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SOLARLIGHT.CO.ZA

SPECIFICATION SHEET - Products

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SOLARLIGHT.CO.ZA utilizes the latest technology in solar power generation, to ensure very bright light at night. The power for the light is harnessed during sufficient daylight conditions and stored in an internal battery. The stored energy is used to power an extremely effective and efficient light source at night. The new improved MPPT algorithm allows the system to use a smaller sized photo voltaic solar panel. The LED's used our products are the latest technology from LUMILEDS, capable to produce 135+ lumens per watt. The solar powered LED redundancy is determined by the model selected. The lockable battery includes a collar to allow it to be mounted on any pole up to a maximum of 100mm. The design allows complete angle adjustments for best solar panel positioning.

150W/4893-X* System Performance

Designed System Performance

Power usage during Night	36W
Total Available Lumens	4893 lm
Operation Dusk to Dawn – Designed for 14 hours during Winter	Dip switch selectable – Factory set Dusk to Dawn
Mapped Current output	3020 mA
Used Watts (14 hours)	504W h/r
AvailableTotal Watts (Battery)	1104W h/r
Depth of Discharge out of battery per Night	45%
Working Redundancy no Sun	2 days
Number of Cycles	>1500
Battery Replacement	>4 years
Operating Temperature	-40°C – 60°C
Recharge Time	3.5 Hours per Day
MPPT Charge Algorithm	YES
Undervoltage Cut Out	YES
Overvoltage Cut Out	YES
LED Protection	YES
Short Circuit Protected	YES

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150W/4893-X* *number of LEDs

Enclosure

IP Rating	52
Finishing	Powder Coated Dove Gray
Solar Degrees	Adjustable 15° - 37° Degrees
Adjustable Light Output Direction	Adjustable LED's (1,2,3 or 4) Left Right & Up and Down 150W/4893-replace" X with amount of lights " 150W/4893-1 = 1LED etc.
Weight	65 kg
Dimensions	1480mm x 670mm x 500mm
Maximum Pole Diameter	100 mm
Pole Fixing	4 x 12mm lock Nuts
Mounting Height	2.5m – 9m
External Cutouts on enclosure	On-Off Switch, Dip Switch Selector, 5 x Fault LED's

LEDs used for 150W/4893-X Lights

LUMILEDS	LXML-PWC2
Quantity	X 21 per LED light Source 150W/4893-1 = 1 Light Source 21 LEDS 150W/4893-2 = 2 Light Source 42 LEDS 150W/4893-3 = 3 Light Source 63 LEDS 150W/4893-4 = 4 Light Source 84 LEDS
Nominal CCT/Color	5650K Cool White
Typical CRI	70
Typical Luminous Flux (lm) @ 350mA Forward Current _+(1W)	135 lm per Watt

Battery used for 150W/4893-X Lights

Capacity	100Ah@20hr-rate to 1.75V per Cell @ 25°C
Weight	30 kg
Type – EV	Frequently deep cycle applications
Cells per Unit	6
Voltage	12
Cylce Life in Relation to Depth of Discharge	
50%	>1500 Cycles
30%	>1750 Cycles

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150W/4893-X* *number of LED's

Solar Panel

Electrical Performance at STC*

Maximum Power	145Wp
Power Tolerance	0/+5Wp
Maximum Power Voltage	18V
Maximum Power Current	8.05A
Open Circuit Voltage	22.6V
Short Circuit Current	8.72A

*Standard Test Conditions : 1000W/m² irradiance, 25°C and AM = 1.5

Thermal Conditions

Normal Operating Cell Temperature	48°C + -2°C
800W/m ² irradiance, 20°C and AM = 1.5	
Power Temperature Coefficient	-0.5%/K
Current Temperature Coefficient	0.0035%/K
Voltage Temperature Coefficient	-0.37MV/K

Limits

Operating Temperature	-40°C to 85°C
Maximum System Voltage	1000V DC

General Characteristics

Cell	Polycrystalline Solar Cell (156 x 156)mm
No Cells	36 (4x9)
Panel Dimensions	1480 x 670 x 35 mm
Weight	11.6 kg