



ESP 290W-320W



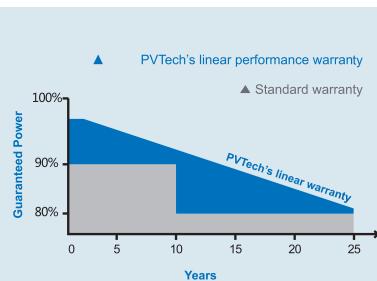
High Efficiency
Polycrystalline Solar Module



100% EL test before and after lamination, and finished products EL test, providing higher quality assurance.



Pass the Salt-mist Corrosion Test, Fire test, Ammonia Resistance Test, Potential Induced Degradation(PID) Test and Carbon Footprint assessment in TUV.



For a period of twenty-five (25) years commencing on the Warranty Start Date, loss of power output of the nominal power output measured at Standard Test Conditions (STC) for the Product(s) shall not exceed:

1. For Polycrystalline Products: 2% in the first year, thereafter 0.67% per year, ending with 82% in the 25th year after the Warranty Start Date.
2. For Monocrystalline Products: 3% in the first year, thereafter 0.67% per year, ending with 81% in the 25th year after the Warranty Start Date.

The Warranty Start Date shall be defined as the date of the Bill of Lading date.

Version 8.0 2013



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Typical Electrical Characteristics

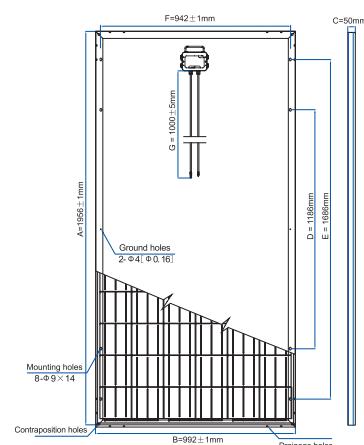
Solar cells:	Poly-Crystalline 156x156mm 72pcs. (6x12) -3 bus bars	
Max-power	290Wp	295Wp
Power Tolerance	0 to +6W	
Voltage at Pmax (Vmp)	36.5V	36.6V
Current at Pmax (Imp)	8.06A	8.17A
Open-Circuit Voltage (Voc)	44.8V	44.9V
Short-Circuit Current (Isc)	8.46A	8.67A
Max-System Voltage (VDC)	1000V(IEC), 600V(UL)	
Cell Efficiency	16.8%	17.0%
Module Efficiency	14.9%	15.2%
No. of Bypass Diodes (pcs.)	3	
Max. Series Fuse (A)	12A	
Temperature Coefficient of Pmax	-0.45%/°C	
Temperature Coefficient of Voc	-0.34%/°C	
Temperature Coefficient of Isc	0.05%/°C	
Nominal Operating Cell Temperature	45±2°C	

*STC Conditions (1000W/m²; 1.5 AM and 25°C Cell temperature)

Mechanical Characteristics

Cable type,Cross-sectional area and Length	Φ =4mm ² , L=1000±5mm
Type of Connector	Compatible type MC4
Dimension A×B×C	1956×992×50mm (77.01×39.06×1.97 inch)
Weight	23.2kg (51.0lb)
No. of Draining Holes In Frame	16
Construction	Glass: High Transmission, Low Iron, Tempered Glass 3.2mm Encapsulation: EVA Back side: White
Junction Box (protection degree)	IP 67
Frame	Clear anodized aluminum alloy type 6063T5 frame

Dimensions



► Caution: Read Safety And Installation Instructions Before Using This Product

Qualification Test Parameters

Dielectric Insulation Voltage	6000V DC max
Operating Temperature	-40°C to +85°C
Max load	5400Pa
Hailstone impact	25mm (1inch) at 23m/s (52mph)
Tire safety class	Class C

Packaging Configuration

Packaging Configuration	20pcs./box and 2pcs./box
Quantity of Big Box/Pallet	1box/pallet
Quantity of Small Box/Pallet	9 boxes/pallet

Loading Capacity 440pcs./40'HQ 190pcs./20'GP