

Multi Busbar Monocrystalline Half Cell PV Module

ZP5MxxxH60(H)

Power Output	Power Tolerance	Maximum Efficiency
580-615W	0~+5W	21.7%



Assembled with multi-busbar cells, reduce shading effect on the energy generation, lower risk of hot spot



Pass the test for weather resistance in harsh environments (salt mist, ammonia corrosion and sand)



Excellent encapsulating materials and strict production process to ensure highly resistance against PID (Potential Induced Degradation) of PV module.



Large size with high power solar panel to reduce the.



Series and parallel design, reduce the series resistance RS of module, reduce the loss of internal electrical performance, and improve the power generation capacity of whole system.



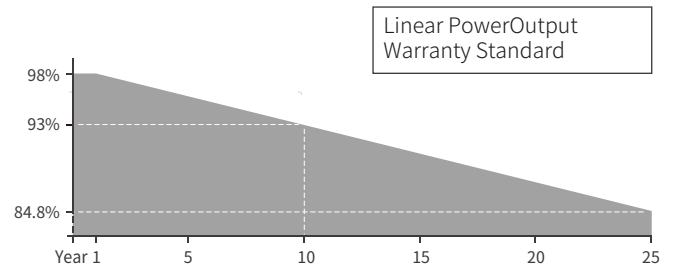
Cutting solar cell technology, which significantly reduces string current and module damage, it is good choice for projects in high temperature areas.

SourceHanSansCN-Medium



Offers Long-term Quality Assurance

- 12 years Product Warranty
- 25 years Linear Power Output Warranty
- The attenuation of the power output in the first year $\leq 2\%$, the annual average attenuation after the first year $\leq 0.55\%$



* More details please read the guarantee letter.

Product Certification & Management Certification

- IEC61215/IEC61730/IEC61701/IEC62716
- ISO 9001:Quality Management System
- ISO 14001:Environment Management System
- ISO 45001:Occupation Health Safety Management System



ZP5MxxxH60(H)

Electrical performance parameters (STC)

Power Output	Pmax(W)	580	585	590	595	600	605	610	615
Rated Power Maximum Voltage	Vmp(V)	33.56	33.76	33.96	34.16	34.36	34.56	34.76	34.96
Rated Power Maximum Current	Imp(A)	17.28	17.33	17.37	17.41	17.46	17.50	17.55	17.59
Open Circuit Voltage	Voc(V)	40.65	40.85	41.05	41.25	41.45	41.65	41.85	42.05
Short Circuit Current	Isc(A)	18.34	18.40	18.45	18.50	18.55	18.61	18.66	18.71
Module Efficiency	(%)	20.5	20.7	20.8	21.0	21.2	21.4	21.6	21.7
Power Tolerance	(W)	0~+5W							

* STC : 1000W/m2 irradiance, 25° C module temperature, AM1.5 spectrum.

Electrical performance parameters (NMOT)

Power output	Pmax (W)	438.1	442.6	446.4	450.2	454.0	457.7	461.5	465.3
Rated Power Maximum Voltage	Vmp (V)	31.26	31.50	31.69	31.88	32.06	32.25	32.43	32.62
Rated Power Maximum Current	Imp (A)	14.02	14.05	14.09	14.12	14.16	14.19	14.23	14.27
Open Circuit Voltage	Voc (V)	38.30	38.48	38.67	38.86	39.05	39.24	39.43	39.62
Short Circuit Current	Isc (A)	14.79	14.83	14.87	14.92	14.96	15.00	15.04	15.09

* NMOT:800W/m2 irradiance, 20°C module temperature, 1m/s wind speed.

Structure Features

Solar Cell	MONO
Solar Cell Array	120 pcs(6x20)
Module Dimension	2172×1303×35mm
Weight	30.9 kg
Glass	3.2 mm (0.13 inches) highly transparent anti-reflection coating tempered glass
Back sheet	White
Frame	Anodized Aluminum Alloy
Junction Box	IP68 rated
Cable	4mm ² L=300 mm、PV cable
Diode Quantity	3
Wind Pressure/Snow Pressure	2400pa / 5400pa
Connector	MC4 Compatible

* More details please read the installation manual.

Temperature Characteristics

Solar Cells Rated Working Temperature	44±2°C
Temperature Coefficient (Isc)	+0.07%/°C
Temperature Coefficient (Voc)	-0.36%/°C
Temperature Coefficient (Pmax)	-0.38%/°C

Maximum Ratings

Working Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Maximum Fuse Rated Current	30A

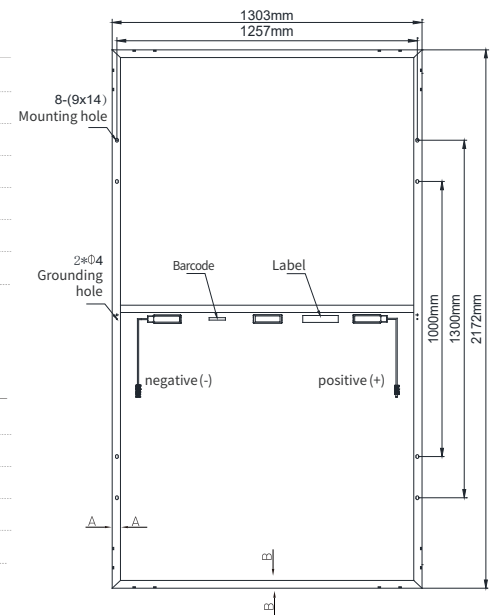
PACKAGING

Number of modules per pallet	31 pcs
17.5*2.8m Flatbed loading	775 pcs
13.0*2.35m Flatbed loading	527 pcs
40HQ Standard container	527 pcs

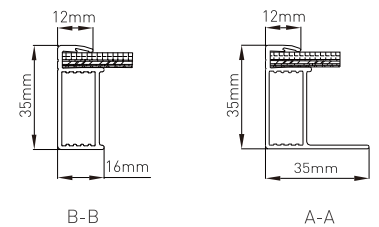
Optional

Connector	<input type="checkbox"/> Original MC4
Cable length	<input type="checkbox"/> 1000mm <input type="checkbox"/> 900mm
Frame	<input type="checkbox"/> Black
Solar Module Dimension	<input type="checkbox"/> 2172x1303x40mm
Back sheet color	<input type="checkbox"/> Black <input type="checkbox"/> Transparency

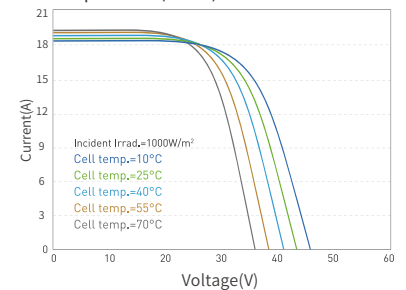
Module Dimension



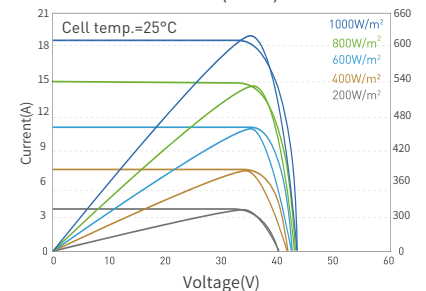
Back view



I-V curves of module under different temperature(605w)



I-V curves/P-V curves of module under different irradiation(605w)



Power measurement error +/-3%