

50W-S1-D-G

50W-S1-D-G Solar Powered LED Street Light

1987.5 Lumens

Mounting Hight 4m

1 x LED Light Source

50Wp Polycrystalline Panel

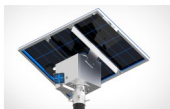
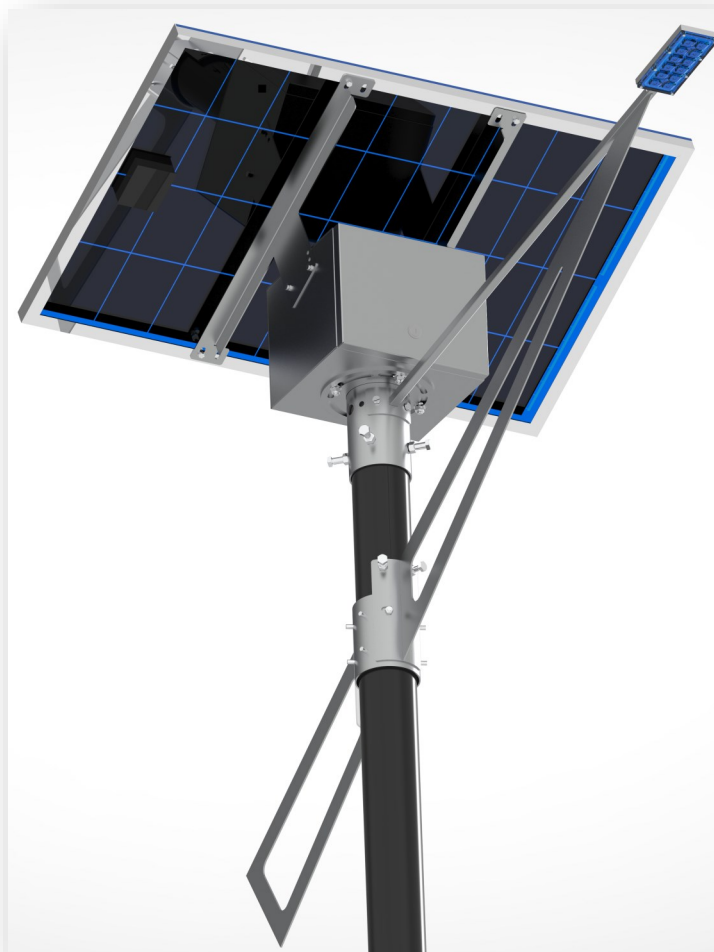
Mounting Pole Diameter 101mm

18Ah 12V Gel

12.5W Power Consumption

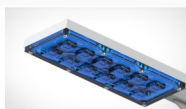
Street Light Lense

>1500 Battery Cycles



MECHANICAL

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



LED CONFIGURATION

LUMILEDS V2
1 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

Ritar
12.8V
18Ah (0.2C Discharge)
Weight 7kg
>1500 Cycles (0.2C Charge / 0.2C Discharge)

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Designed System Performance

Power Consumption per Hour	12.5W
Total Available Lumens	1987.5 Lumens
Operation Dusk to Dawn (Designed for 14 hours during Winter)	Dip Switch Selectable Factory Set Dusk to Dawn
Mapped Current output to LED	1041mA
Used amps during the night (10 Hours)	10.41A
18Ah	24Ah
Depth of discharge of battery per night	57%
Working Redundancy no Sun	8 Hours
Number of Cycles	>1500
Battery Replacement	>2 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 20kg
Dimension	1480mmx670mmx500mm
Maximum Pole Diameter	101mm

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Enclosure

Fixing on Pole

Fixing on Pole

Recommended Mounting Hight

Internally hosted controller

Weight

Slide over collars

6 x 12mm Bolts (4 x Collar below Battery 2 x Arm)

6—9 Meters

Controller loose Item serviceable

Of Complete Unit 20kg

LED USED

Manufacturer

Quantity

Nominal CCT/Colour

Typical CRI

Typical Luminous Flux(lm) @350mA Forward Current +_1W

Cooling Solid Aluminium 12mm Block

Lens Type Used

LUMILEDS—V2

1 x LED Light Source made up out of (12 x LED's)

5650K Cool White

70

159lm per Watt

Machined Profile

Combination of Spots and Wide Lenses

Battery

Manufacturer

Capacity

Weight

Type

Cycle Life in Relation to Depth of Discharge

Nominal Voltage

Max Voltage

Min Voltage

Dimensions

Ritar

18Ah (0.2C) Discharge

7kg

Lithium (Lithium Iron Phosphate)

>1500 @ (0.2C Charge / 0.2 Discharge

12.8V

14.6V +_ 1.0V

10V +_ 1.0V

181x76x170(mm)



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Solar Panel

General Characteristics

Cell	Polycrystalline solar cell 156 x 156mm
Number of Cells (Connections)	36(4x9)
Panel Dimensions	1005 x 670 x 35mm
Weight	8.0 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	50Wp
Power Tolerance	0/+5Wp
Maximum Power Voltage	18V
Maximum Power Current	5.56A
Open Circuit Voltage	22.2V
Short Circuit Current	6.06A

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

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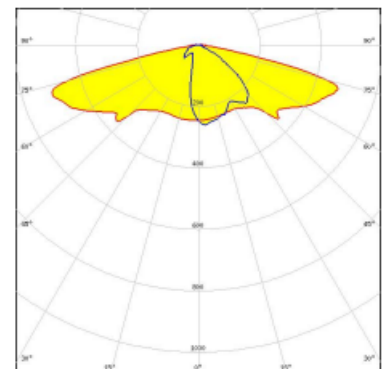
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Light Distribution

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



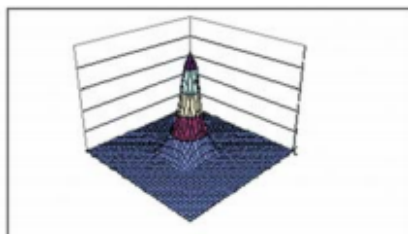
LED LUXEON V2
FWHM Asymmetric
Efficiency 94 %
Peak intensity 0.7 cd/lm
LEDs/each optic 1
Light colour White
Required components:



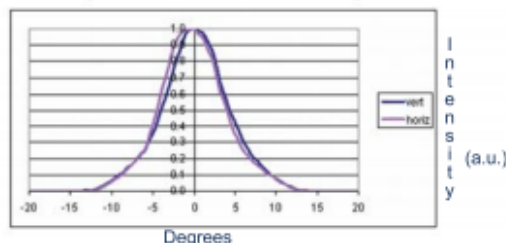
SPOT LENS Design

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		