

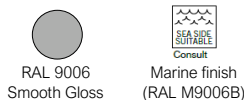
Veka M

GEN 2



KEY BENEFITS

- Up to 4 fixations.
- Tool-free access from the top.
- Durability and sturdiness: IP66 + IK10
- Die-cast aluminium (Cu<0.1%)
- Energy Efficient: GEN2: 164 lm/W
- Up to 17 optical distributions
- Smart Ready: Designed to house both indoor and outdoor (top and/or bottom) communication nodes.
- Future Proof: Zhaga-compliant.
- Lifetime L90B10 100.000h (T_a) 25°C.
- Night Friendly: ULR Arrêté du 27/12/ 2018.
- Cover fastening rod that facilitates installation
- Optional disconnecter for increased safety during installation and maintenance.
- High speed Sensor capability.
- 5 years warranty.

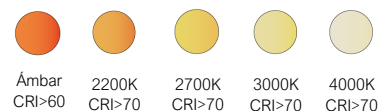


Dark-Sky Association certification
 ≤ 3.000K not available for 4.000K.
 Mechanical adjustment: max. + or - 15 degrees to allow leveling in the field.



DESCRIPTION

Veka is the new family of luminaires by Carandini for public street lighting. Its elegant aesthetics, latest generation LED technology and optical distributions make it a top-quality solution for urban streets, main or secondary roads, motorways, dual carriageways and car parks.



STANDARDS / CERTIFICATES

- CE
- RoHS
- UNE-EN 60598-1
- UNE-EN 60598-2-3
- UNE-EN 62471:2009
- 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 (1,000 h)



2.770lm - 22.833lm



PT1: 0,17355m²
 SE1: 0,17783 m²
 SE2: 0,18007 m²
 PT2: 0,17208 m²



164 lm/W
 Luminaire



-40°C - +50°C



7,8 Kg



0,0%
 FHS/ULR



Tool-free
 access to
 control gear

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

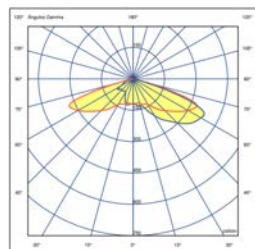
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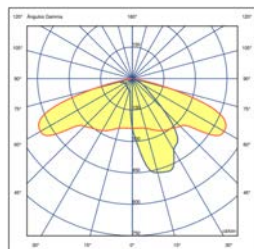
PHOTOMETRIC DISTRIBUTIONS

It features 17 photometric distributions designed for the environments in which this type of luminaire is installed, enabling it to adapt to a wide range of lighting requirements.

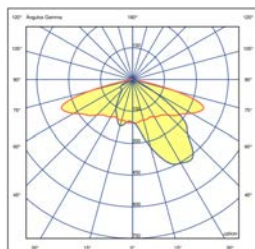
Ceramic LED:



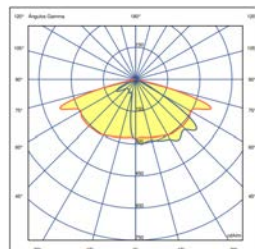
AMA1



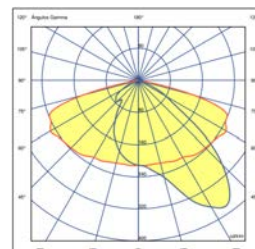
AME1



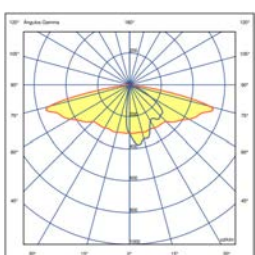
AME2



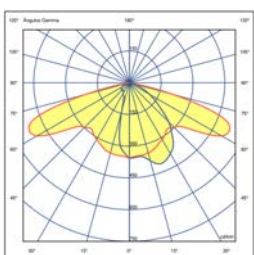
AMM1



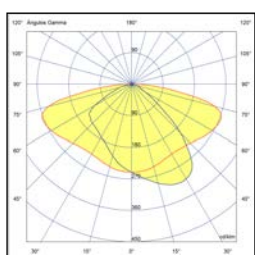
AMM2



AMM3

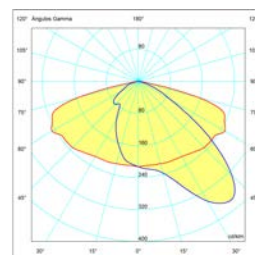


AMM4

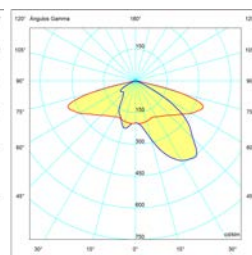


ALM5

With external back-light shield

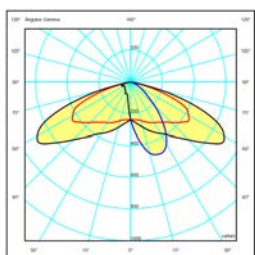


BMA1

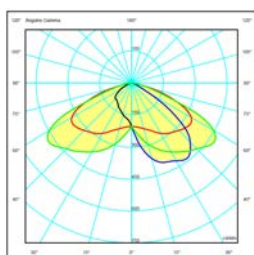


BMM1

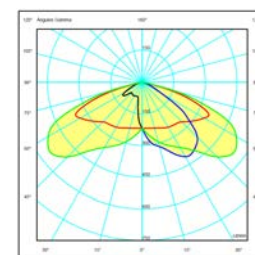
Polymeric LED:



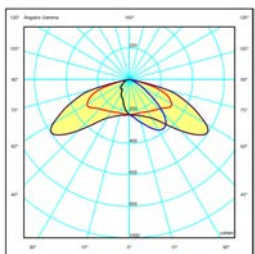
AME1



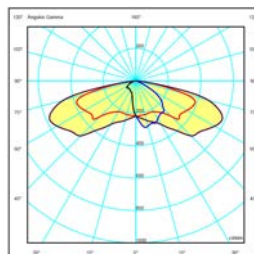
AME2



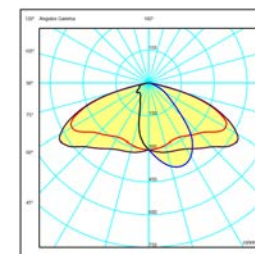
AMM1



AMM2

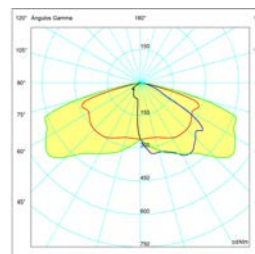


AMM3



AMM4

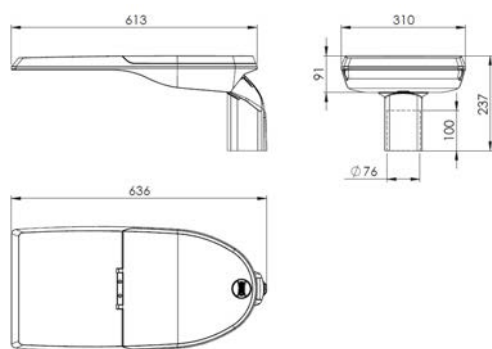
With external back-light shield



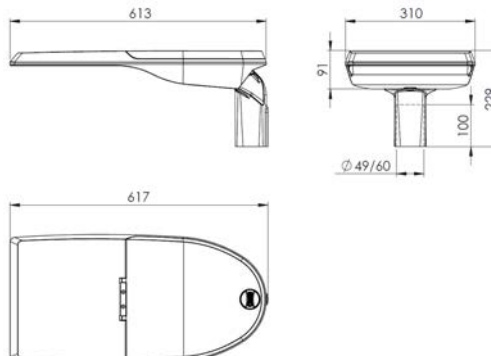
BMM1

DIMENSIONS (mm)

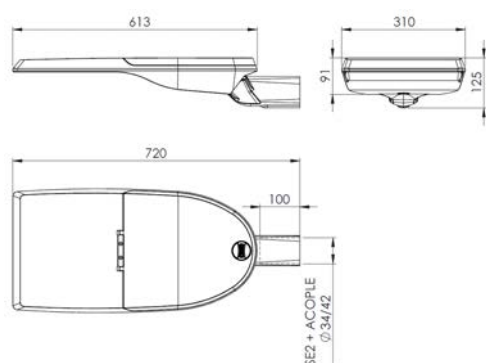
Vertical fixation $\varnothing 76$ mm (PT1)



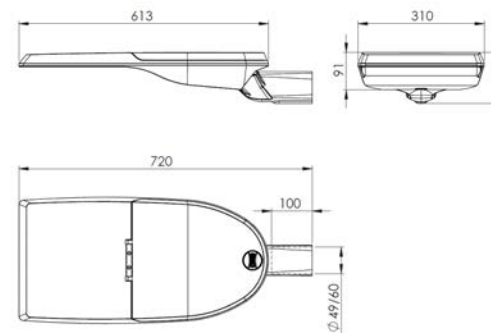
Vertical fixation $\varnothing 49/60$ mm (PT2)



Lateral fixation $\varnothing 34/42$ mm (SE1)



Lateral fixation $\varnothing 49/60$ mm (SE2)



APPLICATIONS

Public streets, main or secondary roads, motorways and dual carriageways, and car parks.



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VEKA M CHARACTERISTICS

GENERAL INFORMATION

Sustainability	Valorisation: 99,38% % Carbon footprint per use: 0,038771 kW/h CO2
CE mark	Yes
ENEC Certificate	Yes
RoHS-compliant	Yes
Testing standards	LM 79-80 (all measurements at ISO17025 certified laboratory)

GENERAL CHARACTERISTICS

Armor and couplings	Die cast aluminum EN AC-44100 (LM6) 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)
Impact protection grade	IK10 (EN 62262)
Operating temperature	Ta -40°C to +50°C According to luminaire configuration.
Lifetime	L90B10 100,000 h at Ta 25°C. Light maintenance assessments to TM-21 based on LM-80 data
Cable	Class I/II Cable from 5 to 12 metres Cross section (mm²): 2x1,5; 3x1,5; 4x1,5; 5x1,5; 2x2,5; 3x2,5

ELECTRICAL CHARACTERISTICS

Electrical class	Class I o Class II
Voltage / Frequency	220V - 240V / 50Hz - 60Hz Optional 100V - 277V (Class I)
Power factor	> 0,9
Harmonic distortion	< 10%
Protection	Surge protection (1.2 / 50) 10 kV. Maximum current (8/20) 10kA. Maximum voltage (L-N) 320 V. Maximum voltage (L / N-GND) 400 V. Optional surge protection: 20kA, 20kV Disconnecter Cable gland

FINISHES

PREDEFINED COLOUR OF THE LUMINAIRE

	Gray polyester powder coat paint RAL 9006 Smooth Gloss (9006B).
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Corrosion protection

	Marine Finish (1.000h)
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LIGHTING CHARACTERISTICS

Package real light	2.770lm - 22.833lm (31 - 161W)
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). Amber
Colour rendering index (CRI)	CRI>70. CRI80 upon request.
LEDs	Incorporate from 32, 48 and 64 LEDs.
FHS/ULR	0,0%
Optics	PMMA polymethylmethacrylate.
Photometric distributions	ALM5: Throw angle 70° spread angle 75° (Type III) AMA1: Throw angle 65° spread angle 70° (Type IV) AME1: Throw angle 45° spread angle 70° (Type I) AME2: Throw angle 60° spread angle 75° (Type II) AMM1: Throw angle 55° spread angle 70° (Type III) AMM2: Throw angle 65° spread angle 75° (Type II) AMM3: Throw angle 60° spread angle 75° (Type II) AMM4: Throw angle 65° spread angle 70° (Type II) BLM5: ALM5 (Throw angle 70° spread angle 75° (Type III)), with external back-light shield 60mm BMA1: AMA1 (Throw angle 65° spread angle 70° (Type IV)), with external back-light shield 60mm BME1: AME1 (Throw angle 45° spread angle 70° (Type I)), with external back-light shield 60mm BME2: AME2 (Throw angle 60° spread angle 75° (Type II)), with external back-light shield 60mm BMM1: AMM1 (Throw angle 55° spread angle 70° (Type III)), with external back-light shield 60mm BMM2: AMM2 (Throw angle 65° spread angle 75° (Type II)), with external back-light shield 60mm BMM3: AMM3 (Throw angle 60° spread angle 75° (Type II)), with external back-light shield 60mm BMM4: AMM4 (Throw angle 65° spread angle 70° (Type II)), with external back-light shield 60mm IMA1: AMA1 (Throw angle 65° spread angle 70° (Type IV)), with internal back-light shield IMM1: AMM1 (Throw angle 55° spread angle 70° (Type III)), with internal back-light shield
LED thermal control	Heat dissipation by conduction through the specific design for this luminaire, since it has been specifically designed for LED technology. (Heatsink).

VEKA M CHARACTERISTICS

MAINTENANCE AND ASSEMBLY

Installation and maintenance	Tool-free luminaire access system designed by Carandini. Access to the driver from the top.
Fixation	PT1: Vertical fixation $\varnothing$ 76 mm.* SE1: Lateral fixation $\varnothing$ 34/42 mm. SE2/PT2: Lateral / vertical* fixation $\varnothing$ 49/60mm. * The PT fixation shall be supplied horizontally mounted with SE for sustainability.
Mechanical adjustment	Vertical and lateral fixation offer an inclination angle range of $\pm 20^\circ$ for every 2.5°.
Equipped weight	PT1: 8 Kg SE1: 7,9 Kg SE2 / PT2: 7,8 Kg
Wind Surf.	PT1: 0,17355m ² SE1: 0,17783 m ² SE2: 0,18007 m ² PT2: 0,17208 m ²
Pressure compensation valve	The integration of the valve extends the projected life of the joints and internal parts by reducing the pressure that is exerted on them and prevents moisture from entering the interior that can cause condensation.

MANAGEMENT AND CONTROL

Equipment	1N: 1 Level RD: DALI protocol adjustable AF: 1-10V protocol adjustable RL: Pulse adjustable LED 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	7-W: NEMA 7 pin socket with/without IP66 cover X: ZHAGA top socket 4 pins with IP66 cover Y: ZHAGA socket 4 pin lower with cover IP66 Q: ZHAGA lower and upper socket with cover IP66
Sensor	1: Photocell for NEMA 3, 5 and 7 pin socket (20 lux) 2: Photocell for upper Zhaga socket (20 lux) 3: Motion sensor for Zhaga socket.

VEKA M PHOTOGRAPHS



ACCESSORIES

External back-light shield

80mm Ref. 111631



LOGISTICAL INFORMATION

European pallet	PT1	SE1	PT2 / SE2
Box dimensions	738 x 328 x 173 mm	657 x 328 x 280 mm	657 x 328 x 280 mm
Box weight	8,6 kg	8,5 kg	8,4 kg
Number of boxes	24 units	24 units	24 units
Total dimension	1200 x 800 x 1530 mm	1200 x 800 x 1530 mm	1200 x 800 x 1530 mm
Number of levels	8	8	8
Total gross weight	228 kg	228 kg	228 kg

NOTE: By sustainability reasons PT fixing accessories will be supplied assembled as side entry (SE)

*If the luminaire includes a cable, please consult dimensions box

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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.

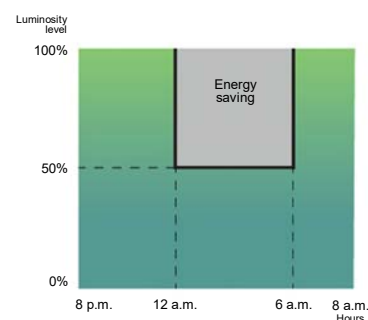
Programming profile 56

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

Up to

26%
savings

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



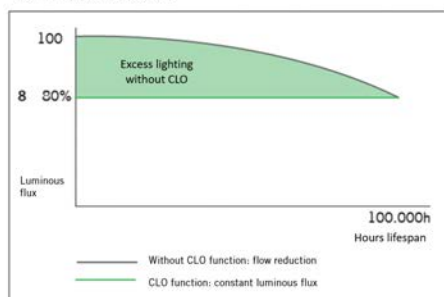
Using the CLO function

Taking into account lighting depreciation over the years, the driver is programmed to start at a reduced level and gradually increase power over the lifetime of the luminaire, which saves energy and increases the service life of the system. In addition, the level of illumination of the area in which it is located is always kept constant.

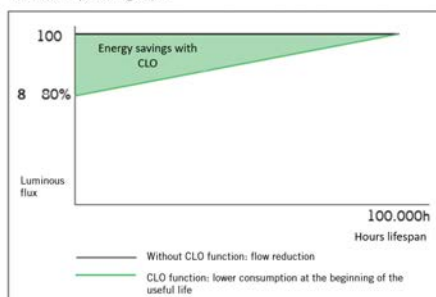
Constant luminous flux 8

Luminaire luminous flux at 80% to maintain light levels throughout its service life.

Luminous flux chart



Consumption graph



Up to

10%
savings

and increase in luminaire
service life

By adding an extra element

Photocell

The photocell allows the luminaire to be switched on or off depending on the intensity of the sunlight it captures.

This is very useful, to avoid having luminaires on at times when there is still enough natural light.

Example with 20 lx photocell:



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INNOVATIVE AND UPDATABLE OVER TIME (Zhaga/ ZD4i)

"All luminaires incorporating Nema Sockets or Zhaga Sockets, 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 Sockets 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.

Book 1-25 Overview by application			
	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	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

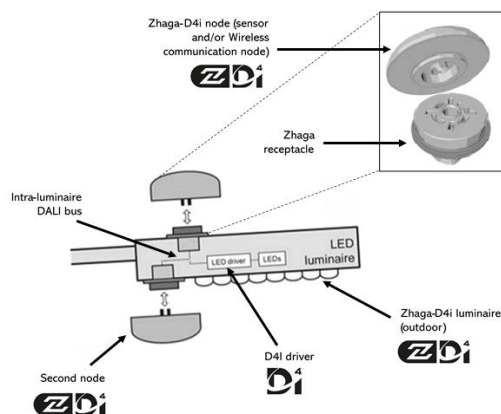
Zhaga-D4i certification covers all the essential characteristics, including automatic adjustment, digital communication, data reporting and power requirements in any single luminaire, ensuring plug-and-play interoperability for luminaires (drivers) and peripherals, such as connectivity nodes.

STANDARDISATION AS A MEANS TO ACHIEVE SUSTAINABILITY

The **Veka M** luminaire has been designed to function with the latest available market-proven technology Socketd on standards. This also enables it to meet the CARANDINI sustainability requirements and become a product ready for maintenance in the future under better guarantees while respecting the environment and society.

The luminaires marked as Zhaga are a "Future Proof" design, meaning it is Socketd on and designed around standard Zhaga components. These components are mainly the LED modules and the drivers. The electric compartment and dissipation area for LED modules has space and additional mountings to include any driver compliant with Zhaga "Book 13" Socketd on market driver dimensions, or any LED module compliant with Zhaga "Book 15" Socketd on LED controller interface specifications.

This makes it possible to have a sustainable product that can be updated over time.



CONNECTIVITY

D4i specifications take the best of the standard DALI2 protocol and adapt it to an interconnected lighting environment, but with certain limitations. Only the control devices installed in the luminaires can be combined with a Zhaga-D4i luminaire. According to the specifications, the control devices are respectively limited to an average power consumption of 2 W and 1 W.

SMART CITY

Luminaires marked ZD4i are a "Smart Ready" design, which means they are designed to house both indoor and outdoor communication nodes through connection sockets compliant with the Zhaga "Book 18" & Zhaga-D4i standard on sensor and communication node interoperability.

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