



PERLIGHT SOLAR
Powering Possibilities

PERLIGHT SOLAR CO.,LTD.

www.perlight.com

**N-type Half-cell
Bifacial Module**

PLM-590DH8N-144 SERIES



Bifacial Cell

- Extra energy generated from the backside of the cell depending on albedo



Fire Rating

- Class A



Pfas Free

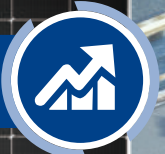
- Product free from perfluoroalkyl and polyfluoroalkyl substances



Sustainable Product

- High percentage of recyclable materials

**High Power Output
Low LCOE**



**Maximum Power
590W+**



15

YEAR
Materials
Warranty

30

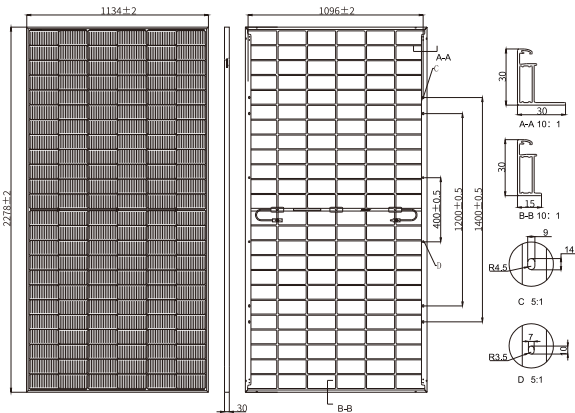
YEAR
Power
Warranty

- 1% First year degradation
- 0.4% Annual degradation
- 87.4% Power in year 30





Drawings (Unit: mm)



Mechanical Parameters

Cells	N Type Monocrystalline Cell
Cell Orientation	144[6X24]
Dimension	2278X1134x30mm
Weight	32.7kg
Front Glass	2.0mm high transmittance, 2mm anti-reflective surface tempered solar glass
Rear Glass	2.0mm semi-tempered glass
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Output Cable	4.0mm ²
Cable Length	+400mm,-200mm,length can be customized
Wind / Snow Load	2400Pa/5400Pa
Packaging	36pcs per pallet, 720pcs per 40'HC

Electrical Characteristics (STC)

Maximum Power: Pmax [W]	580	585	590	595	600
Open Circuit Voltage: Voc [V]	52.30	52.50	52.70	53.20	53.40
Short Circuit Current: Isc [A]	13.85	13.90	13.95	14.15	14.20
Voltage at Maximum Power: Vmp [V]	43.93	44.10	44.27	44.41	44.55
Current at Maximum Power: Imp [A]	13.21	13.27	13.33	13.40	13.47
Module Efficiency: η [%]	22.45	22.64	22.83	23.03	23.22

Electrical Characteristics (NMOT)

Maximum Power: Pmax [W]	436.2	439.9	443.7	447.4	451.2
Open Circuit Voltage: Voc [V]	49.69	49.88	50.07	50.54	50.73
Short Circuit Current: Isc [A]	11.18	11.22	11.26	11.42	11.46
Voltage at Maximum Power: Vmp [V]	40.89	41.08	41.24	41.35	41.48
Current at Maximum Power: Imp [A]	10.67	10.71	10.76	10.82	10.88

*STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5, Measuring Tolerance: ±3%
*NMOT: Irradiance 800W/m², Ambient Temperature 20°C, Air Mass 1.5, Wind Speed 1m/s

Electrical Properties (BSTC*) Bifacial gain > 10%

Power Output [Wp]	640.5	646.1	651.6	656.8	662.5
Voltage Mpp-Vmpp [V]	43.93	44.10	44.27	44.41	44.55
Current Mpp-Imp [A]	14.58	14.65	14.72	14.79	14.87
Voltage Open Circuit-Voc [V]	52.30	52.50	52.70	53.20	53.40
Short Circuit Current-Isc [A]	15.29	15.34	15.40	15.62	15.68
Module Efficiency [%]	24.79	25.01	25.22	25.42	25.64

*BSTC: Front side irradiance 1000W/m², back side reflection irradiation 135W/m², AM=1.5, ambient temperature 25°C
*Bifaciality=Pmax, rear/Rated Pmax, front

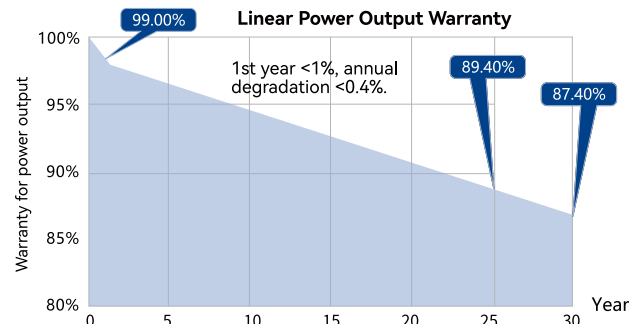
Temperature Parameters

Temperature Coefficient (Pmax)	-0.30%/°C
Temperature Coefficient (Voc)	-0.25%/°C
Temperature Coefficient (Isc)	+0.046%/°C
NMOT	45±2°C

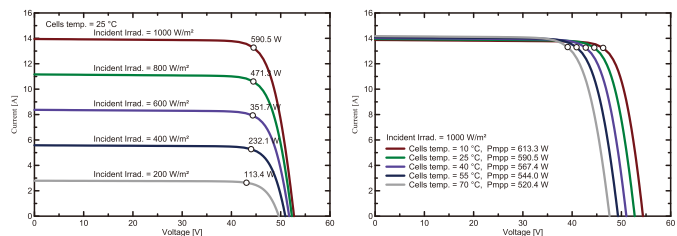
Maximum Ratings

Operational Temperature	-40°C ~ +85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	±3%
Maximum Bifaciality	80±5%

Warranty



I-V Curve



Certifications

Quality Management System and Product Certification

ISO 9001:2015 / quality management system
ISO 14001:2015 / environmental management system
ISO 45001:2018 / occupation health safety management system
IEC 61215/61730



More Than 40 Years Manufacturing
Experience Of Baolite Group Since 1982

