Phasor Electronics CC T/A SOLARLIGHT.CO.ZA

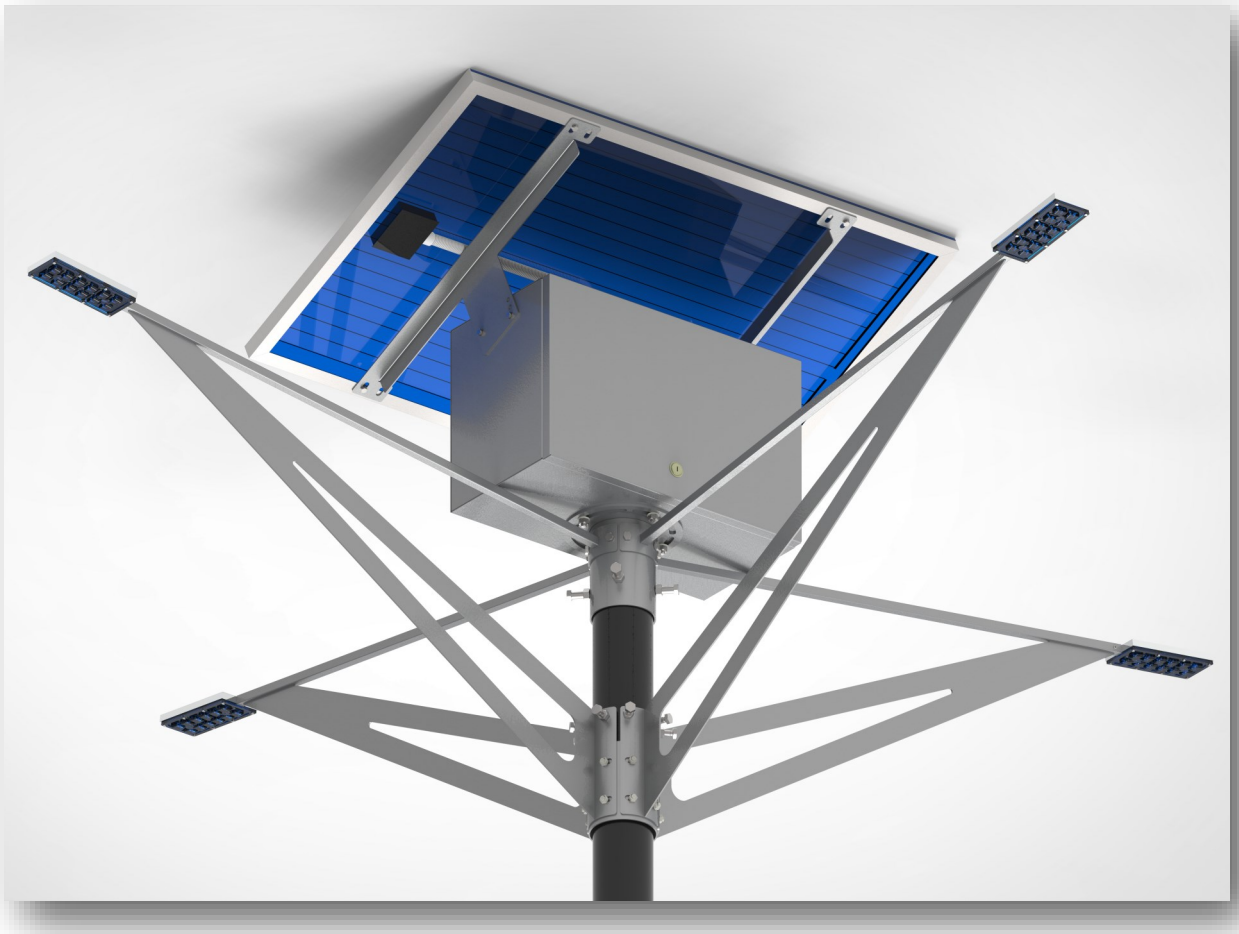
Phone: +27 82 357 0015
Phone: +27 71 220 2208
Email: info@solarlight.co.za

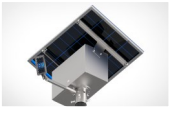
2021/12/29 Publication

300W-S4-L

300W-S4-L Solar Powered LED Flood Light

11925 Lumens	300Wp Polycrystalline Panel	75W Power Consumption
Mounting Hight 4m to 9m	Mounting Pole Diameter 101mm	Wide Area Flood
4 x LED Light Source	100Ah 12V Lithium Iron	>4500 Batter Cycles





MECHANICAL

Fully Adjustable Solar Panel Design
Adjustable orientation for LED light
IP Rated 52
Powder Coated Dove Gray

LED CONFIGURATION

LUMILEDS V2
4 x (12) High Power CHIPS
Nominal CCT/Color 5650K Cool White
Typical CRI 70
Typical Luminous Flux @350mA
159lm per Watt
Combination Spot and Flood

BATTERY

100Ah@20hr-Rate to 1.75V per Cell @25 degrees C
Weight 5.5kg
>4500 Cycles

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Designed System Performance

Power Consumption per Hour	75W
Total Available Lumens	11925 Lumens
Operation Dusk to Dawn (Designed for 14 hours during Winter)	Dip Switch Selectable Factory Set Dusk to Dawn
Mapped Current output to LED	6250mA
Used amps during the night (10 Hours)	62.5A
50Ah@20hr Rate to 1.75V per cell @25° C	100Ah
Depth of discharge of battery per night	62.5%
Working Redundancy no Sun	3.8 Hours
Number of Cycles	>4500
Battery Replacement	>8 Years
Operation Temperature	-20°C—50° C
Recharge Time	3.75 Hours
MPPT Charge Algorithm	YES
Undervoltage Cut Out	YES
Overvoltage Cut Out	YES
LED Protection	YES
Short Circuit Protection	YES

Enclosure

IP Rating	52
Finishing	Powder Coated Dove Gray
Solar Panel Orientation	Fully Adjustable
Solar Degrees Adjustment	Adjustable from 15° - 37° Degrees
Weight	Of Complete Unit 30kg
Dimension	1480mmx670mmx500mm
Maximum Pole Diameter	101mm

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Enclosure

Fixing on Pole	Slide over collars
Fixing on Pole	6 x 12mm Bolts (4 x Collar below Battery 2 x Arm)
Recommended Mounting Hight	6—9 Meters
Internally hosted controller	Controller loose Item serviceable
Weight	Of Complete Unit 20kg

LED USED

Manufacturer	LUMILEDS—V2
Quantity	4 x LED Light Source made up out of (12 x LED's)
Nominal CCT/Colour	5650K Cool White
Typical CRI	70
Typical Luminous Flux(lm) @350mA Forward Current +_1W	159lm per Watt
Cooling Solid Aluminium 12mm Block	Machined Profile
Lens Type Used	Combination of Spots and Wide Lenses

Battery

Manufacturer	Ritar
Capacity	100Ah
Weight	10.5Kg
Type	Lithium Iron Phosphate
Cycle Life in Relation to Depth of Discharge	>1500 @ (0.2C Charge / 0.2 Discharge
Nominal Voltage	12.8V
Max Voltage	14.6V +_ 1.0V
Min Voltage	10V +_ 1.0V
Dimensions	230x127x191(mm)

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Solar Panel

General Characteristics

Cell	Polycrystalline solar cell 156 x 156mm
Number of Cells (Connections)	36(4x9)
Panel Dimensions	1480 x 670 x 35mm
Weight	11.6 kg
Connectors and Cables	Connectors and 1m Cables

Thermal Conditions

Normal Operating Cell Temperature 800W/m^2 Irradiance,20°C,AM=1.5	48°C+_2°C
Power Temperature Coefficient	-0.5%/K
Current Temperature Coefficient	0.035%/K
Voltage Temperature Coefficient	-0.37 MV/K

Limits

Operating Temperature	-40°C to 85°C
Maximum System Voltage	36V

Electrical Performance at STC

Maximum Power	300Wp
Power Tolerance	0/+5Wp
Maximum Power Voltage	18V
Maximum Power Current	8.05A
Open Circuit Voltage	22.2V
Short Circuit Votage	6.72A

Standard Test Conditions 1000W/m^2 irradiance,25°C and AM = 1.5

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Light Distribution

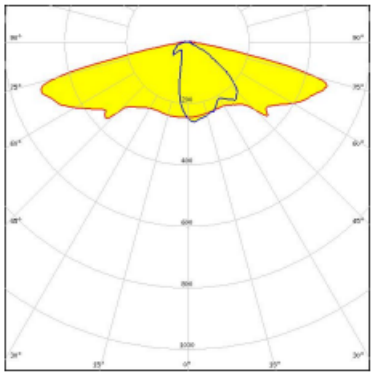
Type II/III (long) beam for very wide pole to pole distances. Ideal for pedestrian walkways and residential road lighting. (EN13201 P-classes)

LUMILEDS

LED	LUXEON V2
FWHM	Asymmetric
Efficiency	94 %
Peak intensity	0.7 cd/lm
LEDs/each optic	1
Light colour	White

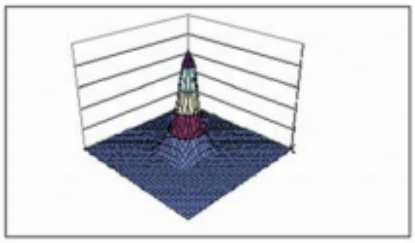
Required components:

SPOT LENS Design

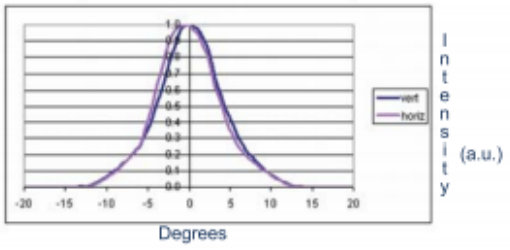


PHOTOMETRIC DATA FOR SPOT VERSION

3 D surface Plot based on simulation



Horizontal and vertical Scans (Lab Measurement)



IES files available at www.dialight.com

For photometric data on other models, please contact factory

ORDERING INFORMATION

BASE LENSES		
Dialight P/N	**Description**	**Degree***
OPC1-1-SPOT	Spot Base Module for LUXEON Rebel	5°
OPC1-1-SDIF	Diffused Base Module for LUXEON Rebel	7°
OPC1-1-MDIF	Medium Diffused Base Module for LUXEON Rebel	10°
OPC1-1-OVAL	Oval Base Module for LUXEON Rebel	8° X 25°
OPC1-1-WIDE	Wide Diffused Base Module For LUXEON Rebel	20°
*All angles refer to half divergence		