



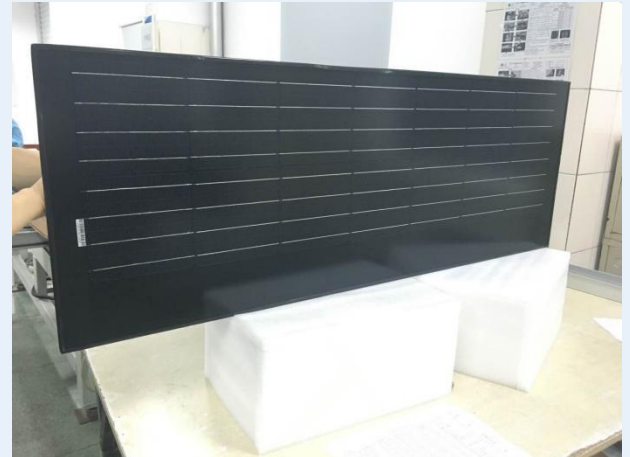
PERLIGHT

Powering Possibilities

PLM-50M-14 SERIES

Monocrystalline Silicon Solar Module

TUV Certificate No.4478017406749-003



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



Versatility

Salt mist corrosion tested, perfect for harsh climatic conditions

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. PID free (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	P_{max}	W	45	50	55
Power output tolerances	ΔP_{max}	%	0 - 3		
Voltage at Pmax	V_{mpp}	V	7.36	7.591	7.7
Current at Pmax	I_{mpp}	A	6.12	6.59	7.15
Open-circuit voltage	V_{oc}	V	9.3	9.451	9.651
Short-circuit current	I_{sc}	A	6.35	6.91	7.31

STC: 1000W/M² 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	β	%/°C	-0.45	
Temperature coefficient of Voc	β_{Voc}	%/°C	-0.34	
Temperature coefficient of Isc	α_{Isc}	%/°C	0.06	
Temperature coefficient of Vmpp	β_{Vmpp}	%/°C	-0.40	

OPERATING CONDITIONS

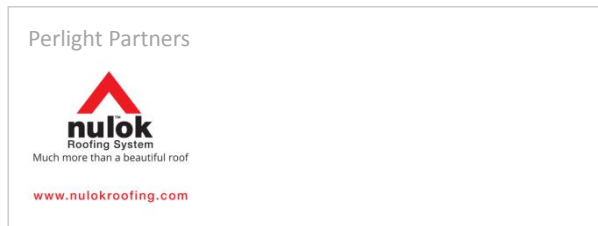
Max. System voltage	1000V _{DC}
Limiting reverse current	15A
Operating temperature range	-40°C to 85°C
Max. Static load front (e.g., snow)	5400Pa
Max. Static load back (e.g., wind)	2400Pa
Max. Hailstone impact (diameter / velocity)	25mm/23m/s

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)	≥ IP65
Cables & Plug connectors	900mm / 4mm ² & MC4 compatible / 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

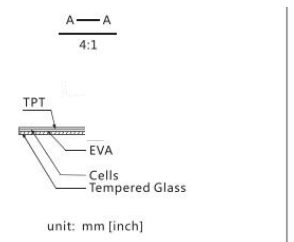
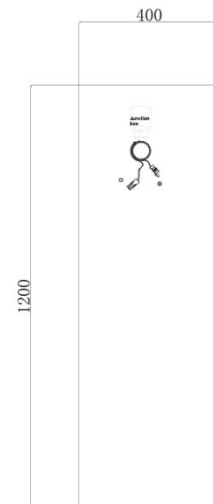


QUALIFICATIONS & CERTIFICATIONS

IEC 61215, IEC 61730, CE, IEC 62804 (PID Free), UL 1703, JET, PV CYCLE, IEC/EN 61701, IEC 62716



Module Diagram:



Electrical Curves:

