



Outstanding performance  
in weak-light conditions



Anti-PID



Positive current sorting



Excellent temperature coefficient giving  
higher yields in the long term



IP68 connectors enhance the  
reliability of the PV system



Certified to withstand  
increased loads of up to 5400Pa



10-year product warranty  
25-year performance warranty<sup>[1]</sup>

Durability assured:



Salt mist corrosion  
resistance



Ammonia corrosion  
resistance



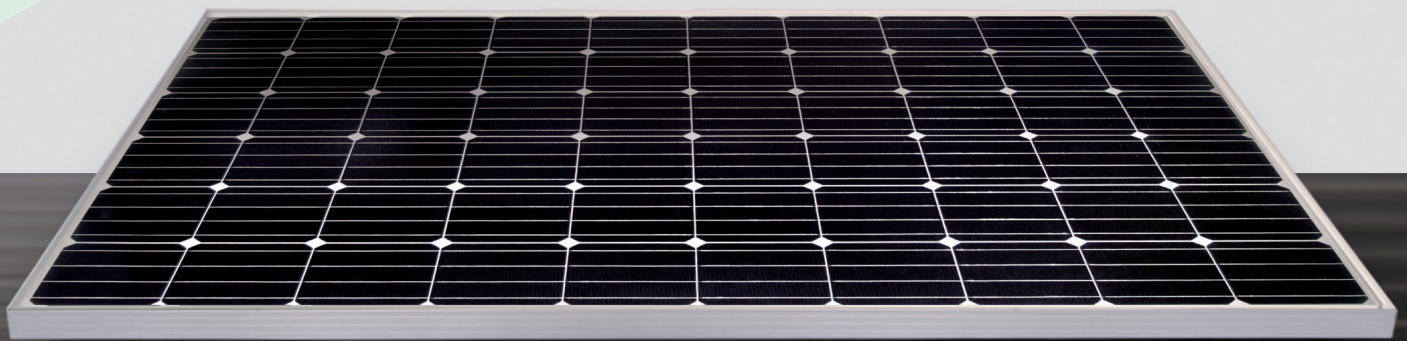
Fire test resistance



Blowing sand resistance

- Manufacturing facility certified by ISO 9001, ISO 14001 and OHSAS 18001
- Internal quality control has standards higher than both IEC and UL

- Product quality is assured through the use of branded components
- Free module recycling through PV Cycle Association membership<sup>[2]</sup>



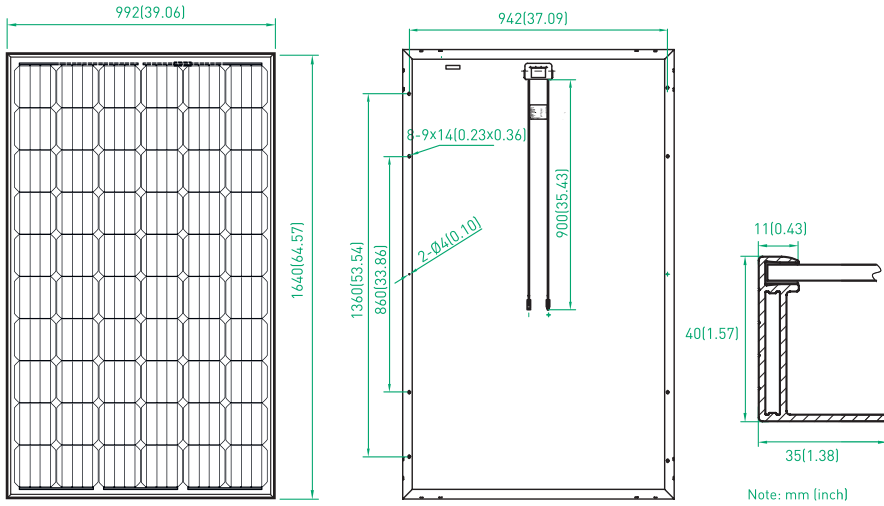
## Premium Modules

# 270-280W<sub>MONO</sub>

Note: This datasheet is not legally binding. Phono Solar reserves the right to make specifications changes without notice. Further information can be found on our website: [www.phonosolar.com](http://www.phonosolar.com)

1. In compliance with our warranty terms and conditions.
2. In PV Cycle member countries only, see: [www.pvcycle.org](http://www.pvcycle.org)

# PREMIUM SOLAR MODULES 270-280W MONO



Note: mm (inch)

## MECHANICAL CHARACTERISTICS

<b>Solar Cells</b>	Monocrystalline 156mm x 156mm square, 6 x 10 pieces in series
<b>Dimension</b>	Length: 1640mm (64.57 inch)
	Width: 992mm (39.06 inch)
	Height: 40mm (1.57 inch)
<b>Weight</b>	19kg (41.9 lbs)
<b>Front Glass</b>	3.2mm toughened glass
<b>Frame</b>	Anodized aluminium alloy
<b>Cable</b>	4mm <sup>2</sup> (IEC) / 12AWG (UL), 900mm
<b>Junction Box</b>	IP 68 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
IEC Application Class (IEC61730)	A
Fire Rating (IEC61730)	C
Module Fire Performance (UL1703)	Type 1
Maximum System Voltage	DC 1000V (IEC)
	DC 600V (UL) / 1000V (ETL)

## ELECTRICAL TYPICAL VALUES<sup>[1]</sup>

Model	Rated Power (P <sub>mpp</sub> )	Tolerance	Rated Current (I <sub>mpp</sub> )	Rated Voltage (V <sub>mpp</sub> )	Short Circuit Current (I <sub>sc</sub> )	Open Circuit Voltage (V <sub>oc</sub> )	Module Efficiency (%)
PS270M-20/U	270W	0~+5W	8.65A	31.2V	9.05A	38.3V	16.60
PS275M-20/U	275W	0~+5W	8.75A	31.4V	9.10A	38.4V	16.90
PS280M-20/U	280W	0~+5W	8.86A	31.6V	9.15A	38.5V	17.20

## WEAK LIGHT PERFORMANCE

Intensity [W/m <sup>2</sup> ]	I <sub>mpp</sub>	V <sub>mpp</sub>
1000	1	1
800	0.8	0.996
600	0.6	0.99
400	0.4	0.983
200	0.2	0.952
100	0.1	0.921

## TEMPERATURE CHARACTERISTICS

<b>NOCT (Nominal Operation Cell Temperature)</b>	45°C ± 2°C
<b>Voltage Temperature Coefficient</b>	-0.35%/k
<b>Current Temperature Coefficient</b>	+0.07%/k
<b>Power Temperature Coefficient</b>	-0.45%/k

## PACKING CONFIGURATION

<b>Container</b>	40' HQ	20' GP
<b>Pieces per container</b>	728	264

1. 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.