

ecoSol 60mc

High Quality Multicrystalline Photovoltaic Module



Features

- High conversion efficiency based on leading innovative photovoltaic technologies
- High reliability with guaranteed -3% to +5% power output tolerance, ensuring return on investment
- Attractive appearance
- Withstands high wind pressure and snow load and extreme temperature variations
- Easy to install

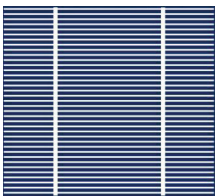
Quality and Safety

- 25-year power output transferable warranty
- Rigorous quality control, meeting the highest international standards
- ISO 9001:2000 (Quality Management System) certified factories manufacturing world class products
- Certifications:
 - IEC 61215, Safety Class II, conformity to CE
 - IEC 61730
 - UL 1703



Recommended Applications

- Residential roof top systems
- On-grid utility systems
- On-grid commercial systems
- Off-grid PV systems
- Others



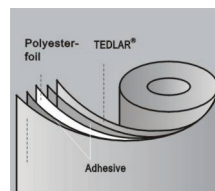
CSG's technology yields improvements to cell texturing, BSF structure and provides an anti-reflective coating to increase conversion efficiency.



Unique design on drainage holes and rigid construction prevents the frame from damage due to freezing weather and other environmental forces.



The module provides more field power output through an advanced CSG solar glass that can reach a transparency of 92%.



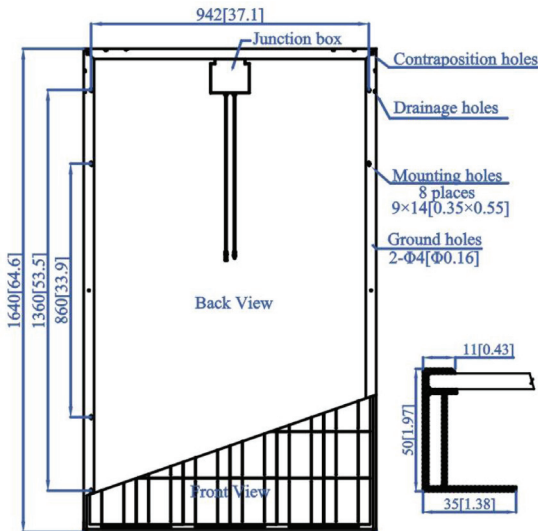
The improved gloss of the Tedlar surface increases the reflection of solar radiation to increase conversion efficiency and resist weather and moisture.



Electrical Characteristics

Characteristics	ecoSol 60mc						
Maximum Power (Pmax)	200Wp	205Wp	210Wp	215Wp	220Wp	225Wp	230Wp
Voltage at Pmax (Vmp)	29.2V	29.5V	29.7V	29.9V	30.0V	30.1V	30.3V
Current at Pmax (Imp)	6.85A	6.95A	7.07A	7.19A	7.33A	7.48A	7.60A
Open-Circuit Voltage (Voc)	35.7V	35.9V	36.1V	36.4V	36.6V	36.8V	37.0V
Short-Circuit Current (Isc)	7.60A	7.68A	7.77A	7.86A	7.98A	8.10A	8.20A
Maximum System Voltage	IEC, UL 1000V DC, 600V						
Maximum Series Fuse Rating	11A						
NOCT	45±2%/°C						
Power Tolerance	-3% to +5%						

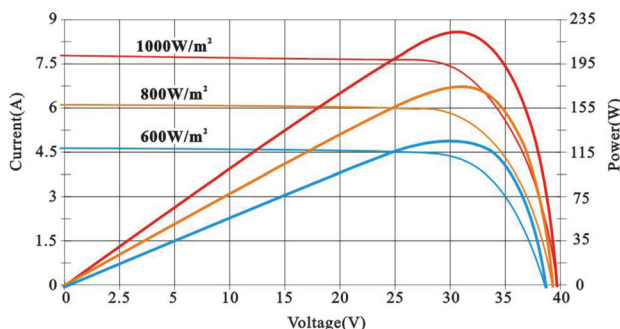
Physical Dimensions



Mechanical Characteristics

Solar Cell	Multicrystalline 156x156mm
No. of Cells	60 (6x10)
Dimensions	1640x992x50mm
Weight	20.0Kg
Construction	Front side: High transmission 3.2mm tempered glass
	Back side: Tedlar, white
Encapsulation: EVA	
Junction Box	IP 65 Rated
Output-Cables	NANYANG 4.0mm ² , length (±) 900mm, Quick connectors IP 65 rated
Frame	Clear anodized aluminum alloy type 6063T6 frame; Color: silver

Characteristics ecoSol 60mc 230W



Qualification Test Parameters

Temperature	-40°C to +85°C
Max load	50psf (2400 pascals)
Hailstone impact	25mm (1 inch) at 23m/s (52mph)

Temperature Coefficients

Temperature Coefficient of Pmax	-0.48%/°C
Temperature Coefficient of Voc	-0.34%/°C
Temperature Coefficient of Isc	0.017%/°C

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.