

## PV PANELS POLY-CRYSTALLINE 320W 72 CELL

CSG 320W M2-72

### GENERAL FEATURES



In-house manufacturing of the complete PV chain including silicon materials, ingot, wafer, solar glass, solar cell and solar module. ISO90001 & ISO14001 certified factory, ensure excellent raw materials and production control.



Modules certified by TUV Rheinland (IEC61215, IEC61730 standards) in extreme conditions (temperature, load, impact) with good performance. Tests for solar modules including salt-mistcorrosion test, fire test, ammonia resistance test, PID test, sand abrasion test and carbon footprint assessment in TUV, successfully passed.



Good, weak light performance (morning, evening and cloudy day).



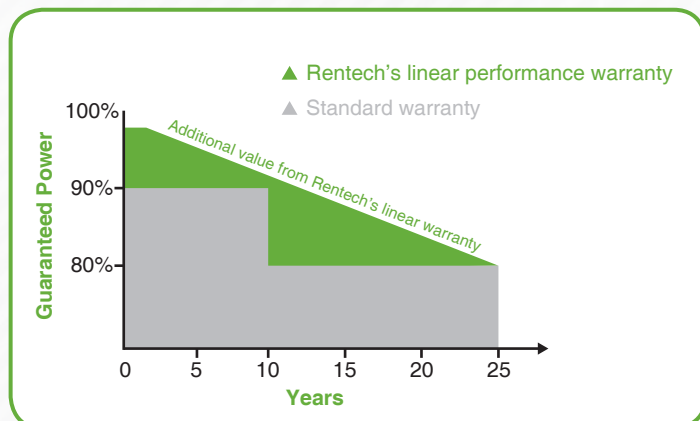
Guaranteed 0 to +6W power tolerance, ensuring more than conventional power output.



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



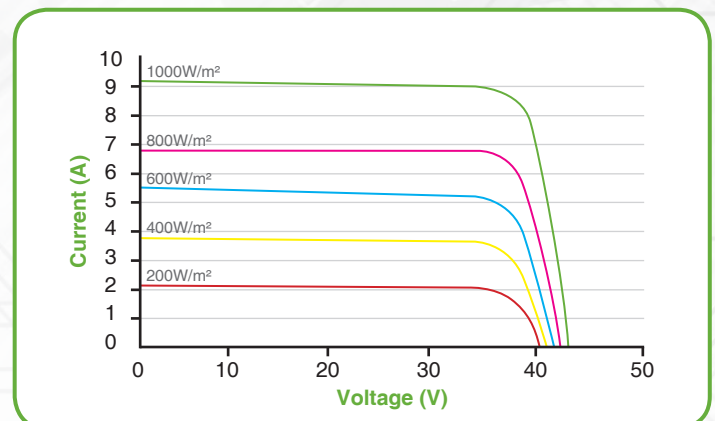
### Performance warranty



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:

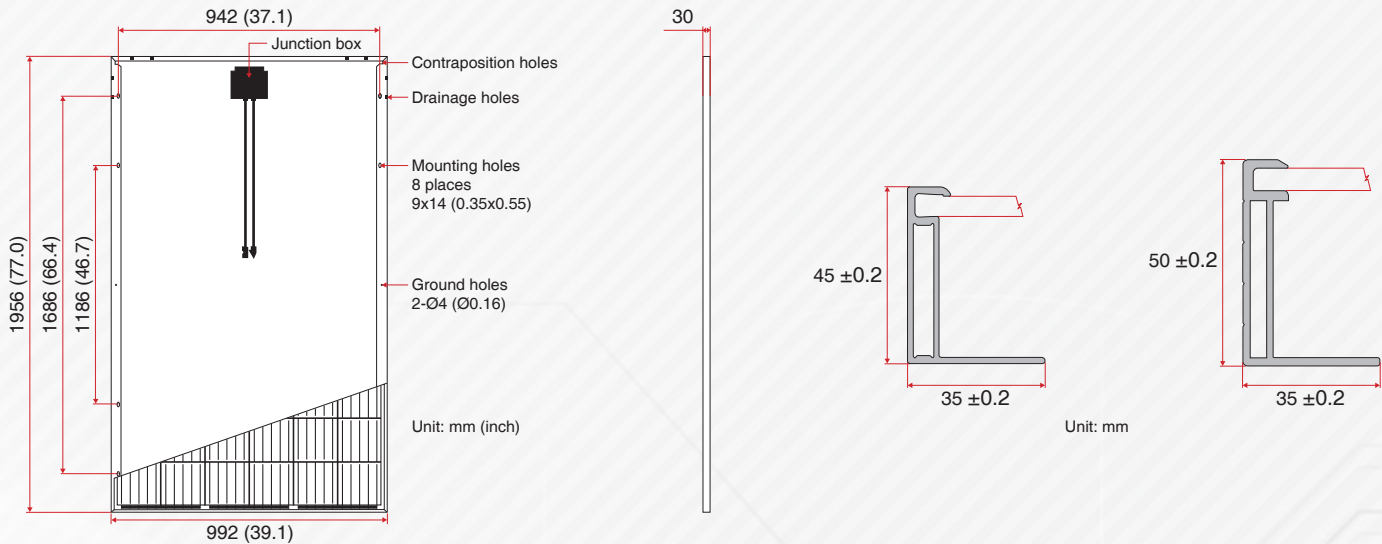
1. **For poly-crystalline products** - 2.5% in the first year, thereafter 0.7% per year, ending with 80.7% in the 25th year after the warranty start date
2. **For mono-crystalline products** - 3% in the first year, thereafter 0.708% per year, ending with 80.2% in the 25th year after the warranty start date

### I-V curves



I-V Curves of PV module 325W at different light power

## PRODUCT DIMENSIONS



## PRODUCT SPECIFICATIONS

MODEL		320W
TYPICAL ELECTRICAL CHARACTERISTICS		
Solar cells	Poly-Crystalline 156.75 x 156.75mm   72 pcs (6x12) - 5 bus bars	
MAX power	320W	
Power tolerance	0 to +6W	
Voltage at Pmax (Vmp)	37.1	
Current at Pmax (Imp)	8.63	
Open-circuit voltage (Voc)	45.4	
Short-circuit current (Isc)	9.33	
MAX system voltage (VDC)	1000V (IEC), 600V (UL)	
Cell efficiency	18.5	
Module effeciency	16.5	
No. of bypass diodes (pcs.)	3	
MAX series fuse (A)	15A	
Temperature coefficient of Pmax	-0.43% /°C	
Temperature coefficient of Voc	-0.32% /°C	
Temperature coefficient of Isc	0.04% /°C	
Nominal operating cell temperature	45 ±2°C	
MECHANICAL CHARACTERISTICS		
Cable type, diameter and length	Ø=4mm², L=1000 ±5mm	
Type of connector	Compatible type MC4	
Dimension A x B x C	1956*992*45 / 40mm	
Weight	21.5 / 20.8Kg	
No. of draining holes in frame	16	
Construction	Glass: High transmission, low iron, tempered glass 3.2mm Encapsulation: EVA Back side: White	
Junction box	Ip68 rated	
Frame	Clear anodised aluminium alloy type 6063T5 frame	
QUALIFICATION TEST PARAMETERS		
Dielectric insulation voltage	6000VDC max	
Operating temperature	-40°C ~ +85°C	
MAX load	5400Pa	
Hailstone impact	25mm (1 inch) at 23m/s (52mph)	
Fire rating	Class C	
PACKAGING CONFIGURATION 1956 x 992 x 40mm		
Packaging configuration	26 pcs/box and 2 pcs/box	
Loading capacity	616 pcs/40HQ   220 pcs/20GP	
PACKAGING CONFIGURATION 1956 x 992 x 45mm		
Packaging configuration	23 pcs/box and 2 pcs/box	
Loading capacity	550 pcs/40HQ   205 pcs/20GP	

\*STC conditions (1000W/m²; 1.5 AM and 25°C cell temperature)

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**AUTOX**