

## 290 W - 300 W MONO-CRYSTALLINE SOLAR MODULE



### Enhanced Reliability and Power Output

- ✓ Higher power output: with passivated backside and BSF technology
- ✓ Excellent low light performance on cloudy days, mornings and evenings
- ✓ High reliability, strict module BOM selection

### Robust Design

- ✓ Strong anodized aluminum alloy frame
- ✓ Certified by TÜV to withstand up to 2400 Pa wind load and up to 5400 Pa snow load
- ✓ Easy installation and minimal maintenance with compatibility to industry standard inverters and mounting systems

### QUALIFICATIONS AND CERTIFICATES

CE-Compliant, IEC 61215 (Ed.1) application class A, TÜV Safety Class II, UL 1703



### WARRANTY

10 Years: Manufacturing Warranty  
 12 Years Warranty: 90% Power Output  
 25 Years Warranty: 80% Power Output

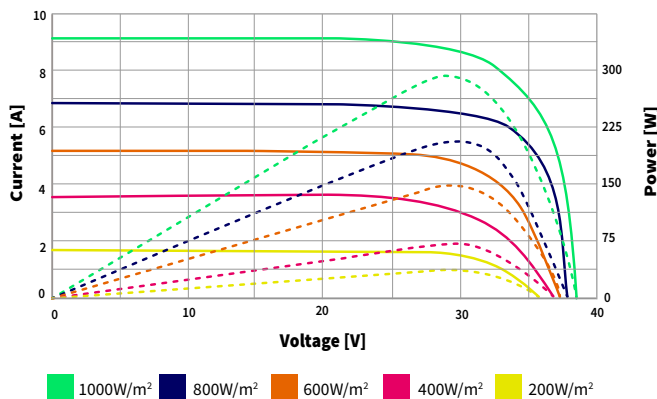
### MECHANICAL CHARACTERISTICS

Cell type	Mono-crystalline
Cell Dimensions	156.75 × 156.75 mm
Cell Arrangement	60 (6 × 10)
Weight	18.5 kg
Module Dimensions	1650 × 992 × 35 mm (also available: 1650 × 992 × 30 mm)
Glass	3.2 mm, high transmission, tempered
Connector	MC4 compatible
Cable Length	900 mm
Cable Cross-section Size	4 mm <sup>2</sup>
No. of Bypass Diodes	3/6

# ELECTRICAL CHARACTERISTICS

SOLAR CELLS		MONO-CRYSTALLINE 156.75 × 156.75MM 60 PCS. (6×10) – 5 BUS BARS		
Model	GSM 290 HE	GSM 295 HE	GSM 300 HE	
<b>Performance at Standard Test Conditions (STC): 1000 W/m<sup>2</sup>, 25°C, AM 1.5, power tolerance +3 %</b>				
Maximum Power (Pmax)	290 Wp	295 Wp	300 Wp	
Operating Voltage (Vmpp)	32.4 V	32.6 V	32.9 V	
Operating Current (Impp)	8.96 A	9.05 A	9.12 A	
Open-Circuit Voltage (Voc)	39.3 V	39.5 V	39.7 V	
Short-Circuit Current (Isc)	9.47 A	9.52 A	9.58 A	
Module Efficiency	17.7 %	18.0 %	18.3 %	
<b>Performance at Nominal Operating Cell Temperature (NOCT) : 800 W/m<sup>2</sup>, 20°C, AM 1.5, wind speed 1m/s</b>				
Maximum Power (Pmax)	214 Wp	217 Wp	221 Wp	
Operating Voltage (Vmpp)	29.9 V	30.1 V	30.3 V	
Operating Current (Impp)	7.17 A	7.24 A	7.30 A	
Open-Circuit Voltage (Voc)	36.3 V	36.5 V	36.7 V	
Short-Circuit Current (Isc)	7.65 A	7.69 A	7.74 A	
<b>Temperature Coefficient</b>				
Temperature Coefficient at Pmax	- 0.39 % / °C			
Temperature Coefficient at Voc	- 0.30 % / °C			
Temperature Coefficient at Isc	+ 0.05 % / °C			
Nominal Operating Cell Temperature	45 ± 2 °C			
<b>Operating conditions</b>				
Maximum System Voltage	1000 V / DC (IEC)			
Operating Temperature	-40 °C to +85 °C			
Maximum Series Fuse	15 A			
Static Loading	5400 Pa			
Conductivity at Ground	≤ 0.1 Ω			
Resistance	≥ 100 MΩ			
Safety Class	II			

I-V Curves at different irradiance



I-V Curves at different temperature

