

This document is exclusive MARECO LUCE s.r.l., is strictly prohibited disclosure or reproduction, even partial, as well the use of without written consent of MARECO LUCE s.r.l..The company reserves the right to change models, dimensions and materials at any time without notice.

## PRODUCT DATA SHEET

### Stud Solar 2

**Code : 1879282M**

#### PRODUCT FAMILY

- Urban architectural LED luminaire, suitable for upright installation on poles Ø60mm on top (IP65)

#### MATERIAL CHARACTERISTICS

- Body made of die-cast aluminum (ADC12) anodized and painted
- Access door/gear tray and top cover made from thermosetting resin (BMC), painting process
- Heat sink frame for in solid, anodised aluminium
- Gear tray in stainless steel AISI 304L
- Diffuser in thick (4mm) transparent PMMA (acrylic)
- Polyester powder coating with a pretreatment (Phosphochromating method) to ensure high protection against weathering
- Silicone gaskets
- A2 stainless steel screws

#### COLOUR

- Anthracite RAL 7016 textured

#### LIGHTING CHARACTERISTICS

- LED's lighting source in fixed position
- Immediately ON at 100% of the light flux
- Monochromatic LED module
- Led's SeoulZ5M2
- Illuminamento rosimmetrico
- Lenses in highly transmittant PMMA (93% efficiency) with unilateral opening of light beam allowing for good spacing between luminaire
- LED's covers arranged in a ring formation, made from NY/FV30% matte white colour, snaps into place without screws LED optics for a round symmetrical, predominantly frontal light throw, guaranteeing a good level of performance at elevated distances
- Luminaire conforms with local and international dark sky laws with emission 0.49cd/Klm for angles 90°, Rn 0.04% - 67.09%

#### WIRING CHARACTERISTICS

- n°16 monochromatic LED's module with n°1 Led SeoulZ5M2
- The modules are connected in parallel via a quick release connector, fixed to the thick circular anodised aluminium heat sink through n.2 screws
- Heat sink frame for LED's in thick anodised aluminium connected to cover with thermo-conducting silicone grease
- Heat sink frame/LED's modules are easily replaced because of polarised connector
- The modules are connected in 2 series of 8 each, via a quick release connector, and supplied by two independent drivers
- In the case of malfunction, one of the following situations may have occurred:
  - one LED module malfunctions, however the other modules remains functional keeping the light fitting on
  - one complete LED crown malfunctions, however the other crown remains functional keeping the light fitting on

#### SOLAR PANEL

- Solar panel tilted 20° Ø700mm in monocrystalline silicon 50Wp integrated into top cover, circular in shape, with tempered glass highly transmittant, 4mm thickness, and resistant to hail: Ø25mm at 75km/h

#### BATTERY

- Weatherproof 230Wh/15.3Ah Lithium Ion battery, with no memory effect, placed inside the body of the luminaire
- It has a display with 5 LED indicators for immediate visual check of the charge level and

#### operation state

- It interacts directly with the electronic circuit board, to communicate data concerning the charge/discharge cycles, the charge level, and the temperature

#### ELECTRONIC CIRCUIT BOARD

The computerised electronic circuit board 3 step-MPPT manages the on/off of the light fitting, and the charge/discharge of the battery

- It allows to select two operating modes:

- NORMAL, in which the luminosity of the LED's is fixed, independently from the level of charge of the battery
- SMART, in which the luminosity of the LED's is variable, and priority is given to the nightly guarantee (2 or 3 nights).
- The SMART mode adjusts the luminous output based on the nightly guarantee and the charge level of the battery
- After NORMAL or SMART operating mood has been selected, it is necessary to choose the nightly duration of the fitting (8 hours, 10 hours, 4+2 hours, from sunset to sunrise); the system turns LEDs on automatically, one minute after sunset
- The nightly duration option of 4 + 2 hours indicates that the fitting switches on at sunset for 4 hours, then goes to stand-by mode (lowered to 25% of luminous output) until 2 hours before sunrise, when it goes back on at maximum available luminosity
- This is possible because the electronic circuit board memorises data on the hours of light/darkness, and then calculates automatically an average based on either 3, 7, and 15 previous days
- Thanks to the calculation of this average, the electronic circuit board manages the on, standby and off, and it anticipates accurately future day/night lengths; based on the calculation of the day/nights lengths, it also increases/decreases the light output of 1 percentage point every 3 days
- In both NORMAL and SMART operating mood, the battery will shut off when only 20% storage remains
- All of the above options can be selected directly on each fitting through simple dip switches found on the electronic circuit board that can be reached by opening the door located in the housing of the luminaire
- Therefore users can set the different operating/running moods according to their needs
- Factory standard programming is SMART mode, 8 hour nightly duration and a 3 nights guarantee

#### INSTALLATION AND ORDINARY MAINTENANCE CHARACTERISTICS

- Luminaire for Ø60mm pole top installation, fixed with n.2 dowels (supplied)
- No connection to power supply as the luminaire is independent
- The positioning of the luminaire, ie. the quantity and quality of the solar exposure and the ambient temperature, greatly influences whether or not the luminaire respects the above parameters

#### DIMENSIONS

- Ø735x1075mm

#### OPTIONAL ACCESSORY TO BE ORDERED SEPARATELY:

- Grid connection (mains power) CLII - COD.CS160001

RECOMMENDED POLE TO BE ORDERED SEPARATELY:

- Stud Solar H3500 - System A - COD.1880100M
- Stud Solar H3000 - System B - COD.1881100M

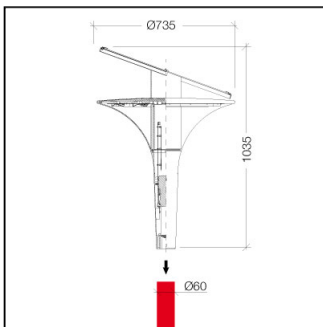
TECHNICAL SPECS 4000K

- LED's consumption: 16W
- Luminaire consumption: 16W
- LED's output: 2432lm max @tc25°C
- Luminaire output: 1929lm max @ta25°C
- LED's efficiency: 152lm/W
- Luminaire efficiency: 120lm/W
- LED's type: SeoulZ5M2
- Step MacAdam: 3
- Lifetime Led's: L80/B50 - 100Kh Tc 85°C
- RG: 2 <40cm
- Warranty: 2 years

Rev 02 - 21/11/2019

Details

- Conformity with EU Directives
- Class III
- IK08
- RG2
- CRI>80
- IP 65



SOLAR 16W					
CE	III	IK 08	RG	CRI >80	IP65

