

**PERLIGHT***Powering Possibilities*

## PLM-50M-14 SERIES

**Monocrystalline Silicon Solar Module**

TUV Certificate No.4478017406749-074



## PERLIGHT SOLAR

Founded in 2006, Perlight is a Global Solar Energy provider with a presence in more than 80 countries around the world. More than 2.3GW of Perlight modules have been used in residential, commercial and off-grid systems around the world.

Perlight's success has been built on proven product performance and reliability, state of the art technology and long term partnerships with key customers.

**18.6 - 22.3%**

CELL EFFICIENCY

**Performance**

High output and efficiency even under low light conditions

**3 YEARS**

PRODUCT WARRANTY

**Well - Experienced**

With over 10 years experience in manufacturing solar modules, Perlight has the experienced and advanced technology to produce modules

**0 - 3%**

POWER TOLERANCE

**Reliability**

Durable and reliable solar panels due to stringent quality control measures, testing and strict selection of raw materials and components. (TUV certified)

### POWER WARRANTY

**25 Years** 80% Power Output Warranty**12 Years** 90% Power Output Warranty**3 Years** Material & Workmanship Warranty**Design and Innovation**

Perlight is committed to innovation and constantly working working to provide the next breakthrough in solar technology: the new All Black panel is an example of this commitment.

# MONOCRYSTALLINE, 14-CELL SERIES

## ELECTRICAL PERFORMANCE

Module type		PLM-50M-14		
Power output		45	50	55
Power output tolerances	$\Delta P_{max}$ %	0 - 3		
Voltage at Pmax	$V_{mpp}$ V	7.36	7.59	7.7
Current at Pmax	$I_{mpp}$ A	6.12	6.59	7.15
Open-circuit voltage	$V_{oc}$ V	9.3	9.45	9.65
Short-circuit current	$I_{sc}$ A	6.35	6.91	7.31

STC: 1000W/M<sup>2</sup> irradiance, 25°C cell temperature, AM 1.5g spectrum according to EN60904-3.

## THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 ± 2
Temperature coefficient of Pmax	$\beta_{P_{max}}$	%/°C	-0.45
Temperature coefficient of Voc	$\beta_{V_{oc}}$	%/°C	-0.34
Temperature coefficient of Isc	$\alpha_{I_{sc}}$	%/°C	0.06
Temperature coefficient of Vmpp	$\beta_{V_{mpp}}$	%/°C	-0.40

## OPERATING CONDITIONS

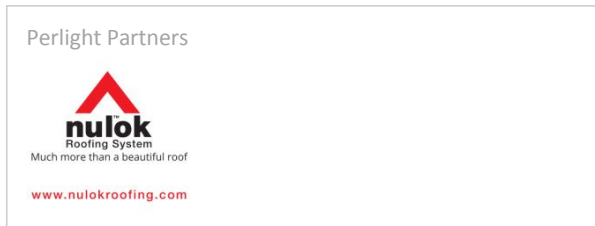
Max. System voltage	1000V <sub>DC</sub>
Limiting reverse current	15A
Operating temperature range	-40°C to 85°C
Max. Static load front (e.g., snow)	5400Pa
Max. Static load back (e.g., wind)	2400Pa
Max. Hailstone impact (diameter / velocity)	25mm/23m/s

## MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	Low-iron tempered glass / 3.2mm
Backsheet (color)	Black
Cell (quantity / material / dimensions)	14 / monocrystalline silicon / 156x156mm
Frame (material / color)	Non
Junction box (protection degree)	≥ IP67
Cables	900mm / 4mm <sup>2</sup> / IP67
Plug connectors	Zhejiang Jiaming Tianheyuan Photovoltaic Co., Ltd PV-JM601; Rated voltage=1000VDC; Rated current=16A; IP67
Module Dimensions (L / W / H)	1200mm x 400mm x 5.1mm
Module Weight	4.5kg

## PACKING DETAILS

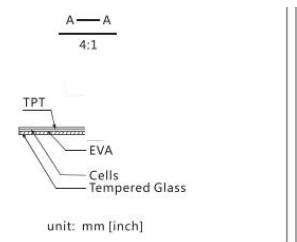
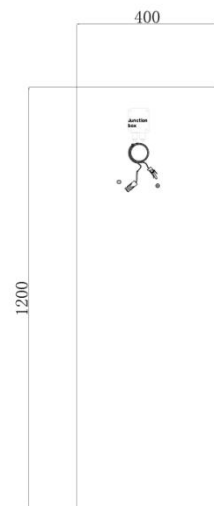
Container	20'GP	40'GP
Pieces per wooden case	38	38
Wooden cases per container	24	54
Pieces per container	912	2052



## QUALIFICATIONS & CERTIFICATIONS



## Module Diagram:



## Electrical Curves:

