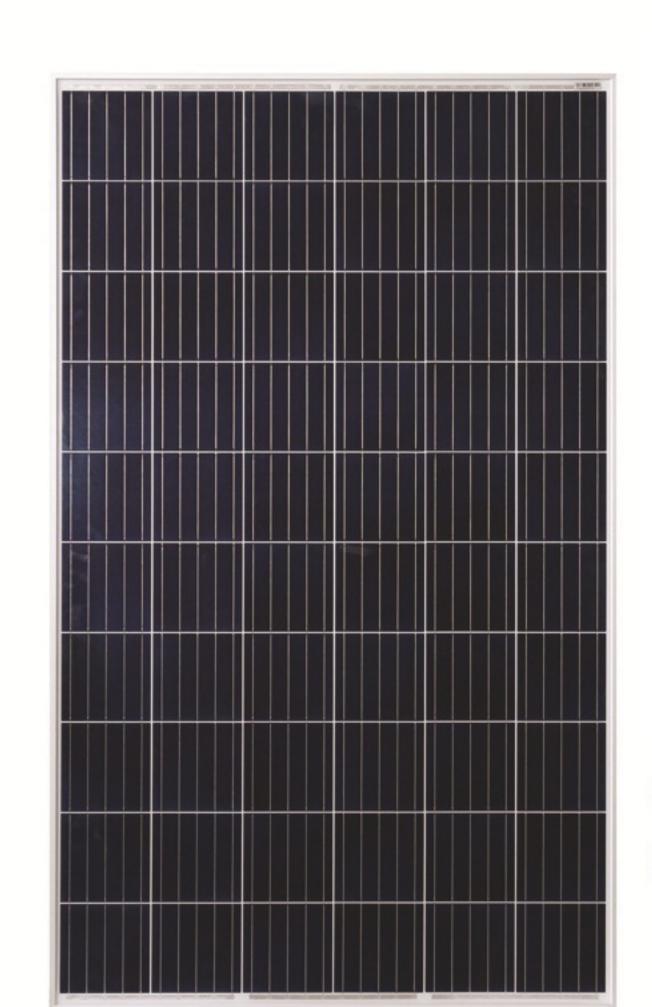
For Global Market



Photon Solar Energy-Germany Polycrystalline PV Module

- MS(250-280)P-60 Series
- ► High PID resist performance
- Steady power output

System voltage 1000V/1500V standard

280 265 270 275



► Reducing cell series resistance ▶ More power output

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ELECTRICAL SPECIFICATIONS						
STC rated output (Pmpp)*	250 Wp	260 Wp	265 Wp	270 Wp	275 Wp	280 Wp
PV Module size			1640*992*35 MM			
Standard sorted output			0/+5 Wp			
Warranted power output STC (Pnominal)	250Wp	260 Wp	265 Wp	270 Wp	275 Wp	280 Wp
Rated voltage (V _{mpp}) at STC	30.48 V	30.88 V	30.92 V	31.08 V	31.12 V	31.16 V
Rated current (Impp) at STC	8.21 A	8.43 A	8.58 A	8.70 A	8.85 A	8.99 A
Open circuit voltage (V₀c) at STC	37.47 V	37.72 V	37.87 V	38.00 V	38.45 V	38.85 V
Short circuit current (Isc) at STC	8.81A	8.95A	9.18 A	9.45 A	9.52 A	9.67 A
Module efficiency	15.4%	16.0%	16.3%	16.6%	16.9%	17.2%
Rated output (Pmpp) at NOCT	187.5 Wp	195.0 Wp	198.8 Wp	202.5 Wp	206.3 Wp	210.1 Wp
Rated voltage (V _{mpp}) at NOCT	27.73 V	27.94 V	27.98 V	28.12 V	28.15 V	28.17 V
Rated current (Impp) at NOCT	6.90 A	6.98 A	7.10 A	7.20 A	7.33 A	7.46 A
Open circuit voltage (Voc) at NOCT	34.24 V	34.46 V	34.60 V	34.71 V	35.13 V	35.16 V
Short circuit current (Isc) at NOCT	7.45 A	7.54 A	7.73 A	7.96 A	8.02 A	8.09 A
Temperature coefficient (Pmpp)		- 0.407%/K	Maximum syst	tem voltage (IEC)	1000	0Vpc / 1500Vpc
Temperature coefficient (Isc)		+0.049%/K	Number of dic	des	3	
Temperature coefficient (Impp)		- 0.000%/K	Maximum seri	es fuse rating	15 A	
Temperature coefficient (V _{mpp})		- 0.408%/K	Operating Ten	nperature	-40°	C to +85°C
Temperature coefficient (V₀c)		- 0.310%/K				
Normal operating cell temperature (NO	CT)	43±2°C				

* Measurement tolerance +/- 3%













IEC 60068-2-68 | IEC 62804







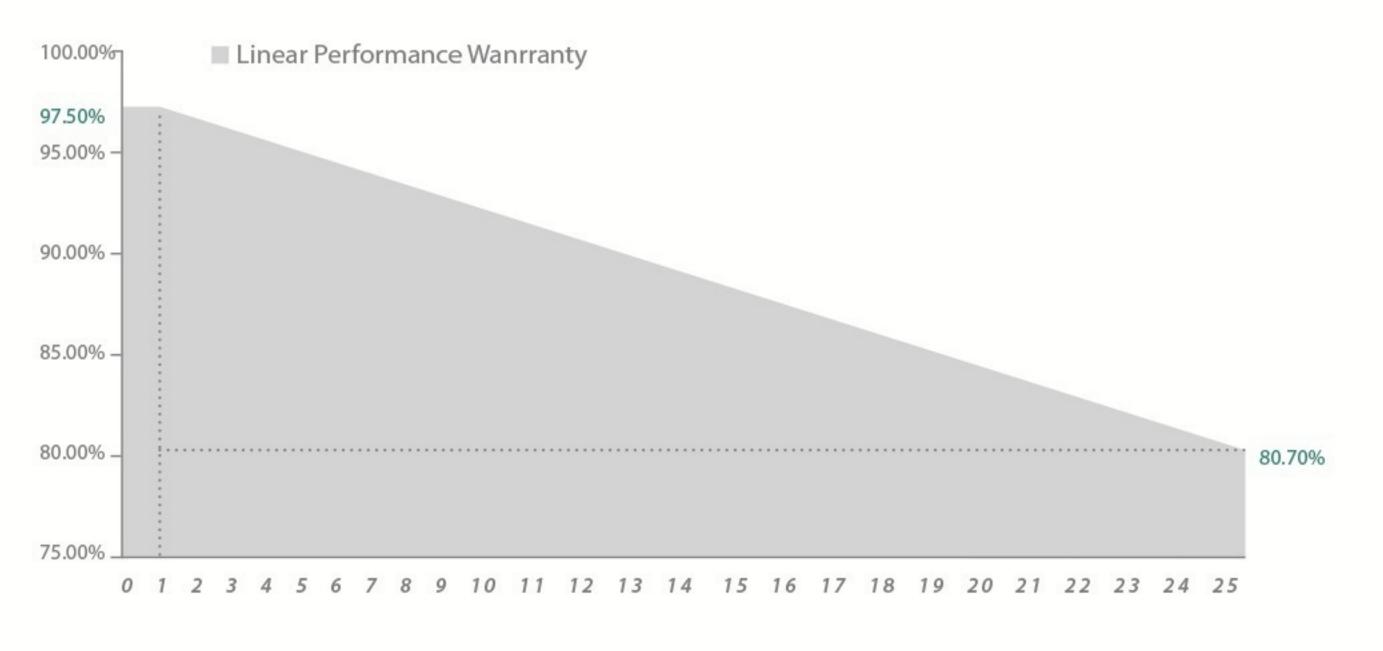




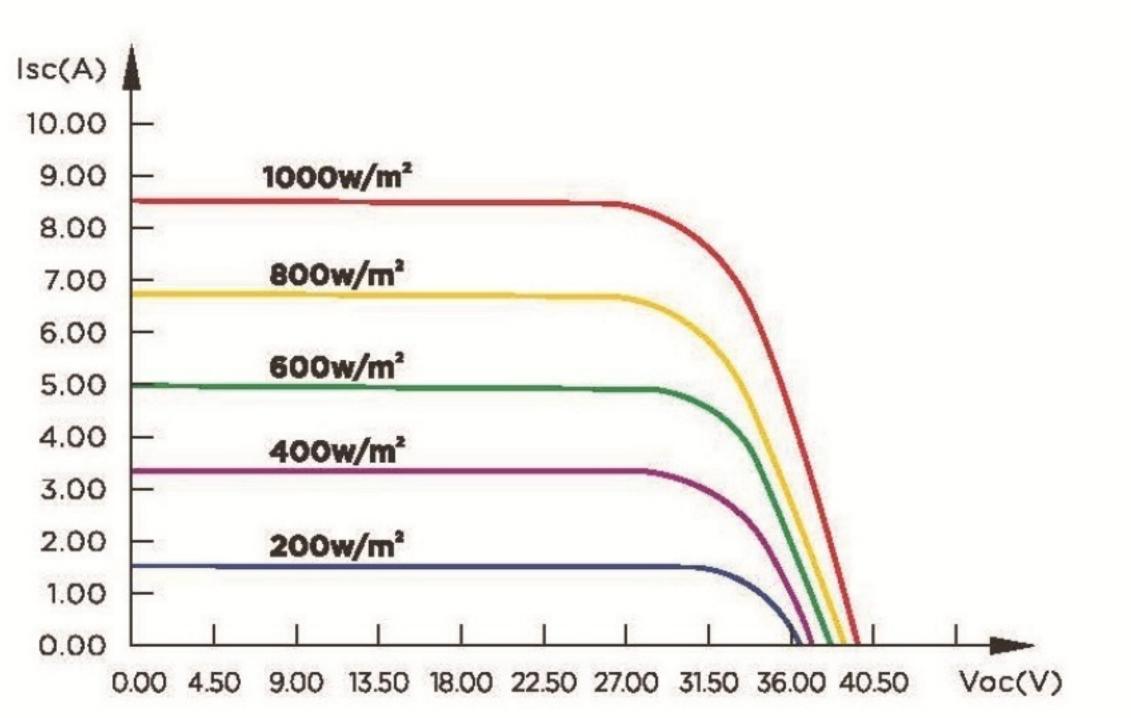
RELATED PARAMETERS	
Cell type	Polycrystalline
Number of cells / cell arrangement	60 / 6 x 10
Cells dimension	6"
Packing unit	30 modules
Weight of packing unit (for container)	557 kg / 1228 lbs

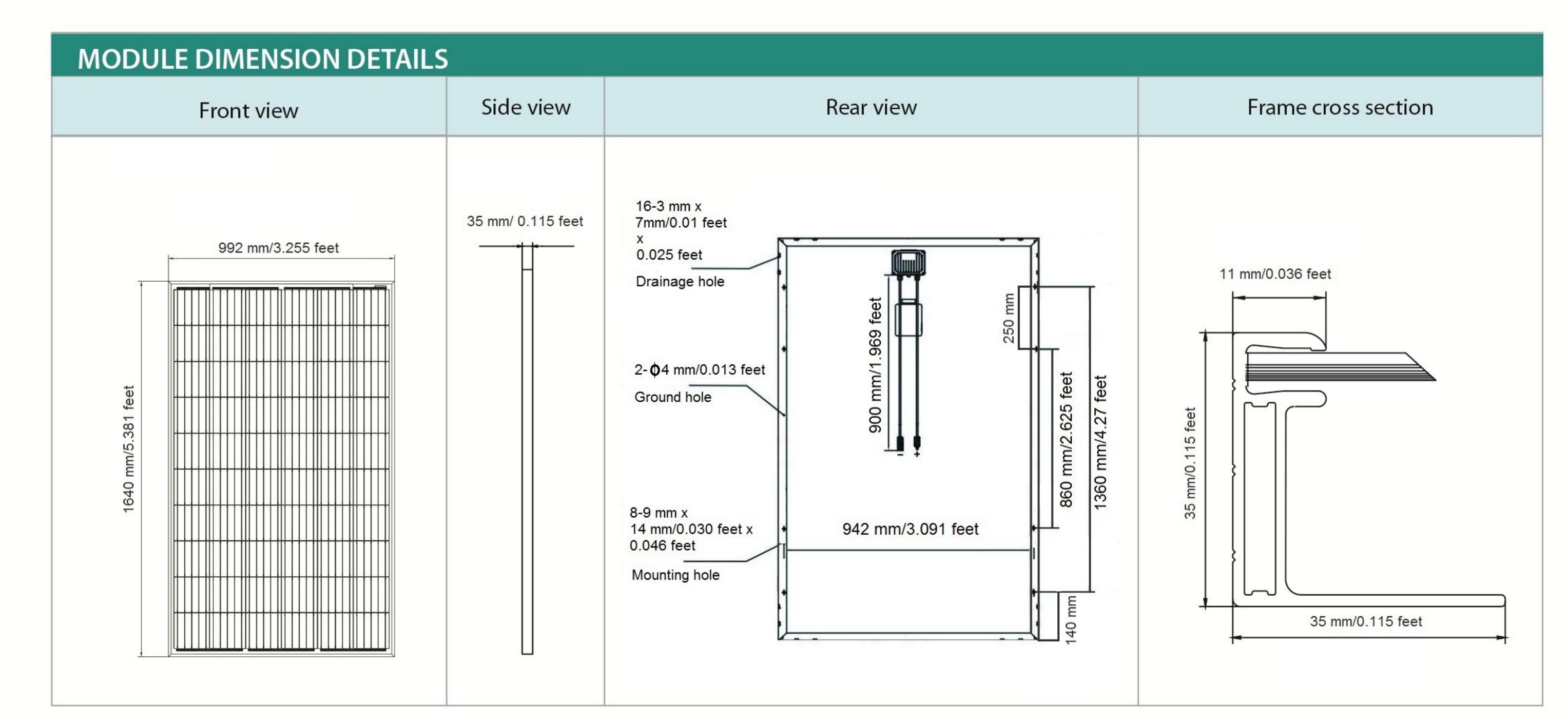
MECHANICAL SPECIFICATIONS			
Outer dimensions (L x W x H)	1640 x 992 x 35 mm 64.57 x 39.06 x 1.38 in		
Frame technology	Aluminum, silver anodized		
Module composition	Glass / EVA / Backsheet (white)		
Weight (module only)	18 kg / 39.68 lbs		
Front glass thickness	3.2 mm / 0.13 in		
Junction box IP rating	IP 65/67		
^① Cable length(IEC)	900mm/35.43 in		
Cable diameter (IEC)	12 AWG /4 mm ²		
² Maximum load capacity	5400 Pa		
Fire performance (IEC)	Class C		
Connector type (IEC)	MC4 compatible		

QUALIFICATION AND LINEAR WARRANTIES				
Product standard	IEC61215, 61730			
Extended product warranty	12 years			
Output decline 3%/year performance Pmpp (STC)	1st year			
Output decline 0.7%/year performance Pmpp (STC)	2 ^{nd~} 25 th years			



I-V Curves of PV module MS-280P-60 at various solar irradiance





Photon Solar GmbH reserves the right of final interpretation. Specifications and designs included in this datasheet are subjekt to change without notice.

SALES: PHOTON SOLAR Energy GmbH – Germany

Address: Niermannsweg 11-15, 40699 Erkrath, Germany Email: info@photon-solar.de, website: www.photon-solar.de LEGAL: MS series panels are distributed according to German electro law 2 (ElektroG2) under PV Global registration number: WEEE No. DE 47693041