

## Premium Module 280-290W



Anti-PID



Maximum System Voltage (optional)



Fire resistance test



IP68 connectors enhance the reliability of the PV system



Certified to withstand increased loads of up to 5400Pa



12-year product warranty  
25-year linear performance warranty

**Bloomberg Tier1**  
NEW ENERGY FINANCE

**TOP PERFORMER\***

### Features



#### Higher Efficiency

Outstanding performance in weak-light conditions



#### Higher Generation

Excellent temperature coefficient giving higher yields in the long term



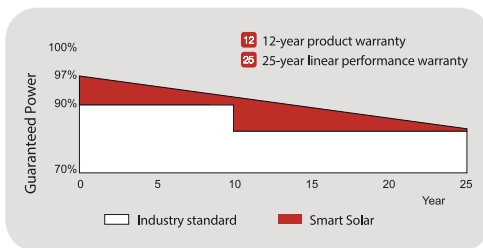
#### Better Durability

Withstand fire/dust/UV/tear tests ensure its long durability in practical application scenarios



#### Super Isolation

Multilayer structure, against 21kV Hi-Voltage breakdown test, extremely low water absorption & permeability guarantee its perfect performance in damp circumstance



**Mono PERC**

### About Smart Energy

Smart Energy produces new generation PERC, Black Silicon, Dual Glass, Bifacial, MBB and Half-Cut Cell modules with both backsheets and glass-glass options on its state-of-the-art technology production lines in its factory located in Gebze Organized Industrial Zone with a covered area of 23.500 m<sup>2</sup>.

\* These criteria are applied only to Panels manufactured with Phono Solar brandname.

# Premium Module

## ELECTRICAL TYPICAL VALUES

Model	PS280M-20/U	PS285M-20/U	PS290M-20/U
	PS280MH-20/U	PS285MH-20/U	PS290MH-20/U
Type	Monocrystalline 6 inch x 6 inch square, 6 x 10 pieces in series		
Rated Power (Pmpp)	280	285	290
Tolerance	0~+5w		
Rated Current (Impp)	8.86	8.96	9.07
Rated Voltage (Vmpp)	31.61	31.81	31.98
Short Circuit Current (Isc)	9.15	9.20	9.25
Open Circuit Voltage (Voc)	38.50	38.60	38.70
Module Efficiency (%)	17.21	17.52	17.83
NOCT (Nominal Operation Cell Temperature)	45°C ± 2°C		
Voltage Temperature Coefficient	-0.35%/°C		
Current Temperature Coefficient	+0.07%/°C		
Power Temperature Coefficient	-0.45%/°C		

## MECHANICAL CHARACTERISTICS

Dimension (L x W x H)	Length: 1640mm (64.57 inch)
	Width: 992mm (39.06 inch)
	Height: 40mm (1.57 inch)
Weight	18kg (39.68 lbs)
Front Glass	3.2mm tempered glass
Frame	Anodized aluminium alloy
Cable	4mm <sup>2</sup> (IEC) , Length:900mm or Customized Length
Junction Box	IP68 rated

## ABSOLUTE MAXIMUM RATING

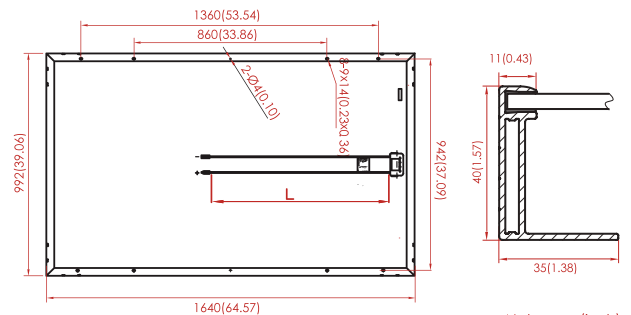
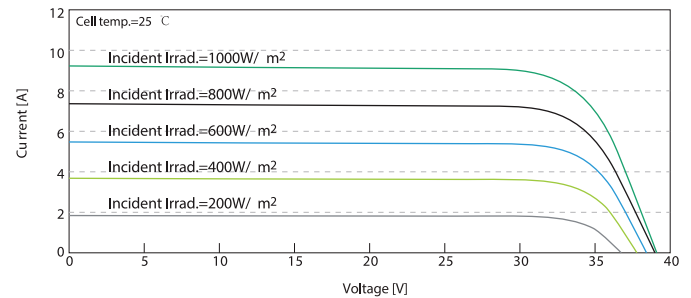
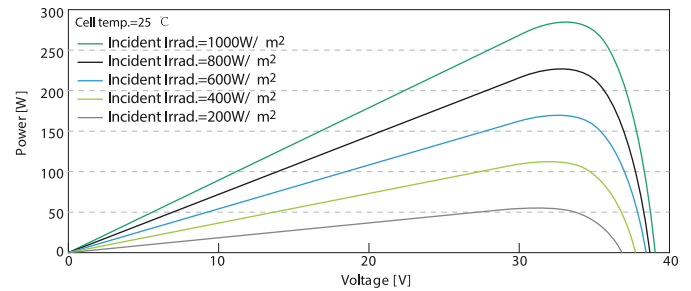
Parameter	Values
Operating Temperature	From -40 to +85°C
Hail Diameter @ 80km/h	Up to 25mm
Surface Maximum Load Capacity	Up to 5400Pa
Maximum Series Fuse Rating	15A / 20A
IEC Application Class (IEC61730)	II
Fire Rating (IEC61730)	C
Module Fire Performance (UL1703)	Type 1
Maximum System Voltage	DC 1000V / 1500V (IEC / ELT)

## PACKING CONFIGURATION

Container	40'HQ	20'GP
Pieces / Container	896	312

- In compliance with our warranty terms and conditions.
- Measurement conditions under irradiance level of Standard Test Conditions(STC): 1000W/m<sup>2</sup>, Air mass 1.5 Spectrum, cell temperature of 25°C.

## WEAK LIGHT PERFORMANCE



Address:  
Gebze OSB, Tembelova District,  
3200 Street, No: 3207 Gebze/Kocaeli - Turkey  
P : +90 262 673 7100  
F : +90 262 673 7103

Note:  
This datasheet is not legally binding. Smart Solar reserves the right to adjust specifications without notice.  
Further information please refer to our website:  
[www.smartsolar.com.tr](http://www.smartsolar.com.tr)

