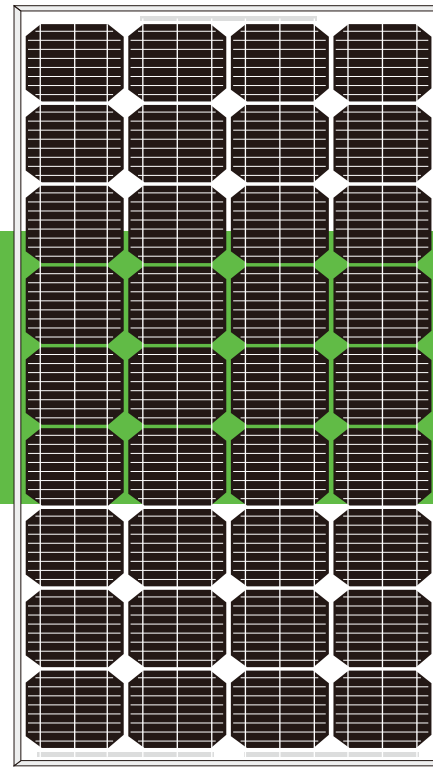




QG 80~90-5M



Features

*This mold of solar module has 36 solar cells.
They can be used for off-grid solar applications.
Our meticulous design and production techniques ensure a high-yield,
long-term performance for every module produced.*

Applications

- *High efficiency*
- *Nominal 12V DC for standard output*
- *Water Pumping systems*
- *Rural area applications*
- *etc.*

Features

- *5 years product warranty on material and workmanship
10 years limited warranty of 90% output
25 years limited warranty of 80% output*
- *Strong framed module, passing mechanical load
test of 5400Pa to withstand heavier snow load*
- *Industry leading power tolerance: $\pm 3\%$*

Qualifications

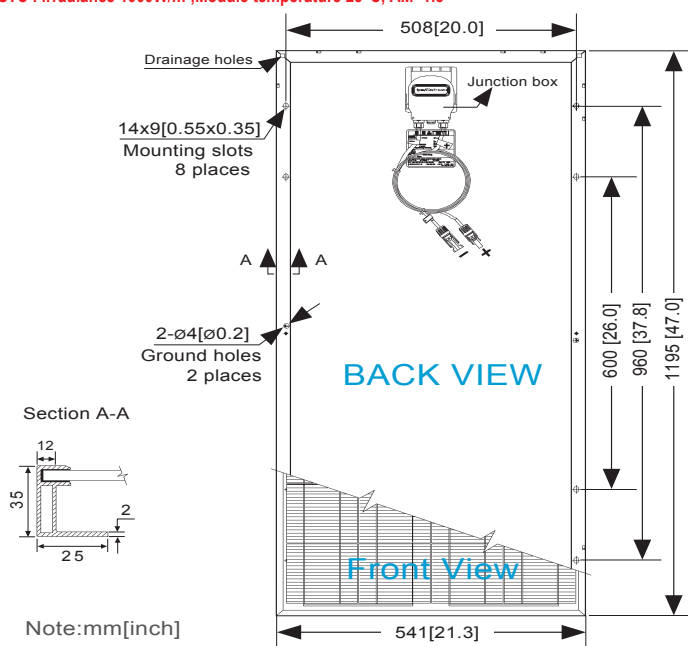
- *IEC 61215 , IEC 61730 , CE*
- *ISO9001:2008: Standards for quality management systems*



Electrical Characteristics

Characteristics	QG90-5M	QG85-5M	QG 80-5M
Open - Circuit voltage (Voc)	22.4V	22.2V	21.9V
Optimum Operating Voltage (Vmp)	18.3V	17.8V	17.5V
Short - Circuit Current (Isc)	5.18A	5.15A	4.95A
Optimum Operating Current (Imp)	4.92A	4.80A	4.58A
Maximum Power at STC (Pmax)	90 Wp	85 Wp	80Wp
Operating Temperature	-40°C to +85°C		
Maximum System Voltage	715V DC		
Maximum Series Fuse Rating	15A		
Power Tolerance	±3 %		

*STC : Irradiance 1000W/m², Module temperature 25°C, AM=1.5



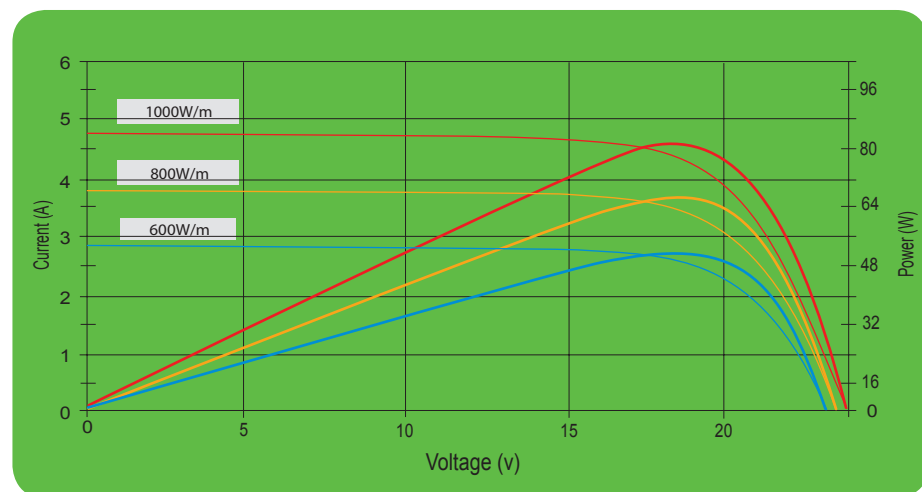
Mechanical Characteristics

Solar Cell	Mono-crystalline 125x125mm (5inch)
No. of Cells	36 (4x9)
Dimensions	1195x541x35mm
Weight	8.0kg
Front Glass	3.2 mm tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP65
Output Cables	(-) 750mm (+)750mm MC pulg Type IV

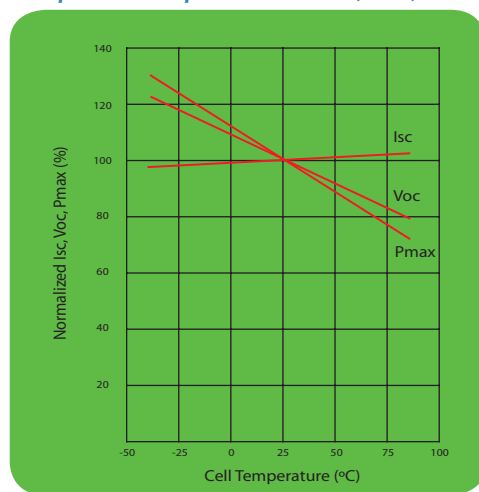
Temperature Characteristics

Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of Pmax	-0.48 %/°C
Temperature Coefficient of Voc	-0.34 %/°C
Temperature Coefficient of Isc	0.037 %/°C

Current-Voltage & Power-Voltage Curve (80W)



Temperature Dependence of Isc, Voc, Pmax



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