

## DATA SHEET

# Maganda

Maganda has an integrated solar panel at the top that harvests the direct and indirect solar radiation throughout the day. From the solar energy it harvests, it generates light all night long, 365 nights a year.

The luminaire's stature is a reflection of nature's beauty, where flowers facing towards the sun serve as inspiration for the creation of the luminaire. The shape and material builds on Danish design.

It is currently installed on locations in Europe and the Middle East, amongst others Gribskov, Sønderborg, Fanø, Græsted, Vesthimmerland, Albertslund and Varde municipalities in Denmark.

### FEATURES:

- Stand alone solar powered LED luminaire
- Light in areas where cabling is not available or feasible
- No cabling and excavation cost
- Solar cells generate power during the day
- Power is consumed during the night to light up the luminaries
- Integration of sensor and Smart City functions CO2 neutral
- Supports Control Management System
- Controllable via mobile app or web-platform
- Possible to integrate a variety of sensor based technology





**LUMINARIES**

<b>Material</b>	Cast aluminium
<b>Coating</b>	Graphite Grey: SW302G (close to RAL 9007) Silver Grey: MW3000 Corten Brown: Mars 2525, YX355f
<b>Screen</b>	Clear polycarbonate with UV-resistant acrylate on both sides
<b>Mounting</b>	On pole, 60 mm top diameter
<b>Connection</b>	In the pole
<b>Classification</b>	IP66, class II
<b>Impact resistance</b>	IK10
<b>Weight</b>	8.4kg
<b>Wind-sweeping area</b>	0.143 m <sup>2</sup> (laterally)

**LED**

<b>LED type</b>	CREE XPGBWT-B1-CACE-A0KE5
<b>Operational life</b>	Min 100.000 hours at a max 25° C, L80B10
<b>Color temperature</b>	2700, 3000 Or 4000 Kelvin
<b>Color rendering</b>	Min 80, typically 85 Ra
<b>Color accuracy</b>	3 steps SDCM
<b>Luminous power</b>	2700K: 1550-4400 lm 3000K: 1650-4600 lm 4000K: 1700-4700 lm
<b>Luminous intensity class, 13201-2-2015</b>	G*1
<b>Glare index class</b>	D6
<b>Output ratio</b>	74%

**BATTERY**

Based on a Nickel-Metal-Hydride environmental friendly battery.  
(No Cadmium, Mercury or Lead). Pending on location and environment the solution will be designed accordingly.

<b>Operating temperature range</b>	-30° C to 77° C
<b>Life cycle</b>	4000
<b>Sizes</b>	10,8V - 130Wh or 10,8V - 260Wh

**BATTERY**

The battery solution is based on a Nickel-Metal-Hydride environmental friendly battery (No Cadmium, Mercury or Lead). It offers a wide operating temperature range -30° C to 77° C with a typical life cycle on 4000 cycles. For the luminaire it comes in two sizes, 12V-130Wh and 12V-260Wh. Pending on location and environment the solution will be designed accordingly.

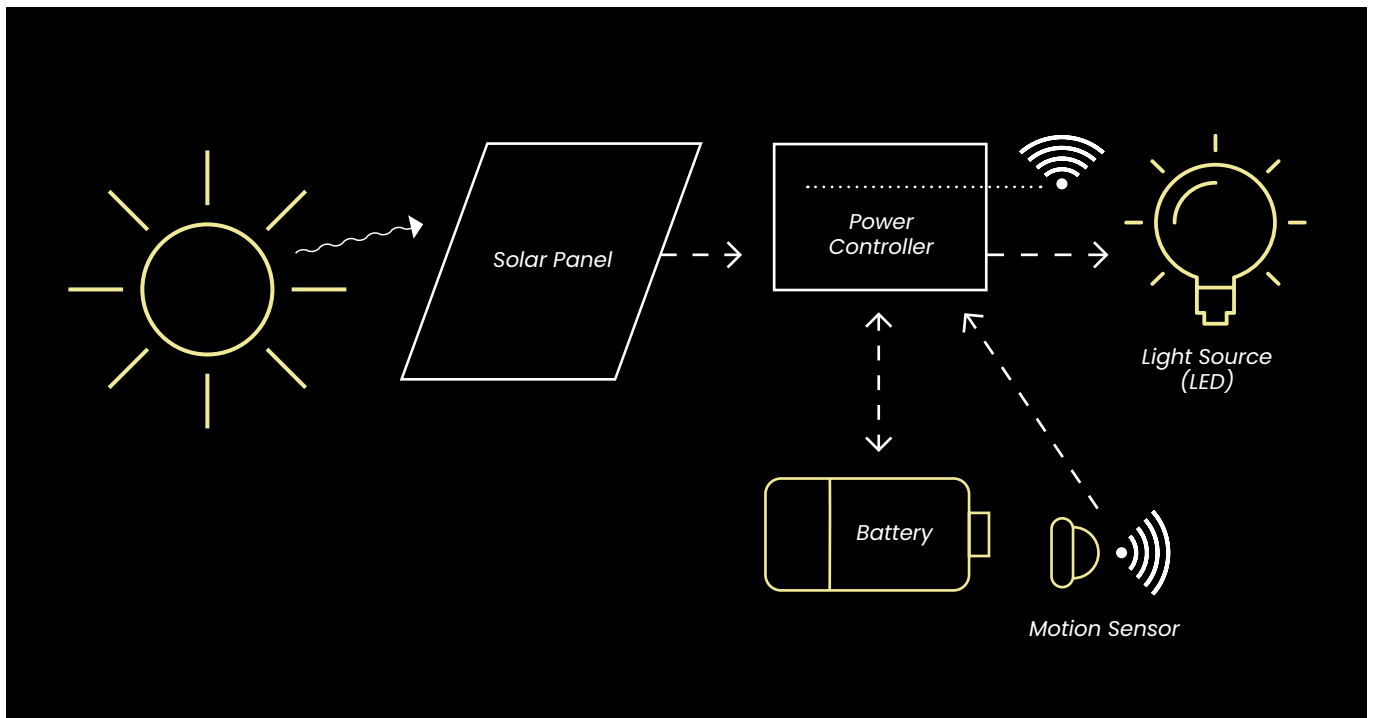
**SOLAR PANEL 60WP MONOCRYSTALLINE**

62Wp panel including 12 pcs. mono crystalline solar cells 5,16 Wp with anti-reflection coating that converts the maximum of light into energy. The structured glass surface reduces reflection, resists wind and snow weather conditions.

**CONTROLLER**

The controller in the luminaire is the intelligent heart of the solution. The controller maximizes the energy available from the solar panel and uses the energy to charge a battery.

During the daytime the controller monitors the charged energy and handles charge up to 60W. When it gets dark the unit has counted the charged energy from the whole day. This energy is then used to light after sunset controlling the LED with up to 24W. Depending on what time of year and location of the luminaire, the night can vary in time. That is why the controller registers the dark hours from the night before, and uses this to calculate the allowed light level/intensity. This makes the luminaire able to light the whole night most days of the year. The only thing that changes is the light intensity. To save even more energy or create more light when needed, a motion sensor can be connected, so the LEDs dims up when presence is detected.



Please recycle to local guidelines

# Empowering energy solutions for street lighting and infrastructure

Sunio is a prominent importer of renewable energy solutions and has a rich history of pioneering sustainable practices and contributing to the clean energy transition in the United Arab Emirates. Founded in 2023 we embarked on a mission to introduce cutting-edge renewable technologies to the UAE market, promoting environmental consciousness and energy independence.

We recognized the growing need for sustainable energy alternatives in the UAE, considering the region's abundant natural resources and the global shift towards clean energy.

We are dedicated to sourcing and importing the latest renewable energy solutions from around the world. Working closely with renowned manufacturers and industry experts, we have curated a diverse portfolio of high-quality products, including solar street light solutions, solar panels, energy storage systems, and other sustainable technologies.

Through strategic partnerships and collaborations, we play a pivotal role in introducing and popularizing renewable energy solutions across the UAE. We actively engage with government entities, private enterprises, and individuals, raising awareness about the benefits of clean energy and facilitating its adoption on a large scale.

Driven by a vision of sustainability and a passion for environmental stewardship, we have actively contributed to the UAE's ambitious clean energy targets. By importing and providing access to advanced renewable technologies, we have helped the UAE reduce its carbon footprint, diversify its energy mix, and foster a more sustainable and resilient economy.

As a trusted importer of renewable energy solutions, we continue to empower individuals, businesses, and organizations to embrace clean energy alternatives, reduce their environmental impact, and contribute to a greener future for the UAE.