

KHANYA HIGH MAST PRO

MODEL NUMBER

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SPECIFICATIONS

LUMINAIRE : Kuhle - LM 6 die cast and extruded aluminium. 10 year construction guarantee.

IP65 rated LED and gear compartment. For detailed luminaire specifications refer to Kuhle catalogue.

LIGHT SOURCE : The fitting is designed to operate a range of LED's up to 100W.

LUMEN MAINTENANCE : At an ambient temperature of 30° C, the lumen maintenance is > 90% at 87 000 hours and > 80% at 102 000 hours.

HOUSING : All components are manufactured from powder coated stainless steel for coastal regions and powder coated galvanised mild steel for inland use.

MOUNTING : Pole Mounted, plinth mounted or buried.

SOLAR PANEL : Polycrystalline solar panel, CINCO modules rated output 380W.

BATTERY : The High Mast Solar Luminaire uses Lithium Ion battery technology, maintenance-free, leak proof and usable in any position.

MODULE BRACKETS : Tilt adjustable bracketing system for accurate sun path adjustment.

CHARGE CONTROLLER : Victron Smart-Solar MPPT charge controller. The SmartSolar charger gathers energy from the solar panels, and stores it in the batteries. Using the latest, fastest technology, Smart-Solar maximises this energy harvest, driving it intelligently to achieve full charge in the shortest possible time. SmartSolar maintains battery health, extending its life. With built-in Bluetooth Dongle users are able to remotely monitor and control their SmartSolar MPPT.

FEATURES : The system is designed to operate optimally for a 10 hour night cycle and up to 2 nights operation without battery recharge. (See Configurations Matrix).

Integrated "hot swap" electronic components.



APPLICATION AREAS

Outdoor application.

Area Lighting

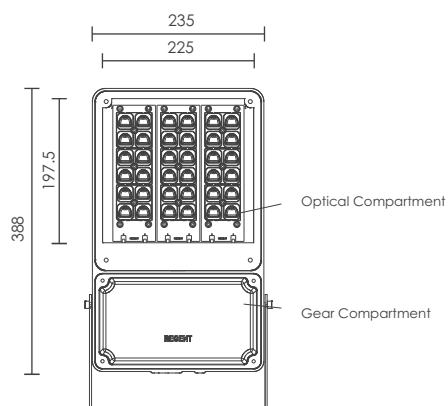
Security Lighting

Parking Areas

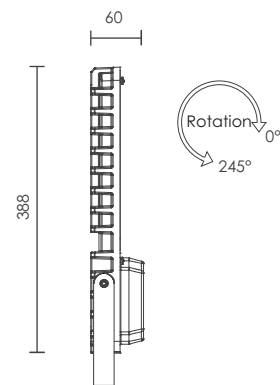
Roads in off grid areas

Road works and traffic control

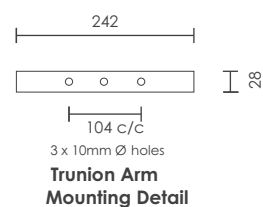
LUMINAIRES & LIGHT PERFORMANCE



Istria Trunion Front View



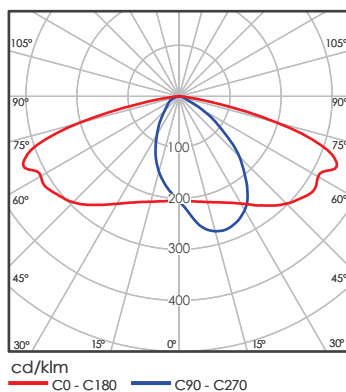
Istria Trunion Side View



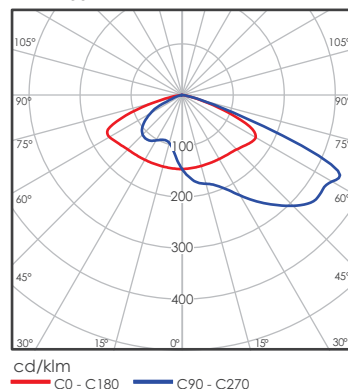
OUTPUT CURRENT (mA)	LUMINOUS WATTAGE (W)	NOMINAL FLUX (lm)	EFFICACY (lm/W)	BATTERY SIZE	DURATION
900mA	65W	14235m lm	219 lm/W	12.8Vdc - 100AH	2 Days (stepDim 75%)
1050mA	75W	16796 lm	219 lm/W	12.8Vdc - 100AH	2 Days (stepDim 75%)
				25.5Vdc - 100AH	3 Days (stepDim 100%)
1400mA	100W	21963 lm	209 lm/W	25.5Vdc - 100AH	2 Days (stepDim 100%)

LIGHT DISTRIBUTION

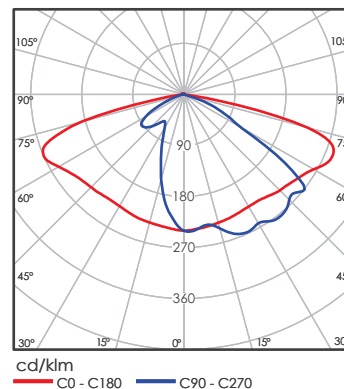
LED DK154X83



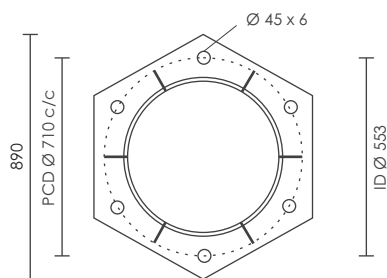
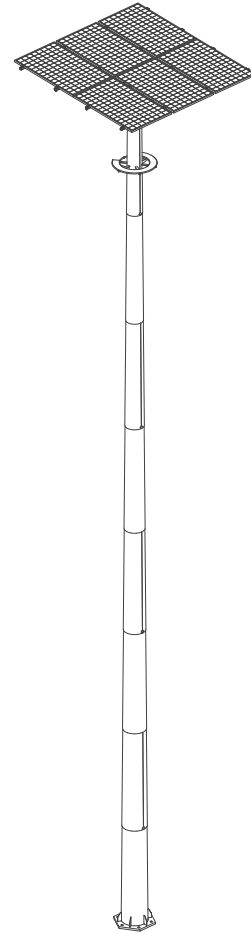
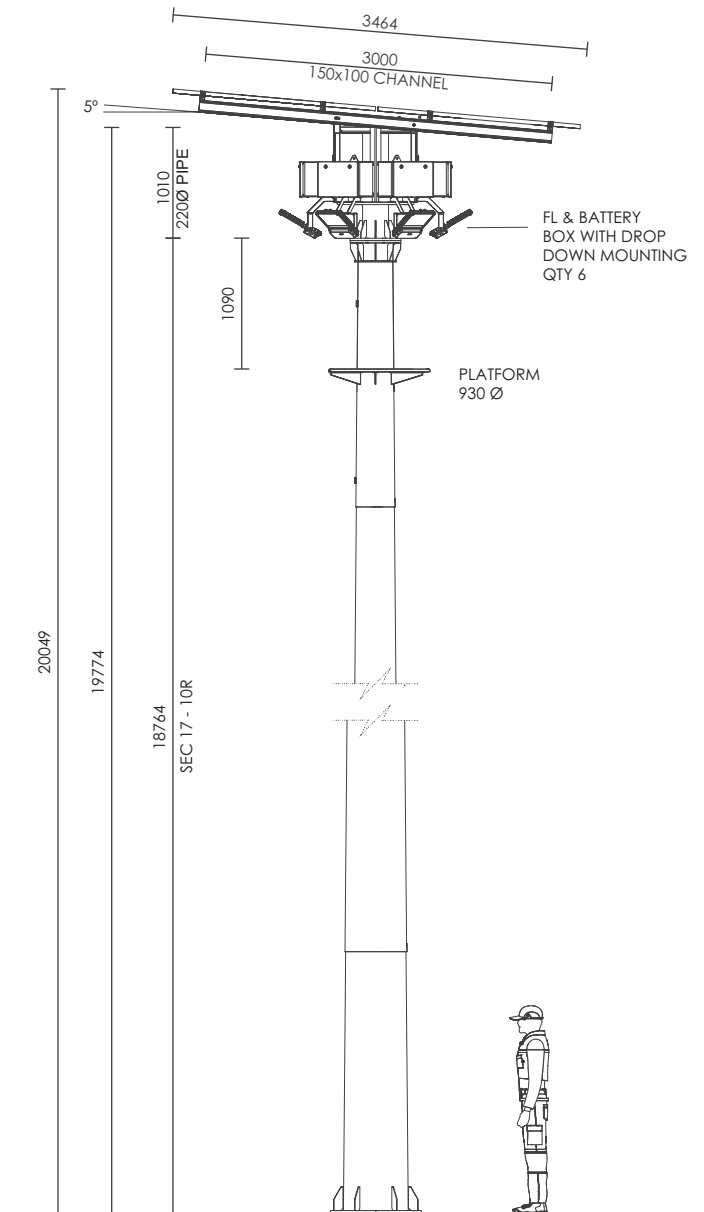
LED RLS014T4B



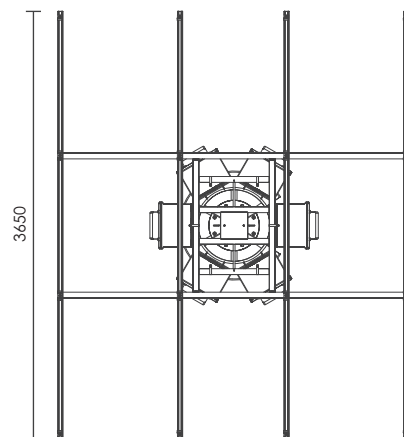
LED RLS065T3M



DIMENSIONS IN mm



**Base Detail
THK - 40mm**



Solar Panel Frame

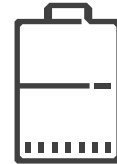
DEFINITIONS & ICONS

Lithium-ion Battery

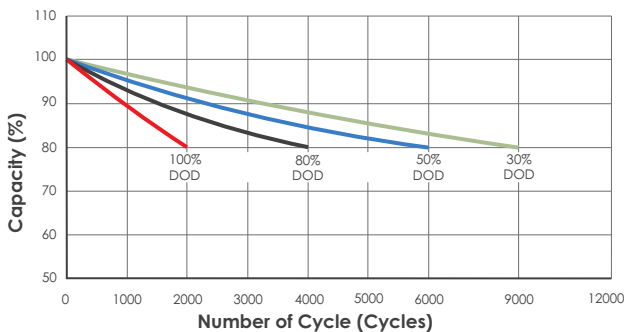
Lithium-ion batteries are distinctly different from their lead-acid equivalents. They also provide more advantages in terms of performance and efficiency. The first noticeably aspect of Lithium-ion systems is the compacted size of the batteries. This is because Lithium-ion has a higher energy density compared to its lead-acid counterparts making it smaller and lighter.

The Depth-Of-Discharge (DOD) of a Lithium-ion systems are also very high. These batteries are able to discharge close to 70% without damaging the battery. Lithium-ion systems also has a much longer cycle life compared to lead-acid Batteries.

Lithium-ion Batteries are incorporated with a Battery Management System (BMS) which constantly monitors the condition of the battery. This allows the battery to disconnect if it is over charged or discharged to a very low voltage. The BMS prevents the battery from excessive draining and over charging which prolongs the battery life.



- Lithium-ion Battery Cycle Life with DOD



- Lithium-ion Battery Pros

- Long Cycle Life
- Lower Maintenance Cost
- Light Weight
- More Compacted
- Higher Depth-of-Discharge
- Built-in BMS
- Smaller Solar Box Design

- Lithium-ion Battery Limitations

- Higher Cost
- Sensitive to Temperature
- Not Widely Available

stepDIM



stepDIM
driver

This is a feature offers autonomous time based scheduling through the course of the night

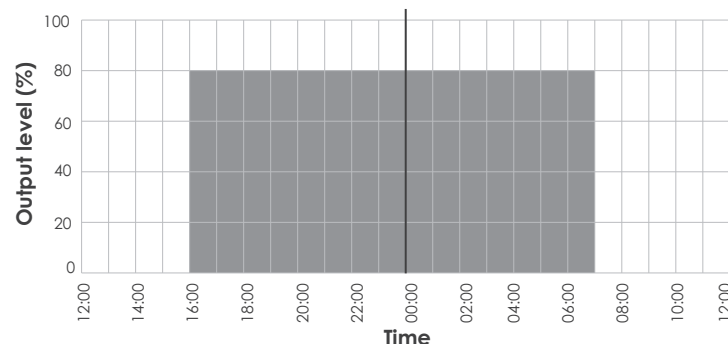
PROFILES

There are predetermined profiles to choose from which best suit the application at hand

PROFILE 1

Average 80%

Virtual Midnight



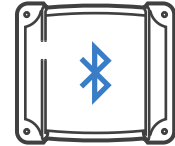
DEFINITIONS & ICONS

Charge Controller - Victron SmartSolar MPPT

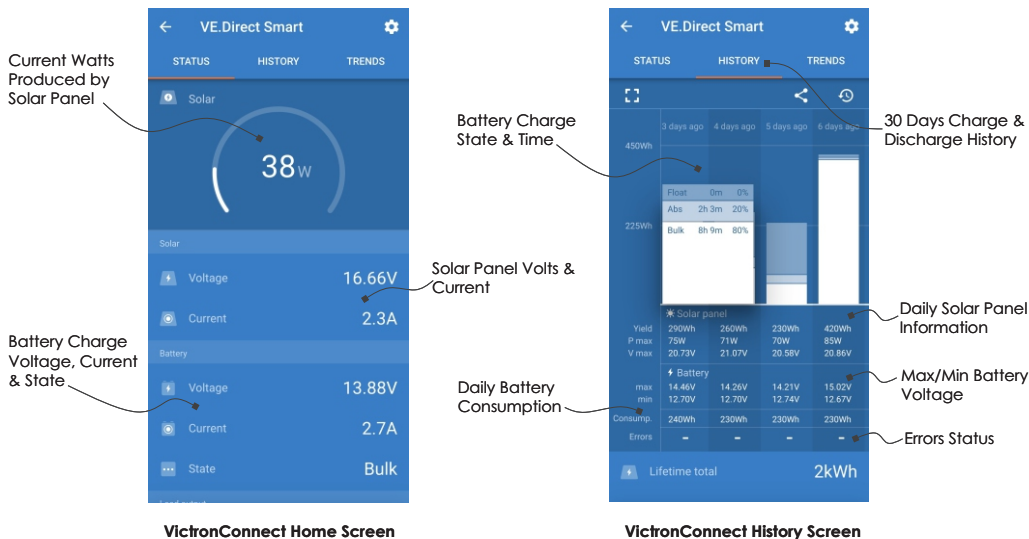
The MPPT Charge Controller is the heart of the solar luminaire. It regulates both the charge and discharge of the battery. The MPPT controls the energy-harvested from the solar panel and stores it in the battery. By using 3 customisable charging states the MPPT attempts to fully charge the battery in the shortest time possible.

The MPPT also protects the battery by ensuring that it does not discharge below a preset voltage, once the battery reaches the preset voltage the MPPT disconnects the load. This setting prevents the battery from excessive draining which prolongs the battery life.

The Victron SmartSolar is equipped with Bluetooth capabilities in order for users to monitor, update and diagnose their MPPT devices using their smartphone. This information is necessary to maximise field operation and system maintenance.

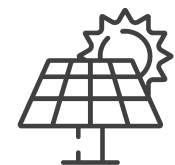


- VictronConnect - Bluetooth Monitoring App



Polycrystalline Solar Panel

Polycrystalline solar panels are silicon based and is the most common Photovoltaic (PV) Systems used across the world. This extensive use of these panels are mostly due to its cost effectiveness and availability. Polycrystalline panels are very durable and has a long lifespan of up to 25 years and a product warranty of 10 years.



Autonomy Days

Autonomy Days refers to the amount of nights the battery can provide power to the solar luminaire without receiving any charge during the course of the day. This is an important element which is taken into consideration as the solar luminaire must work even after days of overcast weather. Each of our fittings are calculate in worst case scenarios to ensure the desired Autonomy days are reached.

