

Veka M



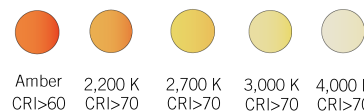
KEY ADVANTAGES

- Up to 4 installation methods
- Tool-free access from the top
- Sturdiness: IP66 + IK10
- Die-cast aluminium (Cu<0.1%)
- Energy Efficient: 155 lm/W
- Up to 7 optical distributions
- Smart Ready: Designed to house both indoor and outdoor communications nodes
- Future Proof: Zhaga-compliant
- Life span L90B10 100,000h (Ta) 25°C
- Night Friendly: ULR Arrêté du 27 décembre 2018
- A presence sensor can be incorporated into the luminaire
- 3G connectivity



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)



3,072 lm - 20,800 lm



PT: 0.1 m²
SE: 0.1 m²



155 lm/W
Luminaire



-40°C - +50°C



9 Kg



0.00% - 0.35%
FHS/ULR



Tool-free
access to
control gear

*Test reports from independent ENAC accredited laboratories or equivalent

Measurements taken at ISO 17025 approved laboratory.
Meets the minimum CEI - IDAE requirements.

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

C. & G. CARANDINI, S.A.U.

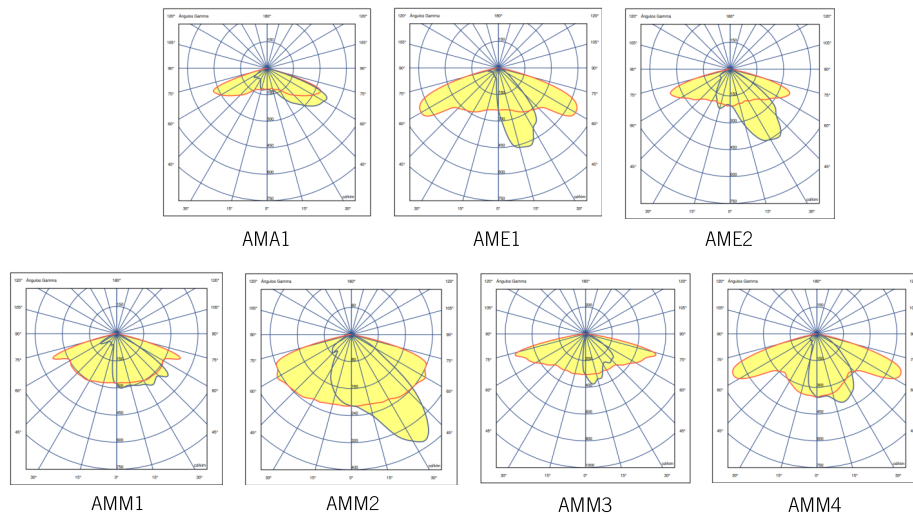
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veka

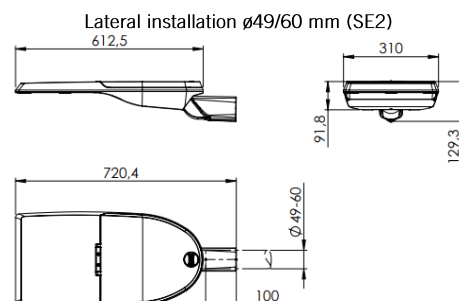
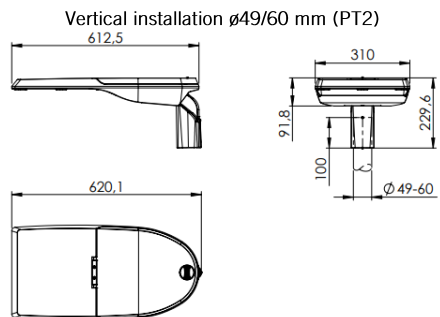
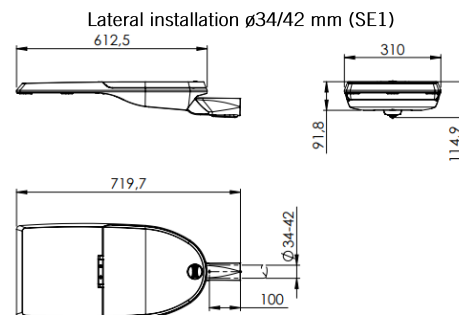
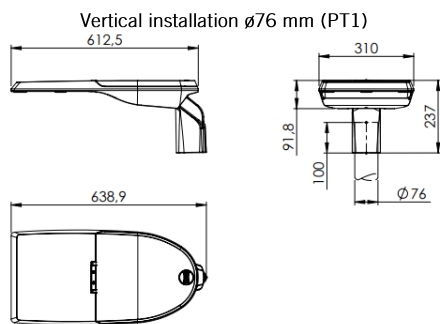
PHOTOMETRIC CONFIGURATIONS



7 photometric configurations are available for use in the various environments where this type of luminaire might be installed, meaning it can be adapted to suit all situations:



DIMEN-



APPLICATIONS

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



VEKA M CHARACTERISTICS

| GENERAL INFORMATION | |
|---------------------|--|
| Sustainability | Recyclability: 96.03% Carbon footprint per use: 0.038801 kg kW/h de CO2 |
| CE mark | Yes |
| ENEC Certificate | Yes |
| RoHS-compliant | Yes |
| Testing standards | LM 79-80 (all measurements at ISO17025 certified laboratory) |

| GENERAL CHARACTERISTICS | |
|--------------------------------------|---|
| Body and mounting | Pressure die-cast aluminium EN AC-44100 (LM6) with low copper content <0.1%. |
| Finish | Grey polyester powder coating RAL 9006 Smooth Gloss (906B). Other finishes, upon request. |
| Light enclosure | 5mm toughened flat glass. |
| Exterior nuts and bolts | Stainless steel (AISI304). |
| General ingress protec- | IP66 (EN 60598-1 and EN 60529) |
| Degree of protection against impacts | IK10 (EN 62262) |
| Operating temperature | Ta -40°C to +50°C According to luminaire configuration. |
| Estimated life | L90B10 100,000 h at Ta 25°C. Light maintenance values at TM-21 based on LM-80 data. |

| ELECTRICAL CHARACTERISTICS | |
|----------------------------|---|
| Electrical class | Class I or Class II |
| Input voltage | 220 V - 240 V / 50 Hz - 60 Hz Optional 100 V- 277 V |
| Power factor | > 0.9 |
| Harmonic distortion | < 10% |
| Overvoltage protection | Overvoltage 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 | |
|------------------------------|---|
| Real light package | 3,072 lm to 20,800 lm (21 - 161 W) |
| 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. |
| Colour rendering index (CRI) | CRI>70. CRI80 upon request. |
| LEDs | Includes 32, 48 and 64 LEDs. |
| ULR/FHS | Between 0.00% and 0.35% |
| Optics | Acrylic PMMA lenses especially designed for LEDs. |
| Photometric configurations | 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 management | Heat dissipation via conduction, radiation and convection based on a design for LED technology. |

VEKA M CHARACTERISTICS

MAINTENANCE AND ASSEMBLY

| | |
|------------------------------|---|
| Installation and maintenance | Tool-free luminaire access system designed by Carandini. Access to the driver from the top. |
| Installation | PT1: Vertical installation \varnothing 76 mm.* PT2: Vertical installation \varnothing 60mm.* SE1: Lateral installation \varnothing 34/42 mm. SE2: Lateral installation \varnothing 49/60mm. * The PT1/ PT2 fixings shall be supplied horizontally mounted with SE for sustainability. |
| Mechanical adjustment | Vertical and lateral installations offer an inclination angle range of $\pm 10^\circ$ for every 2.5°. |
| Equipped weight | PT1: 9.2 Kg / PT2: 9 Kg SE1: 8.7 Kg / SE2: 9 Kg |
| Wind Surf. | PT: 0.1 m ² SE: 0.1 m ² |
| Pressure equalisation valve | The luminaire is fitted with a valve that balances the pressure in the luminaire to prevent the build-up of condensation, thereby extending the lifetime of the components. |

MANAGEMENT AND CONTROL

| | |
|-----------------------|---|
| Devices | 1N: LED 1 level RC: Adjustable LED in head RD: Adjustable LED Protocol DALI AF: Adjustable LED Protocol 1-10 V RL: Pulse adjustable LED 2N: Dual level SR: Smart Ready D4i |
| Autonomous regulation | Factory-programmable regulation: 56: 50% from 00:00 to 06:00 66: 60% from 00:00 to 06:00 76: 70% from 00:00 to 06:00 SC: As requested by the client. |
| CLO regulation | Percentage flow during product lifetime: 7: 70% luminous flux during luminaire lifetime. 8: 80% luminous flux during luminaire lifetime. 9: 90% luminous flux during luminaire lifetime. |
| Sockets | 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. 4-X: Upper Zhaga socket with/without IP66 cover. O-Y: Lower Zhaga socket with/without IP66 cover. P-Q: Lower/Upper Zhaga socket with/without IP66 cover. |
| Photocells | 1: Photocell for Nema 3, 5 and 7 pin socket (20 lux) 2: Photocell for larger Zhaga socket (20 lux) 3: Movement sensor for lower Zhaga socket. 4: Photocell for upper Zhaga socket (20 lux) and movement sensor for lower Zhaga socket. |
| Node | ON: Controlux One BS: Controlux Basicrolux One |

VEKA M PHOTOGRAPHS



LOGISTICAL INFORMATION

VEKA M PT

Box size: 657 x 328 x 280 mm

Box weight: 9.2 kg.

Number of boxes: 18 units

American base: 1200 x 800 x 1880 mm

Stack height: 6 levels

Area occupied: 67.3%

Volume used: 62.9%

Total gross weight: 185 kg

VEKA M SE

Box size: 765 x 355 x 170 mm

Box weight: 9.2 kg.

Number of boxes: 27 units

American base: 1200 x 800 x 1850 mm

Stack height: 9 levels

Area occupied: 85%

Volume used: 81%

Total gross weight: 268 kg

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

LUMINAIRE DIMMING

By programming the driver

Programming profile

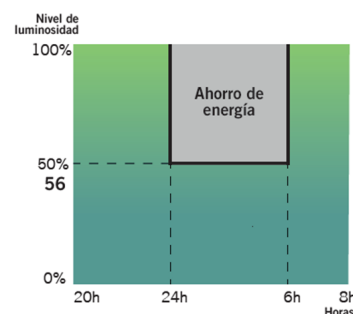
The driver can be programmed so that luminous flux is reduced from the luminaire during the least busy hours at night while always meeting the required lighting and uniformity levels.

Programming profile 56

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

Hasta un

26%
de ahorro



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 lifetime of the luminaire. This saves energy and increases the lifetime of the system. Furthermore, the light level in the area where the luminaire is installed remains constant over time.

Constant luminous flux 8

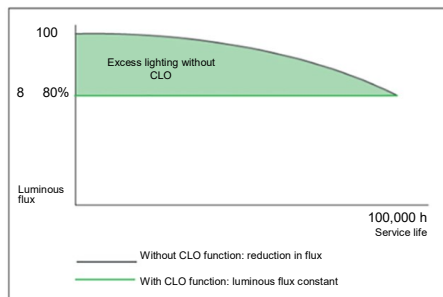
Luminous flux from the luminaire at 80% to maintain light levels throughout its lifetime.

Hasta un

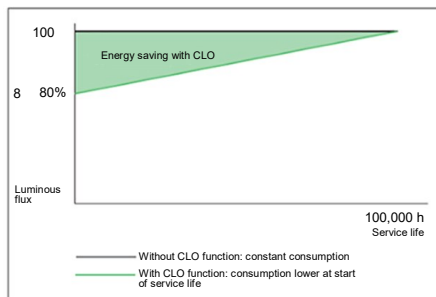
10%
de ahorro

y se incrementa la vida de la luminaria

Graph: Luminous flux



Graph: Consumption



By incorporating an additional device

Presence sensor

By using a presence sensor, lighting can be adjusted according to the level of activity in the area where the luminaire is installed.



The light level is raised when a pedestrian or vehicle is detected in the area.



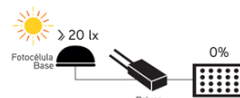
Photocell

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

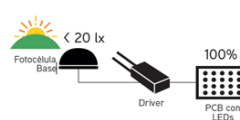
This is extremely useful so the luminaires are not switched on during the day when there is still sufficient natural light.

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.



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INNOVATIVE AND UPDATABLE OVER TIME (Zhaga/ ZD4i)

Zhaga

Zhaga — “Future Proof”

Zhaga is an industrial consortium that seeks to standardise the specifications used for interfaces between LED luminaires and light sources. The goal is to achieve interchangeability between products made by different manufacturers. Zhaga defines the testing procedures for light sources from luminaires and LEDs so that the luminaires accept the LED source.



Zhaga D4i — “Sensor Ready”

The Zhaga consortium merged with DiiA to create one single Zhaga-D4i certificate that combines the specifications for outdoor connectivity from Version 2 of Zhaga Book 18 with the D4i specifications of Dii4 for intra-luminaire DALI.

“BOOKS” PER APPLICATION. A PROFITABLE SOLUTION.

| Z H A G A Consortium | | 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 indicating that a component is Zhaga can be found in a series of books that are only available to consortium members and enable designs to be produced according to the marked standard. The advantages for society are clear given that, besides reducing the consumption of resources, luminaire re-use is increased with a focus on achieving a circular economy.

CERTIFICATION PROGRAMME

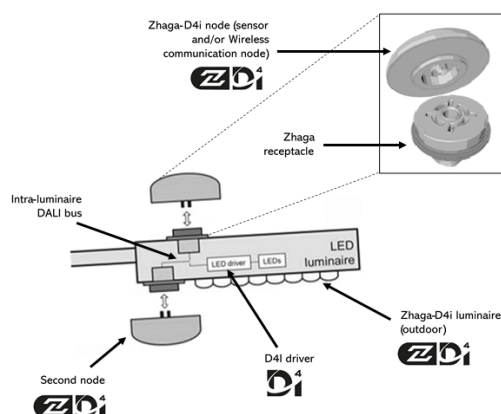
Zhaga-D4i certification covers all the essential characteristics, including automatic adjustment, digital communication, data reporting and power requirements in any single luminaire, ensuring plug-and-play interoperability for luminaires (drivers) and peripherals, such as connectivity nodes.

STANDARDISATION AS A MEANS TO ACHIEVE SUSTAINABILITY

The Veka M luminaire has been designed to function with the latest available market-proven technology based 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 based 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” based on market driver dimensions, or any LED module compliant with Zhaga “Book 15” based 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.