

Mikos S



KEY BENEFITS

- Wide tilt adjustment: $\pm 90^\circ$.
- Tool-free access from the top.
- Flat heat dissipation surface prevents dirt accumulation.
- Durability and sturdiness: IP66 + IK09.
- Injected aluminium ($\text{Cu} < 0.1\%$).
- Energy Efficient:
GEN1: 150 lm/W
GENA: 158 lm/W
- Up to 25 optical distributions.
- Smart Ready: Designed to house both indoor and outdoor communication nodes.
- Future Proof: Zhaga-compliant.
- Lifetime L90B10 100.000h (T_a 25°C).
- Night Friendly: ULR Arrêté du 27 décembre 2018.
- 5 years warranty.



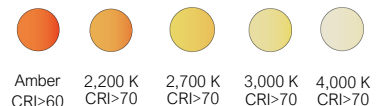
DESCRIPTION

Mikos' design features organic lines, fitting perfectly into urban environments.

Thanks to its functionality and the wide variety of optical distributions, it is an ideal lighting solution for squares, parks, roundabouts, promenades and urban roads.

STANDARDS / CERTIFICATES

- CE
- RoHS
- UNE-EN 60598-1
- UNE-EN 60598-2-3 or 60598-2-5
- UNE-EN 62471:2009
- UNE-EN 60598
- UNE-EN 61000-3-2
- UNE-EN 61000-3-3
- UNE-EN 55015
- UNE-EN 61547
- UNE-EN 62031
- UNE-EN 61347-2-13
- UNE-EN 62384
- UNE-EN 13032-4
- UNE-EN ISO 9227 NSS: 2017 (1000 h)



GEN1:
948lm - 10.413lm
GENA:
1.163 lm - 10.670lm



6 kg



GEN1:
150 lm/W
GENA:
158 lm/W



-40°C - +50°C



Access to
gear without
tools



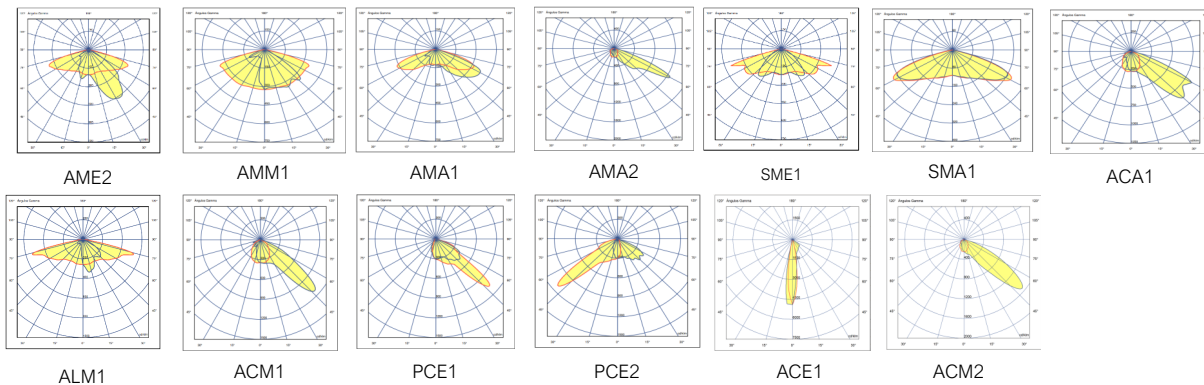
0.00% - 0.08%
FHS/ULR

220 - 240 V/100 V - 277 V
50-60 Hz
L90B10 100,000 h
Ta 25°C

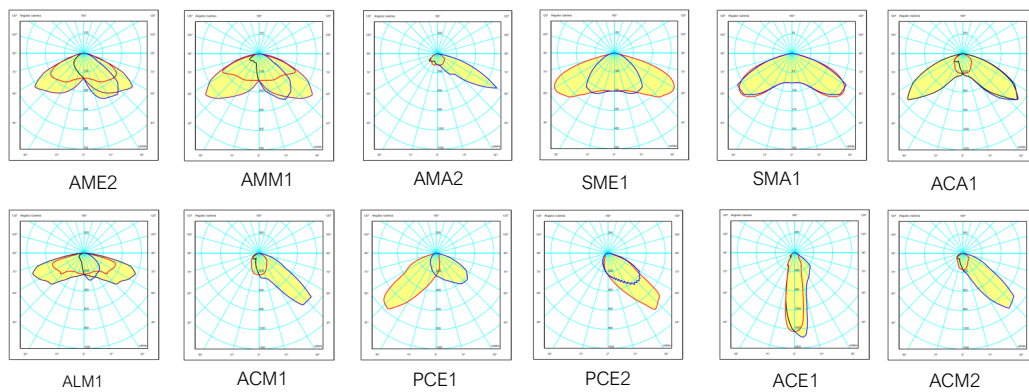
PHOTOMETRIC DISTRIBUTIONS

Provides the 25 photometric distribution patterns suited to the environments in which this luminaire is typically installed, making it adaptable to all requirements.

GEN1:

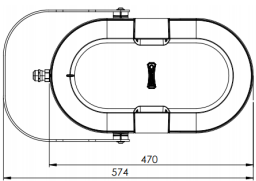
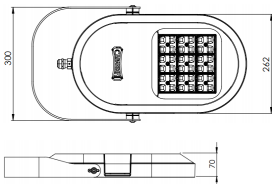


GENA:

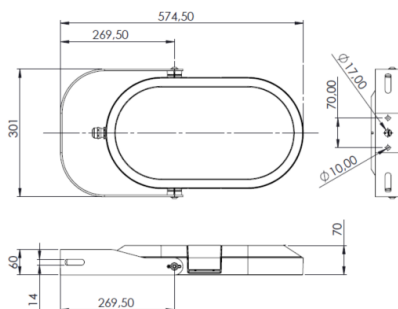


DIMENSIONS

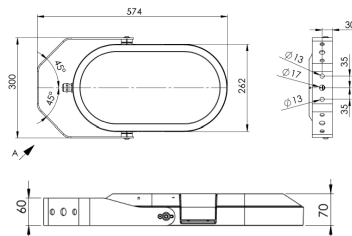
H01: Steel bracket



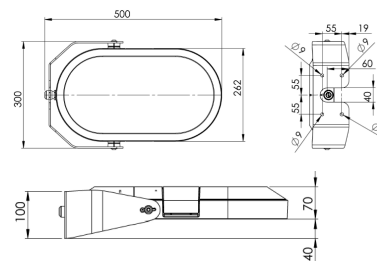
HCL: Steel bracket with slotted holes.



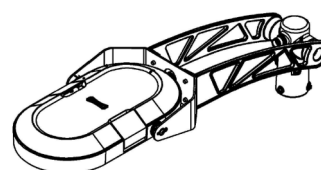
H45: 45° steel bracket



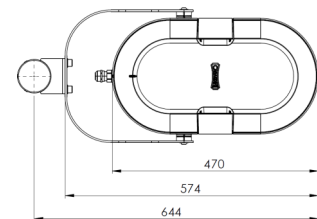
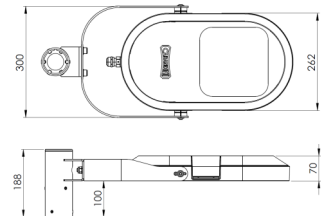
Bracket fixation wall bracket/
HBM/ HBC pole:



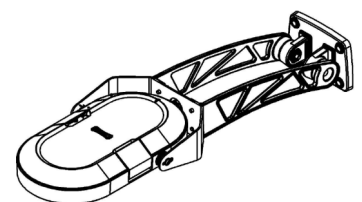
View with HBC arm 321367



PT2: Vertical steel fixation for 60mm tube.



View with HBM arm 321366



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MIKOS

NOTE: We reserve the right to make changes to the product without prior notice
V1: 24/07/2024

MIKOS S CHARACTERISTICS

GENERAL INFORMATION

Sustainability	Valorisation: 99.17% Maximum carbon footprint during use: 0.02072 kg kW/h de CO ₂ .
CE Mark	Yes
ENEC Certificate	Yes
RoHS compliance	Yes
Test standard	LM 79-80 (all laboratory measurements certified in accordance with ISO17025)

GENERAL CHARACTERISTICS

Body	Die-cast aluminium EN AC-44100 with low copper content <0.1%
Closure	Tempered glass 5mm
Nuts outer and bolts	Stainless steel (AISI304).
Watertightness	IP66 (EN 60598-1 and EN 60529)
Degree of protection against impacts	IK09 (EN 62262)
Operating temperature	Ta -40°C to +50°C Depending on luminaire configuration.
Lifetime	L90B10 100,000h at Ta of 25°C. Light maintenance values at 25°C. They are calculated in accordance with TM-21 based on LM-80 data.
Cable	Class I/II Cable from 4 to 8 metres Cross-section: 2x1,5 ; 3x1,5; 4x1,5; 5x1,5

ELECTRICAL CHARACTERISTICS

Electrical class	Class I or Class II
Voltage / Frequency	220 V - 240 V/50 Hz - 60 Hz Optional 100 V - 277 V
Power factor	> 0.99
Harmonic distortion	< 10%
Surge protector	Surge protection (1.2/50) 10 kV Maximum current (8/20) 10 kA Maximum voltage (L-N) 320 V Maximum voltage (L/N-GND) 400 V Optional surge protection: 20 kA, 20 kV.

LIGHTING CHARACTERISTICS


Package real light	GEN1: 948lm - 10.413lm GENA: 1.163 lm - 10.670lm
LED colour temperature	4,000 K (Neutral White, nw). 3,000 K (Warm White, ww). 2,700 K (Warm White, ww). 2,200 K (Warm White, ww). Optional amber colour temperature.
Index of reproduction chromatic (CRI)	CRI>70. CRI80 upon request.
LEDs	Incorporates 12, 24 and 36 LEDs.
ULR	<0.08%
Optics	PMMA polymethylmethacrylate.
Photometric distributions	ACA1: Throw angle 10° spread angle 45°/60° (Type III) ACE1: Throw angle 0° spread angle 50° (Type III) ACM1: Throw angle 15° spread angle 55° (Type III) ACM2: Throw angle 10° spread angle 50° (Type III) ALM1: Throw angle 75° spread angle 10°/45° (Type III) AMA1: Throw angle 70° spread angle 45°/70° (Type IV) AMA2: Throw angle 15° spread angle 60° (Type III) AME2: Throw angle 70° spread angle 15°/40° (Type II) AMM1: Throw angle 70° spread angle 35°/55° (Type III) PCE1: Throw angle 45° spread angle 50°/60° (Type IV) PCE2: Throw angle 50° spread angle 55°/65° (Type III) SMA1: Throw angle 65° spread angle 65° (Type VS) SME1: Throw angle 70° spread angle 40° (Type II)
LED thermal control	Heat dissipation by conduction, radiation and convection via specific design for LED technology.

FINISHES

Predefined luminaire colour

RAL 9005	Polyester powder 9005 intense matt textured black.
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Corrosion protection

	Marine Finish (1.000h)
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MIKOS S CHARACTERISTICS

MAINTENANCE AND INSTALLATION

Installation and maintenance	Tool-free access to the driver from above via top panel.
Fixations	H01: Steel bracket. H45: 45° steel bracket. HCL: Steel bracket with slotted holes. PT2: Vertical steel fixation for 60mm tube. HBM: Cast iron bracket with wall bracket. HBC: Cast iron bracket with pole bracket.
Accessories	NF76-1: Cast knot to attach Ø76 mm pole. NF101-1: Cast knot to attach Ø101 mm pole. NF114-1: Cast knot to attach Ø114 mm pole. NF76-2: Cast knot to attach Ø76 mm pole. NF101-2: Cast knot to attach Ø101 mm pole. NF114-2: Cast knot to attach Ø114 mm pole.
Weight	6 kg

MANAGEMENT AND CONTROL

Equipment	1N: 1 Level RC: Controller dimmed RD: DALI AF: 1 - 10 V RL: Pulse adjustable LED 2N: 2 Level SR: Smart Ready (D4i)
Autonomous regulation	Regulations programmed from the factory: 56: 50% of the 24: 00h at 6: 00h. 66: 60% of the 24: 00h at 6: 00h. 76: 70% of the 24: 00h at 6: 00h. SC: Programming according to client.
CLO regulation	Flow rate during the life of the product: 7: 70% luminous flux throughout the life of the luminaire. 8: 80% luminous flux throughout the life of the luminaire. 9: 90% luminous flux throughout the life of the luminaire.
Socket connection	3-U: NEMA 3 pin socket with/without IP66 cover 5-V: NEMA 5 pin socket with/without IP66 cover 7-W: NEMA 7 pin socket with/without IP66 cover
Sensor	1: Photocell for NEMA 3, 5 and 7 pin socket (20 lux) 2: Photocell for larger Zhaga socket (20 lux)
Node	BS: Controlux Basic

PHOTOS MIKOS S

Fixation by mounting bracket



Vertical fixation for a Ø60 mm poles



APPLICATIONS

Roundabouts and intersections, logistics centres, parking, shopping areas, facades and monuments, sports areas, residential and pedestrian areas.



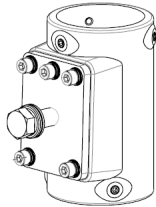
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MIKOS

Accessories for ø 76, 101 and 114 mm poles:

Die-cast knot point for mounting 1 luminaire

- **NF76-1:** Cast knot to attach ø76 mm pole.
Code: 318531
- **NF101-1:** Cast knot to attach ø101 mm pole.
Code: 318504
- **NF114-1:** Cast knot to attach ø114 mm pole.
Code: 318534

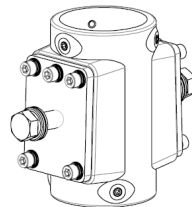


The knot includes:

- To fix the knot point to the pole: Allen bolts M8 x 10 mm.
- To fix the luminaire to the knot point: M16 x 50 mm bolt and washers.

Die-cast knot point for mounting 2 luminaires

- **NF76-2:** Cast knot to attach ø76 mm pole.
Code: 318532
- **NF101-2:** Cast knot to attach ø101 mm pole.
Code: 318533
- **NF114-2:** Cast knot to attach ø114 mm pole.
Code: 318535

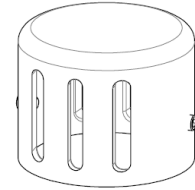


The knot point includes:

- To fix the knot point to the pole: Allen bolts M8 x 10 mm.
- To fix the luminaire to the knot point: M16 x 50 mm bolt and washers.

Top cap for Pole

- **TS76:** Top cap for ø 76 mm pole.
Code: 318541
- **TS101:** Top cap for ø 101 mm pole.
Code: 318542
- **TS114:** Top cap for ø 114 mm pole.
Code: 318543

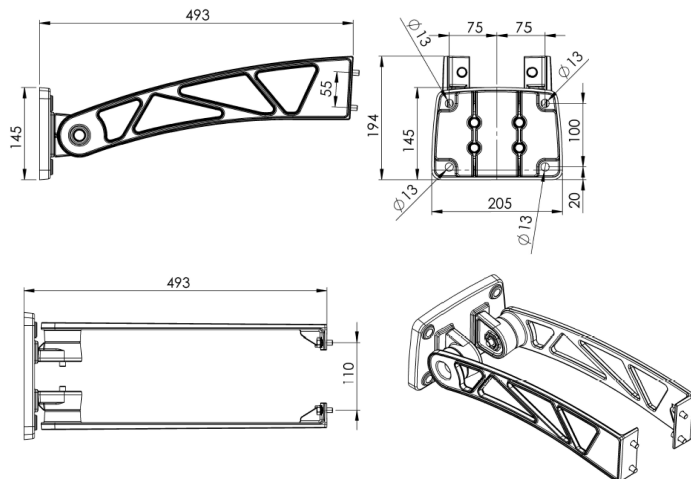


The cap includes:

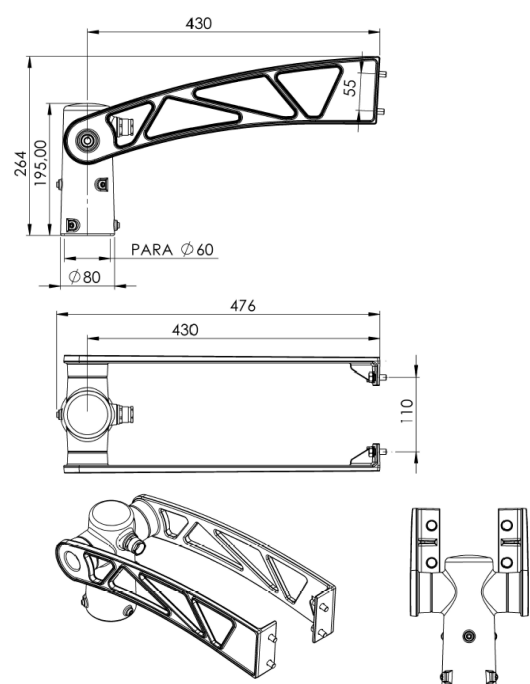
- M8 x 10 mm Allen bolt to fit to the pole.

Bracket

HBM: Wall bracket



HBC: Pole bracket arm



LOGISTICAL INFORMATION

Box size: 590X315X125mm

Box weight: 6Kg

Number of boxes: 52 units

American base: 1200 x 800 x 1830 mm

Stack height: 13 levels

Area occupied: 77,4%

Volume used: 74%

Total gross weight: 322 kg.

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MIKOS

LUMINAIRE DIMMING

By programming the driver

Smart luminaires drivers can be programmed in the factory without needing a control system, additional wiring or maintenance costs. A schedule is pre-programmed for light flow to be automatically reduced at quieter times of the night while respecting light levels and uniformity.

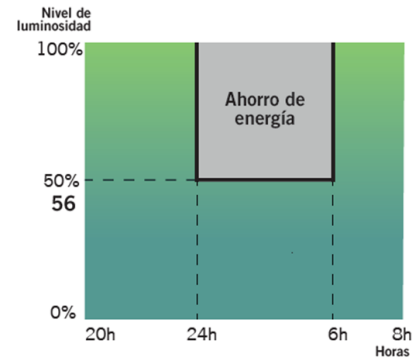
Programming profile 56

From 00:00 to 06:00 the luminaire reduces its initial intensity by 50%.

Hasta un

26%
de ahorro

NOTE: Programming the Dynadimmer using the multitone scheduling tool is done for wintertime. In summer everything is delayed by an hour.



Using the CLO function

While taking lumen depreciation over the years into account, the driver is programmed so that it starts at a reduced level and gradually increases power over the lifespan of the luminaire. This saves energy and increases the lifespan of the system. Furthermore, the light level in the area where the luminaire is installed remains constant over time.

Constant luminous flux 8

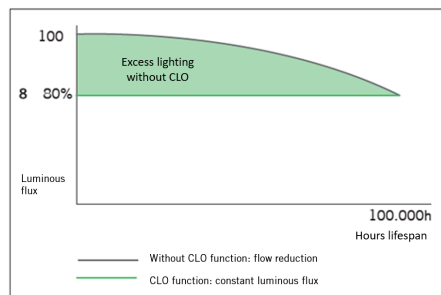
luminous flux from the luminaire at 80% to maintain light levels throughout its lifespan.

Hasta un

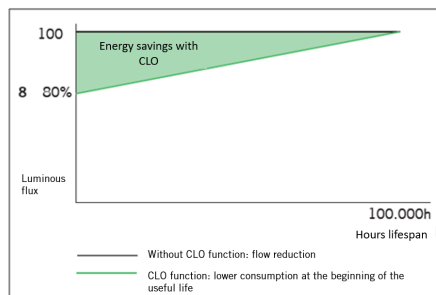
10%
de ahorro

y se incrementa la vida de la luminaria

Luminous flux chart



Consumption graph



By incorporating an additional device

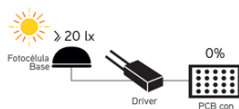
Photocell

A photocell enables the luminaire to be switched on or off based on the solar light intensity detected.

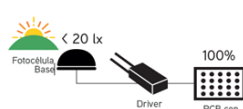
This is extremely useful so the luminaires are not switched on during the day when there is still sufficient natural light.

Ejemplo con fotocélula de 20 lx:

Si la fotocélula detecta más de 20 lx no activará el encendido de la luminaria.



Es cuando los niveles luminicos empiezan a bajar que la fotocélula detecta 20 lx y activa el encendido de la luminaria.



INNOVATIVE AND UPDATABLE OVER TIME (Zhaga/ ZD4i)

All luminaires incorporating Nema Bases or Zhaga Bases, where the control system is not the responsibility of Carandini, must always incorporate IP 66 covers in order to ensure the correct safety and operation of the product.

The sale of luminaires with Nema or Zhaga Bases without the IP 66 cover will only be permitted upon receipt of a written assurance from the customer that the control system using NEMA or ZHAGA Nodes will be installed by the customer at the same time as the luminaires.

Zhaga

Zhaga - Future Proof

Zhaga is an industry-wide consortium that aims to standardise specifications for interfaces between LED luminaires and light sources. The aim is to achieve interchangeability between products made by different manufacturers. Zhaga defines test procedures for luminaire and LED light sources so that the luminaire can receive the LED source.



Zhaga D4i - Sensor Ready

The Zhaga consortium joined up with DiiA to create a unique Zhaga-D4i certification that combines Zhaga's Book 18 version 2 outdoor connectivity specifications with DiiA's D4i specifications for intra-luminaire DALI.

BOOKS PER APPLICATION. A COST-EFFECTIVE SOLUTION.



	Office & Industry	Retail & Hospitality	Outdoor
Integrated LED light engines	14 2,8	17 16	
LED modules (non-integrated)	7 21 14	12 9 5 3,10	4 15 19
Drivers	13	LED set 22,23	24,25
Sensor and communication modules		20	18

The specifications that mark a component as Zhaga-compliant are contained in a series of books, available only to consortium members, that allow you to design to the marked standard. The benefits for society are evident since, apart from reducing the consumption of materials, it favours the reuse of luminaires, aiming towards a circular economy.

CERTIFICATION PROGRAMME

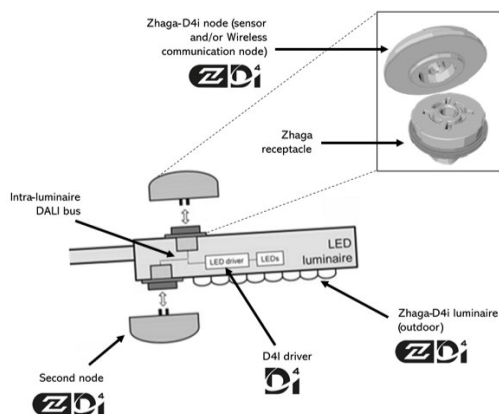
Zhaga-D4i certification covers all essential features, including automatic setting, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability for luminaires (drivers) and peripherals such as connectivity nodes.

STANDARDISATION AS A MEANS TOWARDS SUSTAINABILITY

The **Mikos S** luminaire has been designed to operate with the latest tried and tested technology available on the market, in accordance with current standards, making it a product that conforms to CARANDINI's values of sustainability and that can guarantee future maintenance while respecting society and the environment.

Luminaires marked as **Zhaga** feature **Future Proof** design, meaning that they are based on and designed around Zhaga standard components. These components are mainly LED modules and drivers. The electrical compartment and dissipation area for the LED modules have additional space and mountings to integrate any driver that complies with Zhaga standard Book 13, based on the required dimensions for drivers on the market or any LED module that complies with Zhaga Book 15, based on the LED driver interface specifications.

This allows us to provide a sustainable product that can be upgraded over time.



CONNECTIVITY

The D4i specification takes the best of the standard protocol and adapts it to an intra-luminaire environment, but it has certain limitations. Only the control devices installed within the luminaires can be combined with a Zhaga-D4i luminaire. In accordance with the specification, the control devices are limited to an average power consumption of 2W and 1W respectively.

SMART CITY

Luminaires marked **ZD4i** are a **Smart Ready** design, meaning they are designed to accommodate both interior and exterior communication nodes through docking stations which comply with Zhaga & Zhaga-D4i standard Book 18 on interoperability of sensors and communication nodes.

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