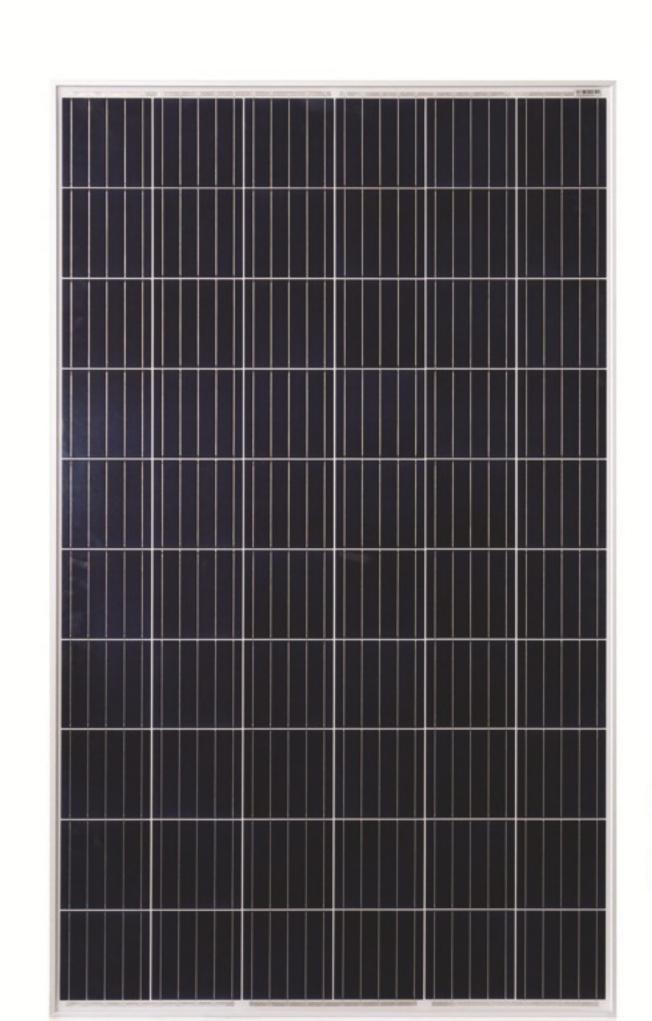
## For Global Market



## 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



► Reducing cell series resistance
▶ More power output

25 <b>0</b> 260 265	270 2	280				E
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 <sub>mpp</sub> ) 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 (Voc) 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 <sub>mpp</sub> ) 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 system voltage (IEC)		1000Vpc / 1500Vpc		
Temperature coefficient (l₅c)		+0.049%/K Number of diodes		3	3	
Temperature coefficient (Impp)		- 0.000%/K Maximum series fuse rating		15 A		
Temperature coefficient (V <sub>mpp</sub> )		- 0.408%/K	Operating Ten	nperature	-40°	C to +85°C
Temperature coefficient (V <sub>oc</sub> )		- 0.310%/K				
Normal operating cell temperature (NC	CT)	43±2°C				

\* Measurement tolerance +/- 3%







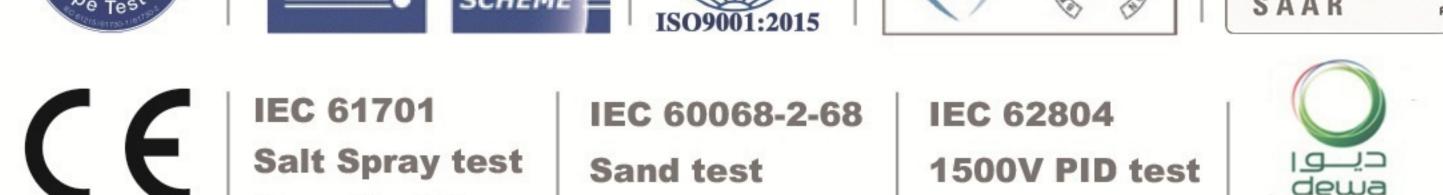












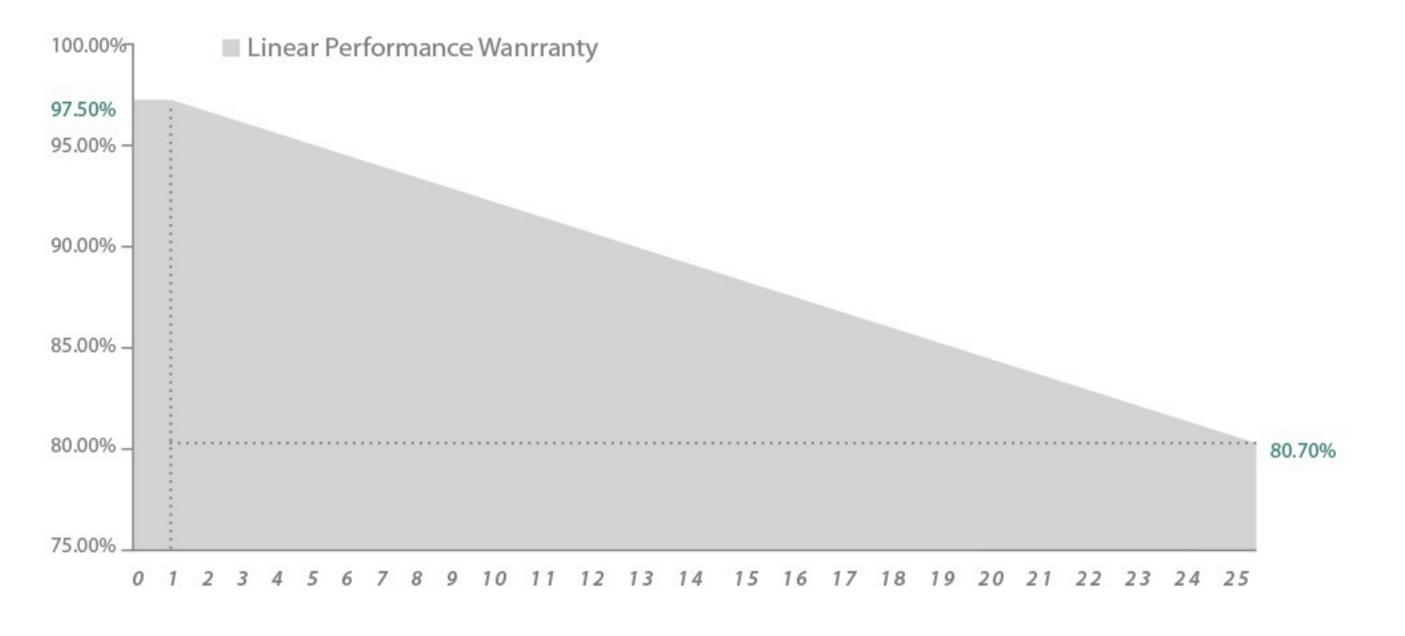




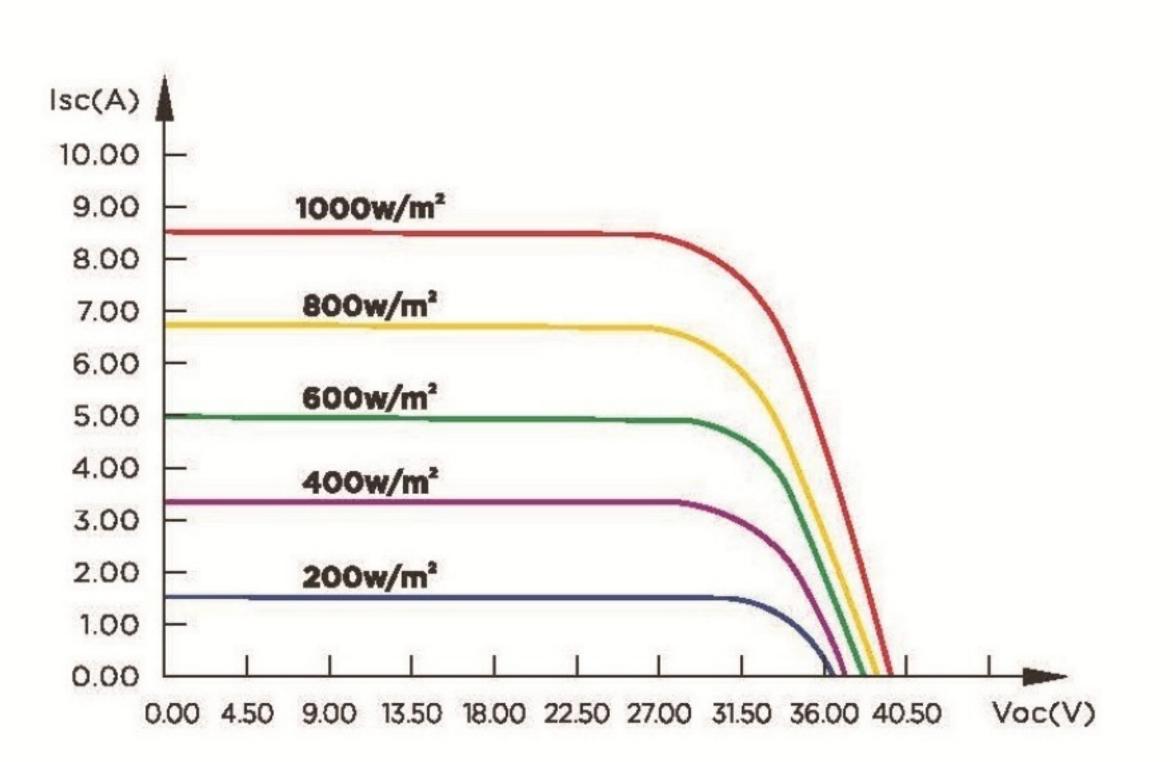
RELATED PARAMETERS	
Cell type	Polycrystalline
Number of cells / cell arrangement	60 / 6 x 10
Cells dimension	6"
Packing unit	30 modules
Weight of packing unit (for container)	557 kg / 1228 lbs

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			
<sup>1</sup> Cable length(IEC)	900mm/35.43 in			
Cable diameter (IEC)	12 AWG /4 mm <sup>2</sup>			
<sup>2</sup> 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 <sup>nd~</sup> 25 <sup>th</sup> years	



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



Front view	Side view	Rear view	Frame cross section
992 mm/3.255 feet	35 mm/ 0.115 feet	16-3 mm x 7mm/0.01 feet x 0.025 feet Drainage hole  2-••4 mm/0.013 feet Ground hole  8-9 mm x 14 mm/0.030 feet x 0.046 feet Mounting hole  16-3 mm x 14 mm/0.030 feet x	35 mm/0.115 feet

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