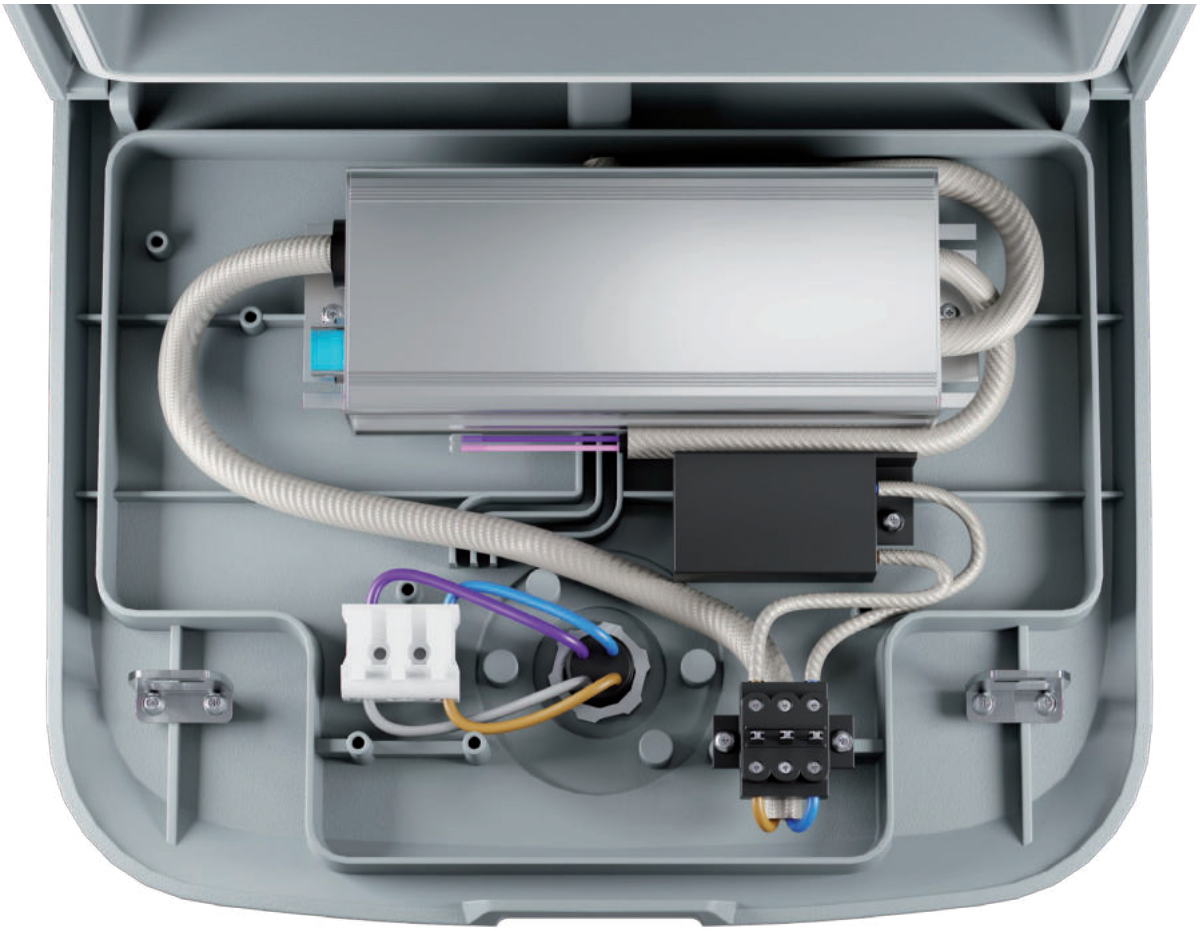
The mounting sockets can be top/bottom configured, allowing for simultaneous installation of a sensor (e.g. twilight, or PIR motion) and a communication controller (e.g. GSM, NB-IoT). This allows the luminaire to operate completely autonomously and be ready for remote integration without the need for physical modification.

Luminaires with a built-in Linter Control controller can:

- implement power reduction profiles based on an astronomical clock or schedule,
- respond to presence sensors and environmental conditions,
- be remotely monitored and configured by a master system (e.g. via GSM/NB-IoT),
- report energy data (including consumption, voltage, luminaire status, operating temperature).

Efficiency

SOLID is a luminaire with impressive photometric and electrical parameters. Thanks to the use of modern LED modules and carefully selected power supply systems, it achieves a luminous efficacy of up to 195 lm/W, while maintaining a very high power factor (Power Factor > 0.99), which means minimal reactive power in the network load. As standard, the luminaire is equipped with a high-class surge protection device (SPD) with parameters of 20 kV (L-FG), ensuring resistance to interference from the power grid and atmospheric discharges.



The protection covers both the LED module and the power supply system, ensuring safety and long component life – even in demanding locations (e.g. rural areas, dispersed power grids). High efficiency and resistance to interference guarantee stable operation of the luminaire for many years.

The combination of advanced electronics, passive cooling and configurability makes SOLID a great tool optimised for long-term energy savings and operation.

The images depicting the interior of the lamp are for visualisation purposes only. They are for demonstration purposes only and may differ from the final product.

ELECTRICAL AND LIGHTING PARAMETERS

Rated power	15-280 W (programmable in 1 W increments, NFC)
Luminous flux	2,325-30,300 lm
Luminous efficacy	155-195 lm/W
Correlated colour temperature (CCT)	2200 K / 2700 K / 3000 K / 3500 K / 4000 K / 5000 K / 5700 K
Colour Rendering Index (CRI)	>70
Durability	> 100 000 h L95B10, tested to LM80 i and TM21 projection
LED light sources	MST / TCI / BMTC
Power supply voltage	200-260 V AC, 50/60 Hz
Power Factor (PF)	>0.99
THD	< 10 %
Voltage ripples	< 6 %
Control	1-10 V, DALI, DALI-2, D4i, NFC
Autonomous dimming profiles	5 programmes, adjustment every 1 minute
CLO (Constant Light Output)	Yes
Soft-Start	Yes
Protection	thermal, overvoltage, short circuit, ESD
LED temperature sensor	active current limitation at overheating
Supply disconnector	scissor-type, 3-pole

GENERAL

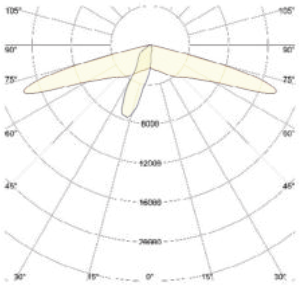
Installation	on a pole or boom, Ø 32-76 mm
Tilt adjustment	-90° to +90°, in 5° increments
Dimensions of the luminaire	415 x 254 x 145mm
Weight	4.6Kg (S) / 6kg (M)
Enclosure	aluminium casting with PVDF coating
Chamber	dual – optical and power source

Service access	tool-free
Self-cleaning body	smooth, no ribs
Water drainage	gravity channel in the body
Fastening mechanism	5-point clamp
Connector	IP68 with sealing gland
Optics type	multi-lens
Upward emission	IP66 / IP67 (ENEC certificate) 0% (compliance with EC 245/2009 / Dark Sky)
Cut-off optics	backwards glare and emission reduction
Lens material	UV resistant, transmission > 86 %
LED replacement	solderless
Light distribution characteristics	23
Control systems / IoT / CMS	compatible to GSM, NB-IoT, LoRaWAN, Mesh 2.4 GHz / TALQ support / Plug & Play ready
Communication sockets	Zhaga Book 18 and/or NEMA ANSI C136.41 configuration: top / bottom / double (determined prior to prefabrication)
Identification	QR code with serial number, optics, date, configuration / label for pole recess / integration with mobile application (if available)
Protection rate	IP66 / IP67
Mechanical strength	IK09 / IK10
Operating temperature	-40 °C to +50 °C
Environmental durability	PVDF coating, salt mist, UV
Corrosivity category	C3-H according to ISO 9227
Vibration resistance	IEC 60068-2-6
Photobiological safety	RG0
Environmental statement	PEP - ISO 14040, EN 15804
Certificates	ENEC, ENEC+

Standard colour options available.

RAL 7000 RAL 7001 RAL 7004 RAL 7045 RAL 7046 RAL 1023 RAL 1021

LIGHT DISTRIBUTION

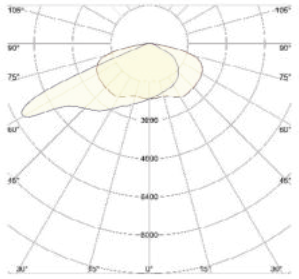


1. **L-type optics – roadside distribution (asymmetrical longitudinal, narrow)**

   Designed for single-sided installation along motorways and local roads. Provides effective road lighting with large pole spacing, minimising side emissions.

   APPLICATION

   Single carriageway roads, residential areas, footpaths and cycle paths.

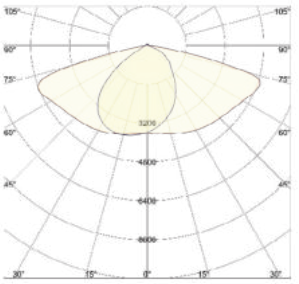


2. **S-type optics – medium-wide distribution (asymmetrical with a wide angle)**

   Wide longitudinal distribution with extended lateral emission. It provides optimal illumination of the road and pavements on both sides of the road.

   APPLICATION

   City streets, Z and L class roads, transport routes with verges.

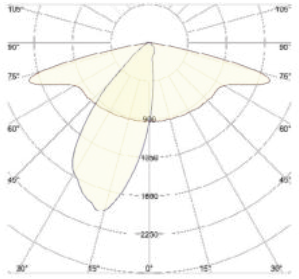


3. **ME3 optics – symmetrical roadside distribution, medium-narrow**

   Suitable for central mounting, it provides uniform illumination of both lanes and the centre line.

   APPLICATION

   Main urban and suburban roads, pole arrangements in the centre of the road.

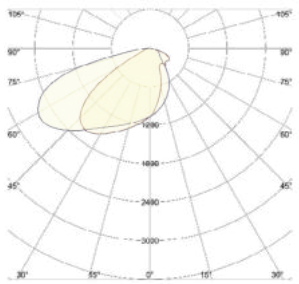


4. **T-type optics – tunnel/wide cross-sectional distribution**

   Optics with focused emission in the transverse plane. Particularly effective for lighting areas with limited installation height.

   APPLICATION

   Tunnels, underpasses, infrastructure facilities.

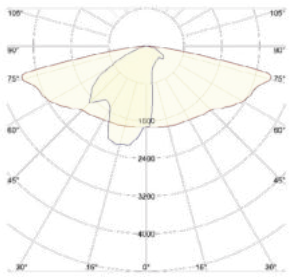


5. **P6 optics – symmetrical, wide dispersion**

   Universal symmetrical optics for lighting squares, car parks and open areas.

   APPLICATION

   Car parks, bus bays, manoeuvring areas.



6. **C2 optics – asymmetrical with rear emission (cut-off)**

   Provides high glare control and limited light emission outside the illuminated area.

   APPLICATION

   Industrial areas, roads with buildings on one side, minimisation of light pollution.

INSTALLATION METHOD

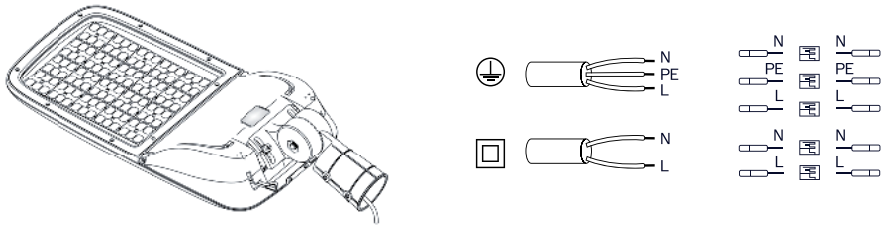
1

2

SWITCH IT OFF!

3

4



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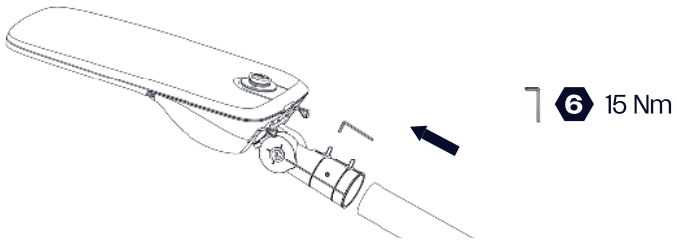

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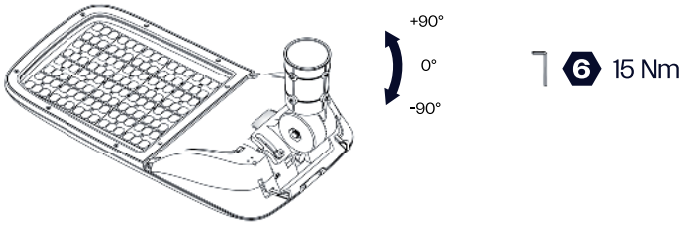
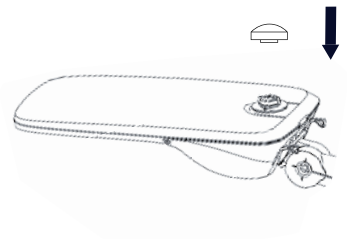


Full range tilt adjustment with five-step increments

7



SWITCH IT ON!

LINTER

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