

## 295 W - 310 W MONO-CRYSTALLINE SOLAR MODULE



- ✓ Half-cut cell technology: New circuit design, lower internal current, lower  $R_s$  loss
- ✓ Maximize limited space: More internal reflection, maximum power output 310W
- ✓ Significantly lower risk of hot spot: Special circuit design, lower hot spot temperature
- ✓ Lower LcoE: 1% more power generation
- ✓ Excellent anti-PID performance
- ✓ Highly reliable due to stringent quality control: certification requirements, in-house testing
- ✓ Certified to withstand the most challenging environmental conditions: 2400 Pa wind load, 5400 Pa snow load, 25 mm hail stones at 82 km/h
- ✓ IP68 junction box: the highest waterproof level

### 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, half-cut
Cell Arrangement	60 (6 × 10)
Weight	19.5 kg
Module Dimensions	1675 × 992 × 35 mm
Glass	3.2 mm, high transmission, tempered
Connector	MC4 compatible
Cable Length	300 mm
Cable Cross-section Size	4 mm <sup>2</sup>
No. of Bypass Diodes	3/6

# ELECTRICAL CHARACTERISTICS

<b>SOLAR CELLS</b>	<b>MONO-CRYSTALLINE 156.75 × 156.75MM 60 PCS. (6×10) – 5 BUS BARS</b>			
<b>Model</b>	<b>GSM 295 HC</b>	<b>GSM 300 HC</b>	<b>GSM 305 HC</b>	<b>GSP 310 HC</b>

**Performance at Standard Test Conditions (STC): 1000 W/m<sup>2</sup>, 25°C, AM 1.5, positive power tolerance: 0/+3%**

Maximum Power (Pmax)	295 Wp	300 Wp	305 Wp	310 Wp
Operating Voltage (Vmpp)	32.6 V	32.9 V	33.2 V	33.5 V
Operating Current (Impp)	9.05 A	9.12 A	9.20 A	9.26 A
Open-Circuit Voltage (Voc)	39.5 V	39.7 V	39.9 V	40.1 V
Short-Circuit Current (Isc)	9.52 A	9.58 A	9.64 A	9.69 A
Module Efficiency	18.0 %	18.3 %	18.6 %	18.9 %

**Performance at Nominal Operating Cell Temperature (NOCT) : 800 W/m<sup>2</sup>, 20°C, AM 1.5, wind speed 1m/s**

Maximum Power (Pmax)	217.9 Wp	221.6 Wp	225.2 Wp	228.7 Wp
Operating Voltage (Vmpp)	30.1 V	30.3 V	30.7 V	31.0 V
Operating Current (Impp)	7.24 A	7.30 A	7.34 A	7.38 A
Open-Circuit Voltage (Voc)	36.5 V	36.7 V	36.86 V	37.03 V
Short-Circuit Current (Isc)	7.69 A	7.74 A	7.79 A	7.83 A

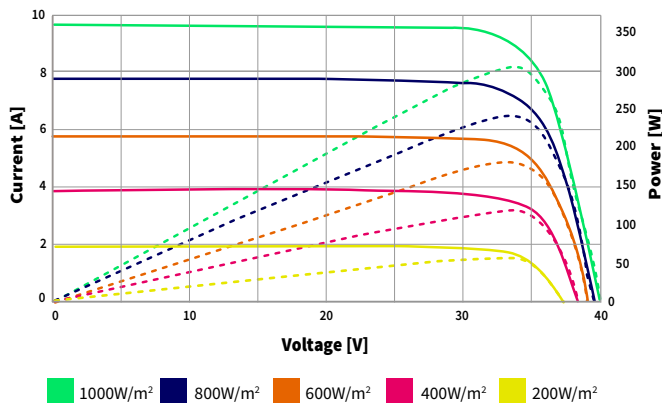
### Temperature Coefficient

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

### Operating conditions

Maximum System Voltage	DC1000 V (IEC) / DC1500 V (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

