PERLIGHT SOLAR
Powering Possibilities

PERLIGHT BLACK GRID 500W

PLM-500DH8N-120 SERIES

N-type TOPCon Bifacial Dual Glass

25.52% Efficiency BSTC

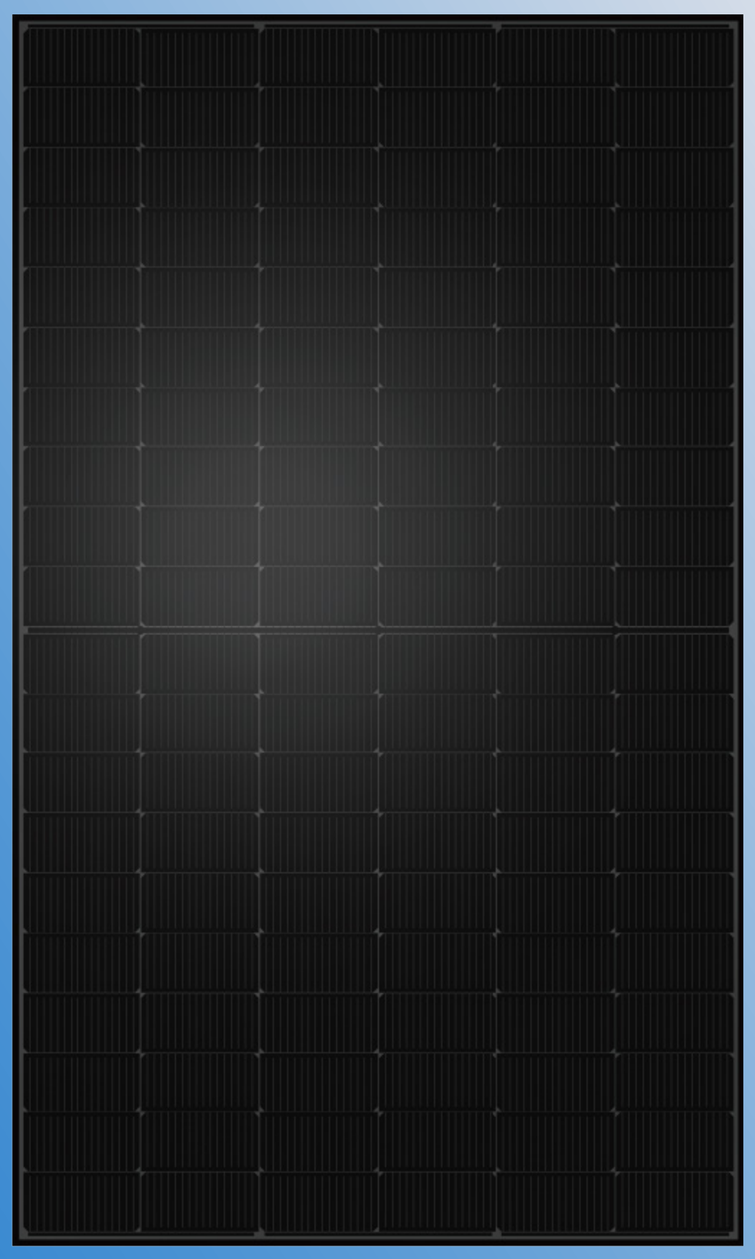
500W Power

30-YEAR Warranty

Built for 30 Years

Smarter 500W Design

Advanced N-Type Technology



MODULE FEATURES

Sustainable Manufacturing
Produced with reduced environmental impact and long-term lifecycle responsibility.

Better Temperature Coefficient
More consistent performance in summer heat and real-world conditions.

Outstanding Low-Light Performance
Higher yield in cloudy or low irradiance conditions.

ETHICAL MANUFACTURING STANDARDS

EcoVadis Silver: Top 15%
Recognised among the top 15% of manufacturers globally for sustainability, ethics and supply chain governance.

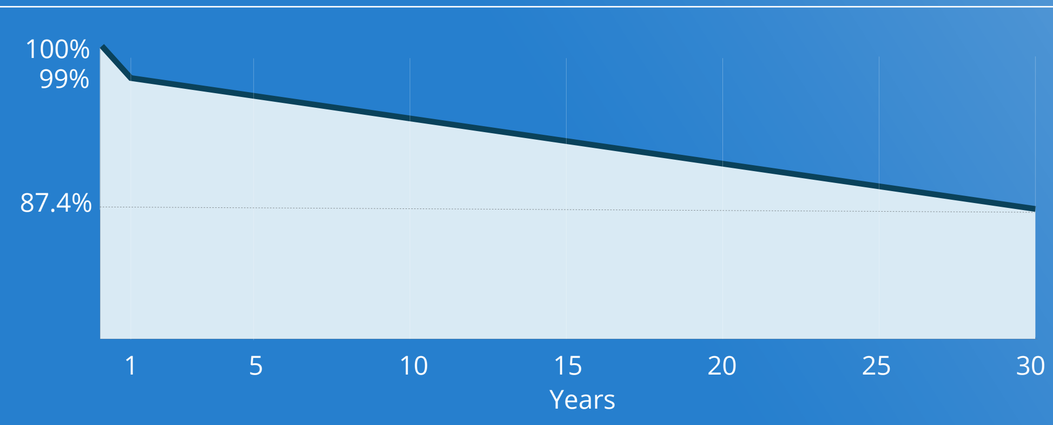
SA8000 Certification
Independently audited social accountability standards across production facilities.

Sedex Member
Full transparency and responsible supply chain practices you can stand behind.

QUALITY MANAGEMENT SYSTEM AND PRODUCT CERTIFICATON

IEC61215/61730, IEC62804(PID), IEC61701 (Salt),
IEC62716 (Ammonia), IEC60068-2-68 (Sand)
ISO 9001:2015 / quality management system
ISO 14001:2015 / environmental management system
ISO 45001:2018 / occupation health safety management system
ISO 50001:2011 / energy management system
IEC TS 62941 - 2016 / PV industry quality management system

PERLIGHT'S LINEAR PERFORMANCE WARRANTY



EXTENDED POWER OUTPUT WARRANTY

30 YEAR Limited Product Warranty

30 YEAR Performance Warranty

PERLIGHT SOLAR
Powering Possibilities

PLM-500DH8N-120 SERIES

ELECTRICAL CHARACTERISTICS	STC	BSTC	NMOT
Maximum Power - Pm (W)	500	552.2	378.5
Open Circuit Voltage - Voc (V)	44.22	44.22	42.04
Short Circuit Current - Isc (A)	13.94	15.38	10.97
Maximum Power Voltage - Vm (V)	37.14	37.14	35.77
Maximum Power Current - Im (A)	13.48	14.87	10.59
Module Efficiency - η (%)	23.10	25.52	

Note: 1. Standard Test Conditions [STC]: irradiance 1000 W/m²; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Nominal Module Operating Temperature (NMOT): Irradiance 800 W/m²; wind speed 1 m/s, ambient temperature 20°C;
3. BSTC: Front side irradiance 1000W/m², back side reflection irradiance 135W/m², AM=1.5, ambient Temperature 25°C
4. Tolerance of Pm: -/+3%, Measuring uncertainty of power: -/+3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: -/+3%

MECHANICAL PARAMETERS

Dimensions	1908 x 1134 x 30 mm
Weight	27.2kg ±3%
Front Glass	2.0 mm High Transmittance, AR Tempered Glass
Rear Glass	Black Grid 2.0mm Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Cells	N-Type Monocrystalline Cell
Number of Cells	120 [2 x (10x6)]
Junction Box	IP 68 (3 Diodes)
Cable	TUV 1x4.0mm², (+):1200mm/(-):1200mm or Customized Length
Connector	Staubli MC4 EVO 2A

TEMPERATURE PARAMETERS

NOCT	45°C (±2°C)
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	+0.046%/°C
Temperature Coefficient of Pm	-0.30%/°C

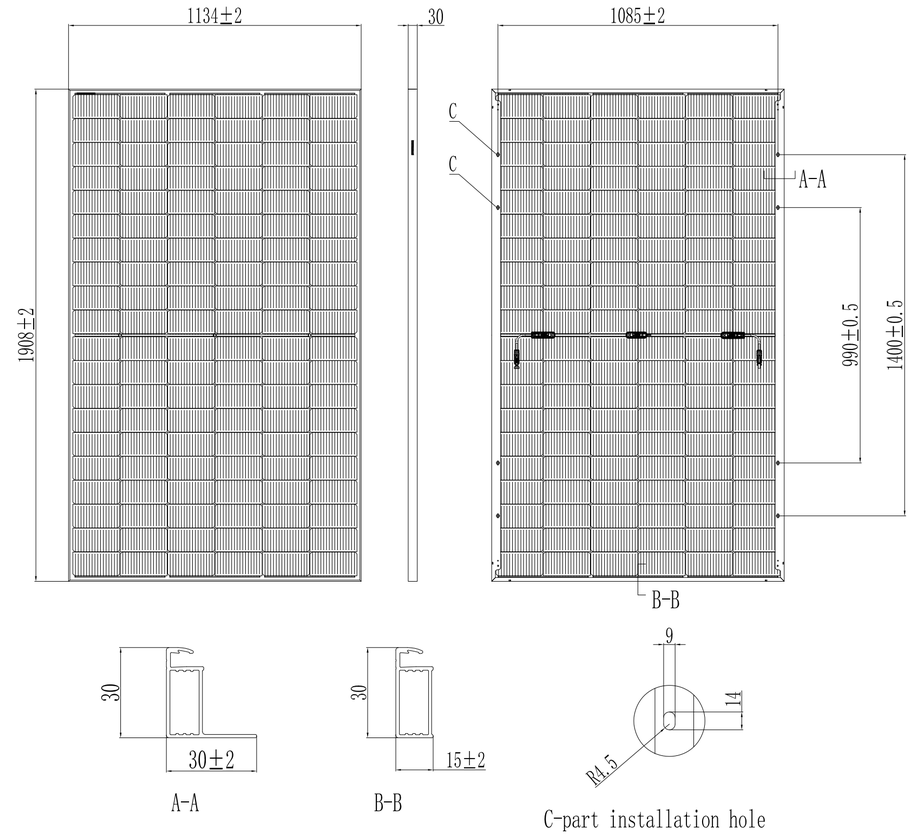
MAXIMUM RATINGS

Maximum System Voltage [V]	1500 DC (IEC)
Limiting Reverse Current [A]	30
Maximum Surface Load Capacity [Pa]	Front 5400 / Back 2400
Temperature Range [°C]	-40 ~ +85
Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m/s
Power Tolerance	±3%

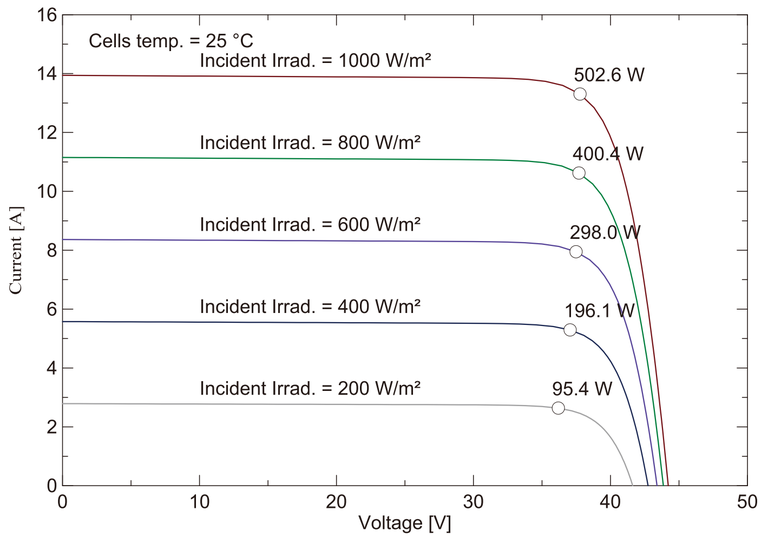
CLAMPING ZONES

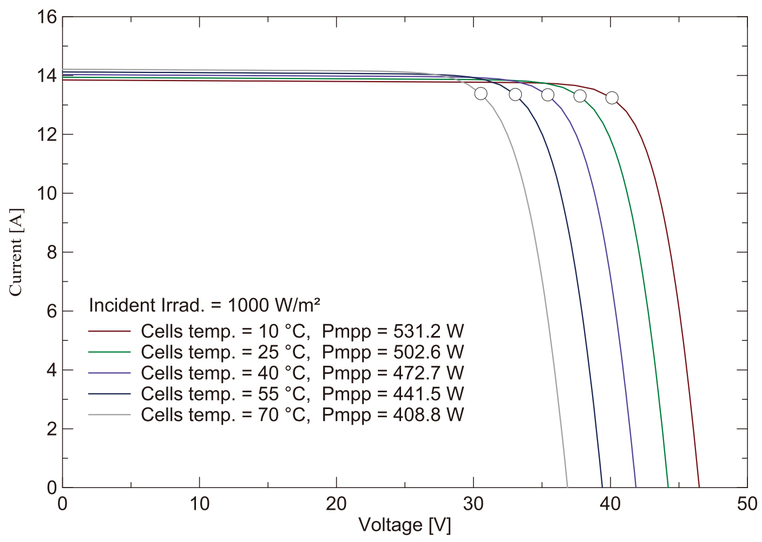
Long Side	420mm to 520mm from edge
Short Side	150mm to 250mm from edge

DRAWINGS



I-V CURVE





PACKAGING CONFIGURATION

Packaging Type	40'HQ
Piece/Pallet	37
Piece/ Container	888

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