



ESP 290W-320W



Top 10 of Most Competitive Chinese Public Listed Companies.
Top 10 of World's Biggest Glass Makers by PLIMSOLL.
CCTV Finance & Economics 50 Indexes Listed Company.
Top 500 of Asian Brand Assessment System.



We are a full member of PV Cycle Association. This association has established a voluntary take-back and recycling program for end-of-life solar modules in 25 years.



30 years manufacturing experience. A complete solar PV industrial chain, covering poly-silicon, ingot, wafer, solar glass, solar cell and solar module. Manufacturing with standard ISO 9001:2008&ISO 14001:2004 to ensure CSG's solar modules with excellent raw materials and exquisite process.



Utilizing green power of Three Gorges Dam in Yangzi river instead of coal, with the first closed-loop polysilicon plant, CSG devotes to making green energy by green energy.



Modules certified by TUV and ETL testing organization in the extreme conditions (temperature, load & impact) with good performance.



The good weak light performance (morning, evening and cloudy day) has been tested and approved by professional third-party.



Guarantee from 0 to +6W as power tolerance, customers can obtain 5.8% power more than conventional output.



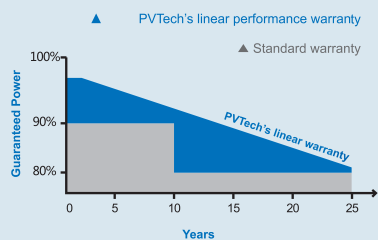
100% EL test before and after lamination, and finished products EL test, providing higher quality assurance.



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



High Efficiency
Polycrystalline Solar Module



- 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.

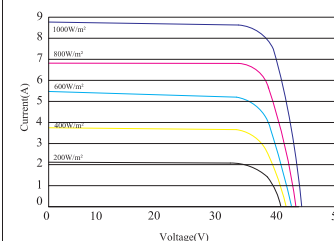
Version 8.0 2013



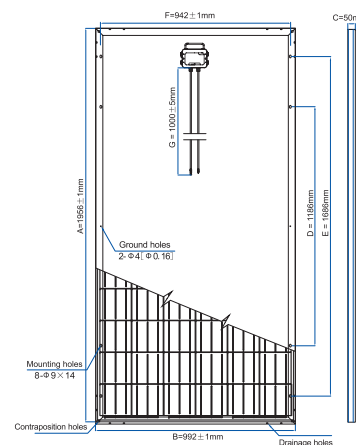
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I-V Curves

I-V Curves of PV module ESP 300W at Different light power



Dimensions



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

Typical Electrical Characteristics

Solar cells:	Poly-Crystalline 156x156mm 72pcs. (6x12)—3 bus bars					
Max-power	290Wp	295Wp	300Wp	305Wp	310Wp	320Wp
Power Tolerance	0 to +6W					
Voltage at Pmax (Vmp)	36.5V	36.6V	36.7V	36.8V	36.9V	37.1V
Current at Pmax (Imp)	7.95A	8.06A	8.17A	8.29A	8.40A	8.58A
Open-Circuit Voltage (Voc)	44.8V	44.9V	45.0V	45.1V	45.2V	45.5V
Short-Circuit Current (Isc)	8.46A	8.67A	8.79A	8.97A	9.09A	9.28A
Max-System Voltage (VDC)	1000V(IEC), 600V(UL)					
Cell Efficiency	16.8%	17.0%	17.3%	17.6%	17.9%	18.5%
Module Efficiency	14.9%	15.2%	15.5%	15.7%	16.0%	16.5%
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

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	1 boxes/pallet
Quantity of Small Box/Pallet	/	9 boxes/pallet
Loading Capacity	440pcs./40'HQ	190pcs./20'GP