Tango
GEN4

KEY BENEFITS

- Top access maintenance.
- Durability and sturdiness: IP65 + IK10.
- Injected aluminium (Cu<0.1%).
- Energy Efficient: 140 lm/W.
- Up to 8 photometric distributions
- Smart Ready: Designed to house both interior and exterior communications node.
- Future Proof: Complies with Zhaga standard.
- Service life L90B10 100,000h at Ta of 25°C.
- Night Friendly: ULR Arrêté du 27 décembre 2018.
- 5 years warranty.

IP65 IK10 CI CII

RAL 7040B Smooth Gloss

Marine finish (RAL M7040B)

Eprotec Di Zhaga DALI

Ámbar CRI>60 | 2200K CRI>70 | 2700K CRI>70 | 3000K CRI>70 | 4000K CRI>70

DESCRIPTION

The Tango GEN4 Series is one of the luminaires manufactured and designed by Carandini for urban environments. Thanks to its functional design and the various versions and accessories available, this LED version of the TANGO Series has been perfectly integrated within façade lighting, monuments, roundabouts, intersections and outdoor areas.

Tango uses latest-generation, high-performance, high-efficiency LEDs in a universal modular solution for inclusion in our luminaires.

1.748 lm - 11.624 lm

0.141 m²

140 lm/W Luminaire

-40°C - +50°C

12 kg

0.01% - 0.06% FHS / ULR

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

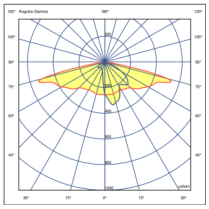
STANDARDS / CERTIFICATES

- 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 (1000h)

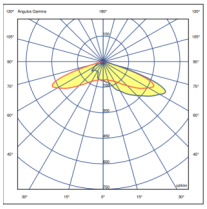
Distributor: EPK elektro s.r.o.
info@carandini.cz - www.carandini.cz

PHOTOMETRIC DISTRIBUTIONS

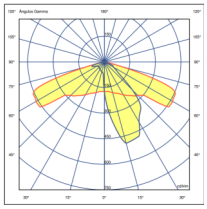
It has the 8 photometric distributions used for the environments in which this type of luminaire is installed, allows it to adapt to all needs:



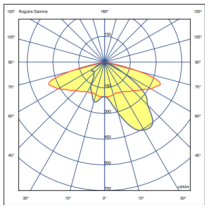
ALM1



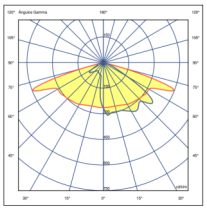
AMA1



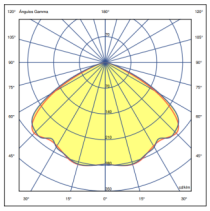
AME1



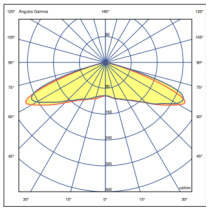
AME2



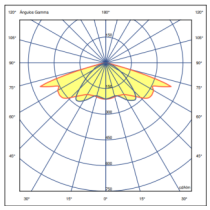
AMM1



SCM1

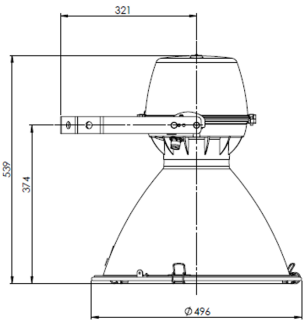


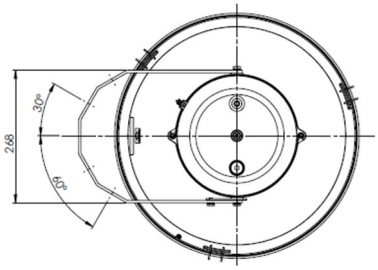
SMA1



SME1

DIMENSIONS (mm)





LOGISTICAL INFORMATION

Box dimensions: 527 x 527 x 576 mm

Individual weight: 12 kg

Number of boxes: 12 units

US socket: 1200 x 1100 x 1878 mm

Number of levels: 3 levels

Surface area used: 84.2%

Volume used: 72.7%

Total weight: 164 kg

APPLICATIONS

Commercial areas, parks, gardens and squares.

TANGO CHARACTERISTICS

GENERAL INFORMATION

Sustainability	Valorisation: 95,46%. Maximum carbon footprint per use: 0,013727 kg kW/h CO2
CE marking	Yes
RoHS compliance	Yes
Test standard	LM 79-80 (all measurements in the laboratory certified according to ISO17025)

GENERAL CHARACTERISTICS

Armor and couplings	Die-cast aluminium EN AC-44100 with low copper content <0.1%.
Reflector	Spun aluminium plate AL1050
Cable inlet	M20 polyamide cable gland at base of housing.
Closure	Tempered glass 5mm
Nuts outer and bolts	Stainless steel (AISI304).
Watertightness	IP66 (EN 60598-1 and EN 60598-2-3)
Impact protection grade	IK10 (EN 62262)
Operating temperature	Ta -20°C to +40°C. According to luminaire configuration.
Lifetime	L90B10 100,000h at Ta of 25°C. Light maintenance assessments to TM-21 based on LM-80 data.

ELECTRICAL CHARACTERISTICS

Electrical class	Class I and Class II
Voltage / Frequency	220V - 240 V/50 Hz - 60 Hz Optional 100 V - 277 V
Power factor	> 0.9
Harmonic distortion	< 10% Other voltages on request.
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
Cables	Class I/II Cable from 4 to 13 metres Cross-section: 2x1.5 ; 3x1.5; 4x1.5; 5x1.5;

MAINTENANCE AND INSTALLATION

Installation and maintenance	M20 polyamide inlet. Housing and dome secured to body via safety chain. Equipment access from above.
Mounting	Reinforced galvanised steel bracket.
Weight with equipment	12 kg
Surface Wind	0.141 m²

FINISHES

Predefined luminaire colour

RAL 7040	Window Grey Smooth Glossy

Corrosion protection

SEA SIDE SUITABLE	Marine Finish (1.000h) (Optional)

LIGHTING CHARACTERISTICS

Package real light	1.748 lm - 11.624 lm (17W - 102W)
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 available.
Index of reproduction chromatic (CRI)	CRI>70 CRI80 on request.
LEDs	Incorporate from 24, 32 and 48 LEDs.
FHS/ULR	0.01% - 0.06% (Upward Light Ratio).
Optics	PAMMA acrylic lenses specially designed for LEDs
Photometric distributions	**ALM1**=> throw angle 75° spread angle 15°/45° (Type II) **AMA1**=> throw angle 65° spread angle 65° (Type IV) **AME1**=> throw angle 70° spread angle 15°/30° (Type II) **AME2**=> throw angle 70° spread angle 15°/40° (Type II) **AMM1**=> throw angle 70° spread angle 35°/50° (Type III) **SCM1**=> throw angle 50° spread angle 50° (VS Type) **SMA1**=> throw angle 65° spread angle 65° (VS Type) **SME1**=> throw angle 70° spread angle 40° (Type II)
LED thermal control	Heat dissipation by conduction, radiation and convection designed for LED technology.

MANAGEMENT AND CONTROL

Equipment	**1N:** 1 Level **RC:** Controller dimmed **RD:** DALI **AF:** 1 - 10 V **RL:** Pulse adjustable LED **2N:** 2 Level
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.
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 **4-X:** Zhaga 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	Controlux Basic

LUMINAIRE DIMMING

By programming the driver

Programming profile

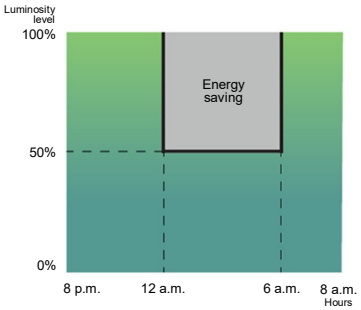
The driver can be programmed in such a way that, during less busy hours of the night, the luminaire reduces the luminous flux, while remaining in compliance with the required lighting and uniformity levels.

Programming profile 56

Between midnight and 6 am, the brightness of the luminaire is reduced by 50%.

Up to

26% savings



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

Via 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

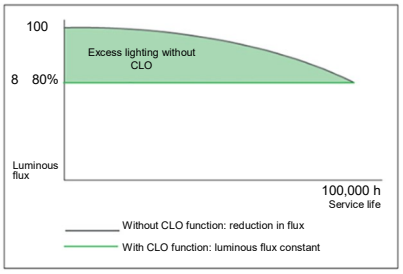
Luminaire luminous flux at 80% to maintain light levels throughout its service life.

Up to

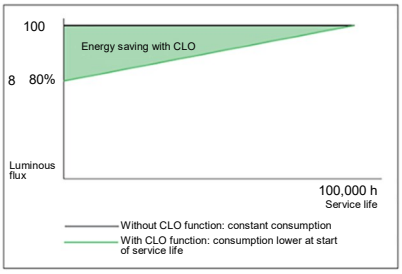
10% savings

and increase in luminaire service life

Graph: Luminous flux



Graph: Consumption



By adding an extra element

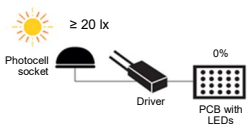
Photocell

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

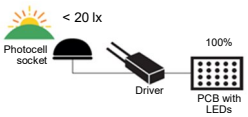
This is very useful, to avoid having luminaires on at times when there is still enough natural light.

Example with 20 lx photocell:

If the photocell detects more than 20 lx it will not switch on the luminaire.



It is when the luminance levels begin to fall that the photocell detects 20 lx and switches on the luminaire.



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 Dii4's D4i specifications for intra-luminaire DALI.

BOOKS PER APPLICATION. A COST-EFFECTIVE SOLUTION.

Zhaga 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, 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

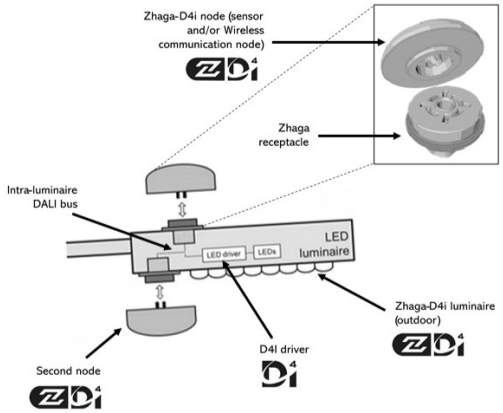
Zhaga-D4i certification covers all essential features, including automatic setting, digital communication, data reporting and power requirements within a single luminaire, ensuring plug-and-play interoperability for luminaires (drivers) and peripherals such as connectivity nodes.

STANDARDISATION AS A MEANS TOWARDS SUSTAINABILITY

The **Tango GEN4** 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** are a ***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 DALI2 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 as **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.