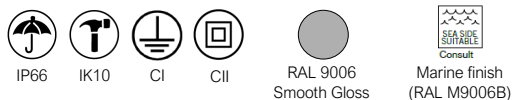


# Veka M

## 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:  
GEN1: 155lm /W  
GENA: 161 lm/W
- Up to 13 optical distributions
- Smart Ready: Designed to house both indoor and outdoor communication nodes.
- Future Proof: Zhaga-compliant.
- Lifetime L90B10 100.000h (T<sub>a</sub>) 25°C.
- Night Friendly: ULR Arrêté du 27/12/ 2018.
- 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.



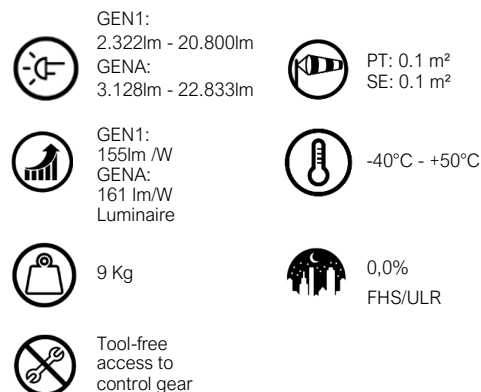
## DESCRIPTION

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)



220 - 240 V / 100 V - 277 V  
 50-60 Hz  
 L90B10 100,000 h  
 T<sub>a</sub> 25°C

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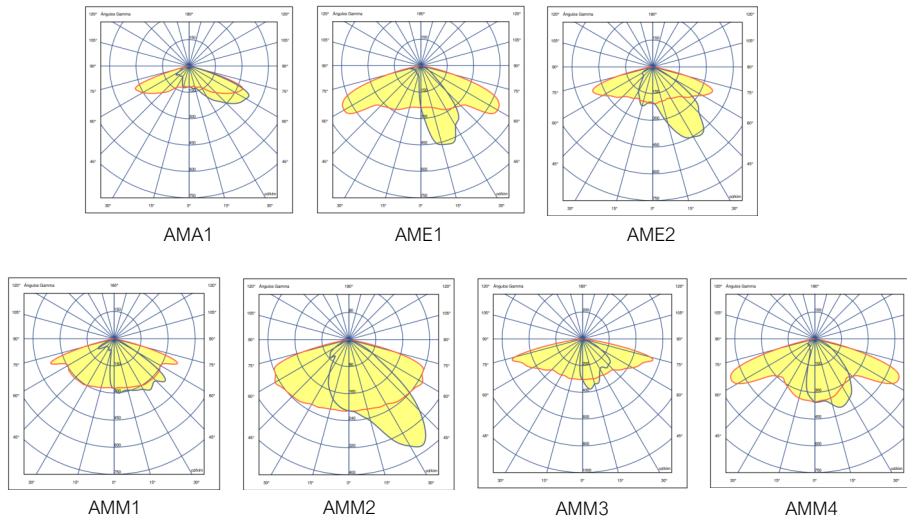
NOTE: The company reserves the right to make product changes without advanced notice  
 V1. 25/07/2024

veka

## PHOTOMETRIC DISTRIBUTIONS

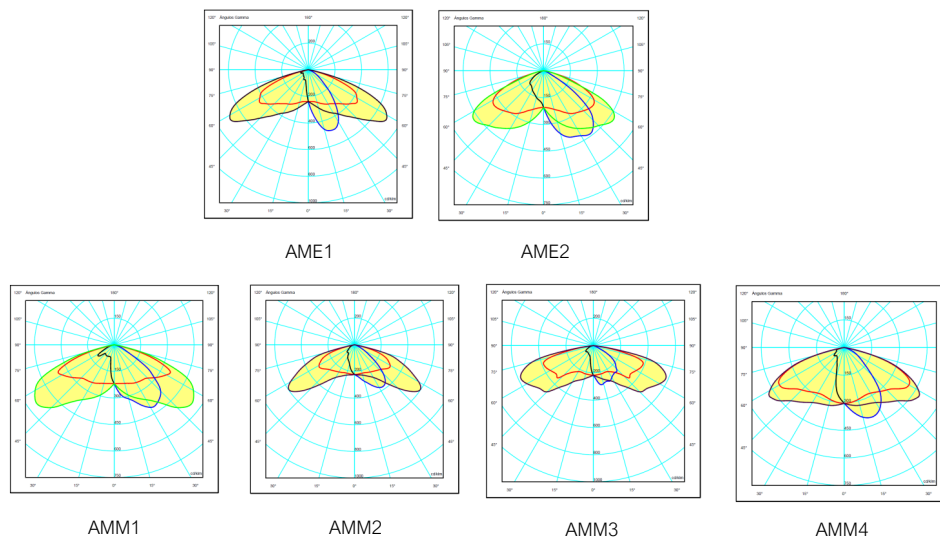
### GEN1

It has the 7 photometric distributions used for the environments in which this type of luminaire is installed, allows it to adapt to all needs:



### GENA

It has the 6 photometric distributions used for the environments in which this type of luminaire is installed, allows it to adapt to all needs:



## 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: 0,041699Kg 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 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 values at TM-21 Socketd on LM-
Cable	Class I/II Cable from 5 to 12 metres Cross section: 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 120V - 277V
Power factor	> 0,9
Harmonic distortion	< 15%
Surge protector	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 overvoltage protection: 20kA, 20kV

## LIGHTING CHARACTERISTICS

Package real light	GEN1: 2.322lm - 20.800lm (21 - 161W) GENA: 3.128lm - 22.833lm (21 - 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 temperature, upon request.
Index of reproduction chromatic (CRI)	CRI>70. CRI80 upon request.
LEDs	Incorporate from 32, 48 and 64 LEDs.
FHS/ULR	0,0%
Optics	PMMA polymethylmethacrylate.
Photometric distributions	AMA1=> Throw 70° Spread 65° (Type IV) AME1=> Throw 65° Spread 15° (Type I) AME2=> Throw 70° Spread 35° (Type II) AMM1=> Throw 70° Spread 35°/50° (Type III) AMM2=> Throw 60° Spread 35° (Type II) AMM3=> Throw 75° Spread 5°/20° (Type III) AMM4=> Throw 65° Spread 20° (Type II)
LED thermal control	Heat dissipation by conduction through the specific design for this luminaire, since it has been specifically designed for LED technology. (Heatsink).

## FINISHES

## PREDEFINED COLOUR OF THE LUMINAIRE

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

SEA SIDE SUITABLE	Marine Finish (1.000h)
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## 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: Lateral fixation $\varnothing$ 49/60 mm.  * The PT1 fixation shall be supplied horizontally mounted with SE for sustainability.
Weight with equipment	Vertical and lateral fixation offer an inclination angle range of $\pm 10^\circ$ for every 2.5°.
Equipped weight	PT1: 9.2 Kg SE1: 8.7 Kg / SE2: 9 Kg
Wind Surf.	PT: 0.1 m <sup>2</sup> SE: 0.1 m <sup>2</sup>
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

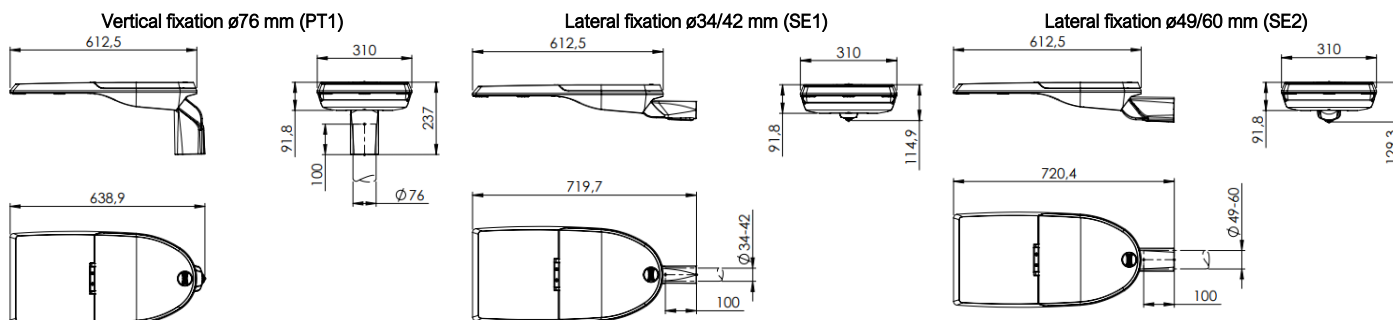
Equipment	<b>1N:</b> 1 Level <b>RC:</b> Controller dimmed <b>RD:</b> DALI <b>AF:</b> 1 - 10 V <b>RL:</b> Pulse adjustable LED <b>2N:</b> 2 Level <b>SR:</b> Smart Ready (D4i)
Autonomous regulation	Regulations programmed from the factory: <b>56:</b> 50% of the 24: 00h at 6: 00h. <b>66:</b> 60% of the 24: 00h at 6: 00h. <b>76:</b> 70% of the 24: 00h at 6: 00h. <b>SC:</b> Programming according to client.
CLO regulation	Flow rate during the life of the product: <b>7:</b> 70% luminous flux throughout the life of the luminaire. <b>8:</b> 80% luminous flux throughout the life of the luminaire. <b>9:</b> 90% luminous flux throughout the life of the luminaire.
Socket connection	<b>3-U:</b> NEMA 3 pin socket with/without IP66 cover. <b>5-V:</b> NEMA 5 pin socket with/without IP66 cover. <b>7-W:</b> NEMA 7 pin socket with/without IP66 cover. <b>X:</b> Larger Zhaga socket with/without IP66 cover. <b>O-Y:</b> Smaller Zhaga socket with/without IP66 cover. <b>P-Q:</b> Smaller/larger Zhaga socket with/without IP66 cover.
Sensor	<b>1:</b> Photocell for NEMA 3, 5 and 7 pin socket (20 lux) <b>2:</b> Photocell for larger Zhaga socket (20 lux) <b>3:</b> Motion sensor for smaller Zhaga socket. <b>4:</b> Photocell for larger Zhaga socket (20 lux) and motion sensor for smaller Zhaga socket.
Node	<b>ON:</b> Controlux One <b>BS:</b> Controlux Basic Pedestrian crossing: Controlux Sense

## ACCESSORIES

Optional pre- or post-installation shielding for these luminaires



## DIMENSIONS



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## VEKA M PHOTOGRAPHS



## LOGISTICAL INFORMATION

**VEKA M PT**

Box dimensions: 657 x 328 x 280 mm

Box weight: 9.2 kg

Number of boxes: 18 units

American pallet: 1200 x 800 x 1880 mm

Number of levels: 6 levels

Surface area used: 67.3%

Volume used: 62.9%

Total gross weight: 185 kg

**NOTE:** By sustainability reasons PT1 & PT2 fixing accessories will be supplied assembled by side entry (SE)

**VEKA M SE**

Box dimensions: 738 x 328 x 173 mm

Box weight: 9 kg

Number of boxes: 21 units

American pallet: 1200 x 800 x 1411 mm

Number of levels: 7 levels

Surface area used: 75.6%

Volume used: 72.7%

Total gross weight: 290 kg

\*If the luminaire includes a cable, please consult dimensions Box

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## LUMINAIRE DIMMING

### By programming the driver

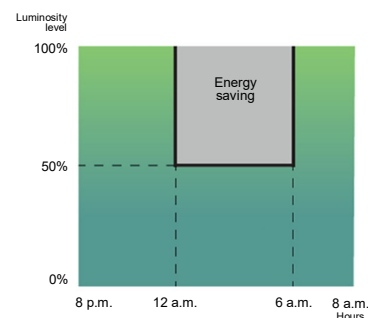
Smart luminaires drivers can be programmed in the factory without needing a control system, additional wiring or maintenance costs. A schedule is pre-programmed for light flow to be automatically reduced at quieter times of the night while respecting light levels and uniformity.

#### 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.



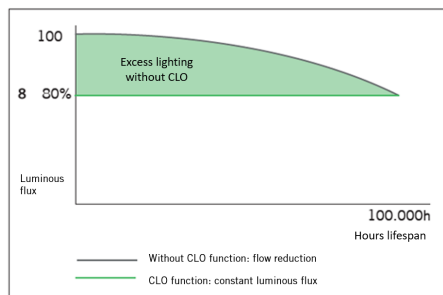
### Using the CLO function

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.

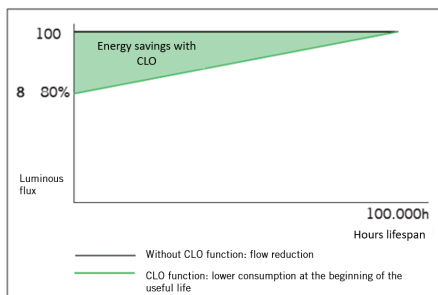
#### Constant luminous flux 8

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:





## 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 - 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

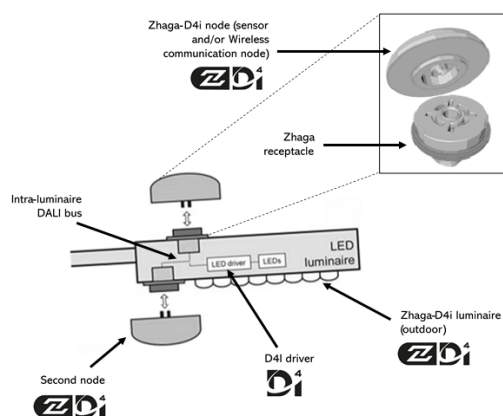
Zhaga-D4i certification covers all the essential characteristics, including automatic adjustment, digital communication, data reporting and power requirements in any single luminaire, ensuring plug-and-play interoperability for luminaires (drivers) and peripherals, such as connectivity nodes.

## 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.