



Sun-Earth

Poly-Crystalline Photovoltaic Module

TPB156×156-60-P

220W / 225W / 230W / 235W / 240W



Anti-reflective solar glass

Sun-Earth Solar modules use a textured cell surface and tempered glass for solar use to reduce reflection of sunlight.

An anti-reflective coating provides a uniform blue color and increases the absorption of light in all weather conditions.

Long service life

Sun-Earth Solar modules will last for at least 25 years. 5 years warranty on material and workmanship and guarantee their output at 90% after 10 years and 80% after 25 years.

Excellent construction

Sun-Earth Solar modules have been encapsulated with the greatest care: they resist corrosion caused by rain, water and gas. Their anti-shocking performance makes them resist hail and work under atrocious weather conditions where temperature changes quickly.

Real life examples

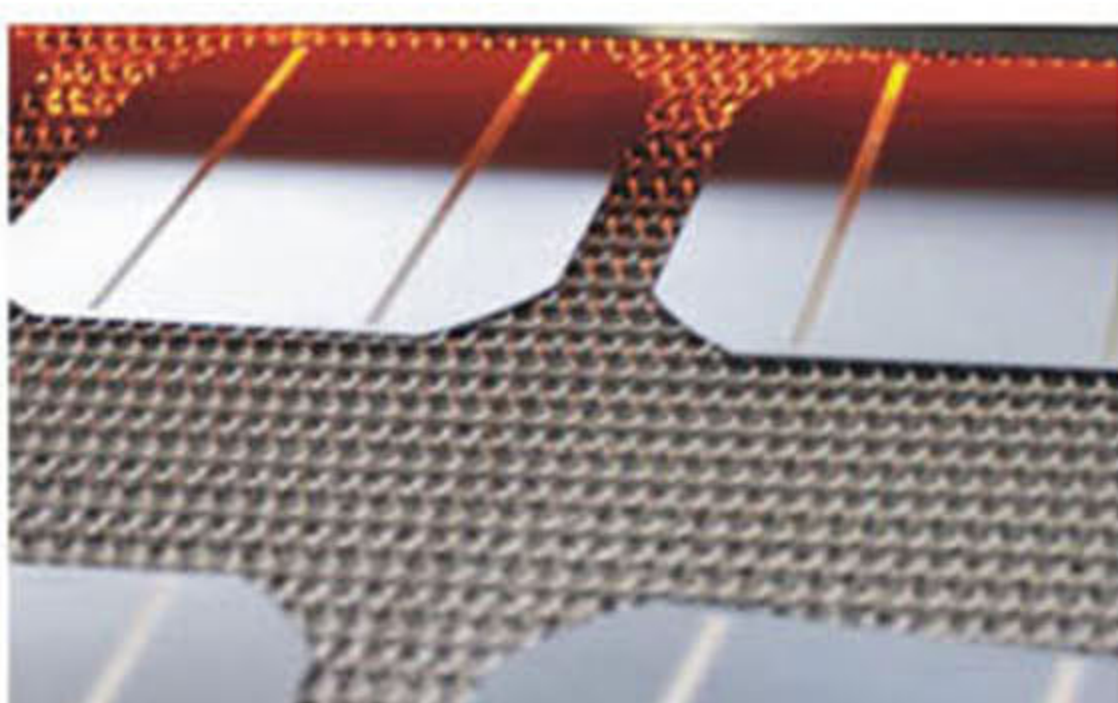
Sun-Earth Solar modules have been applied in many areas, such as building roofs, photovoltaic power plants and telecommunication stations. Our modules are exported globally and we continue to maintain an already outstanding reputation.



CSI



CE CEC



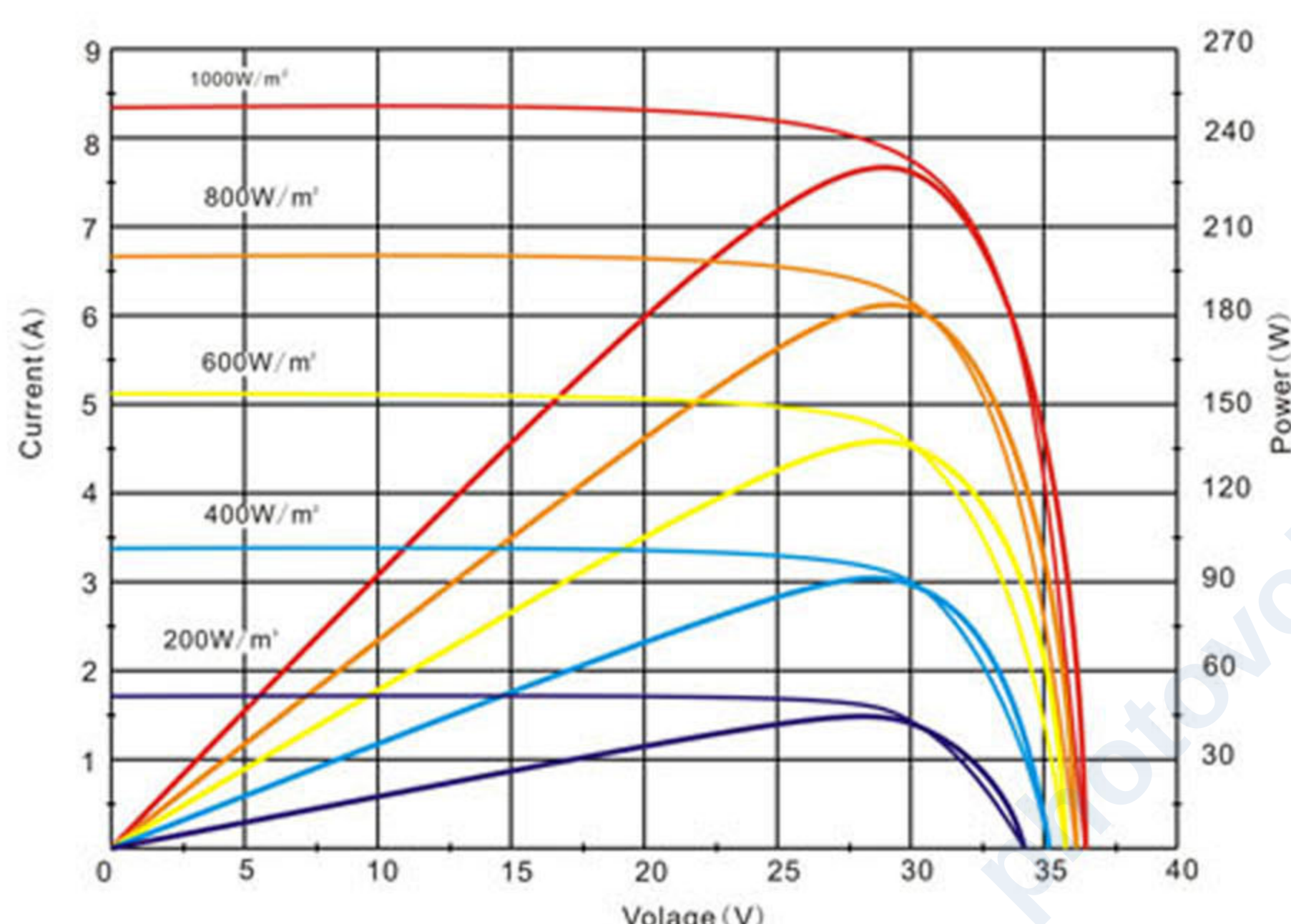
Electrical Characteristics

TPB156×156-60-P

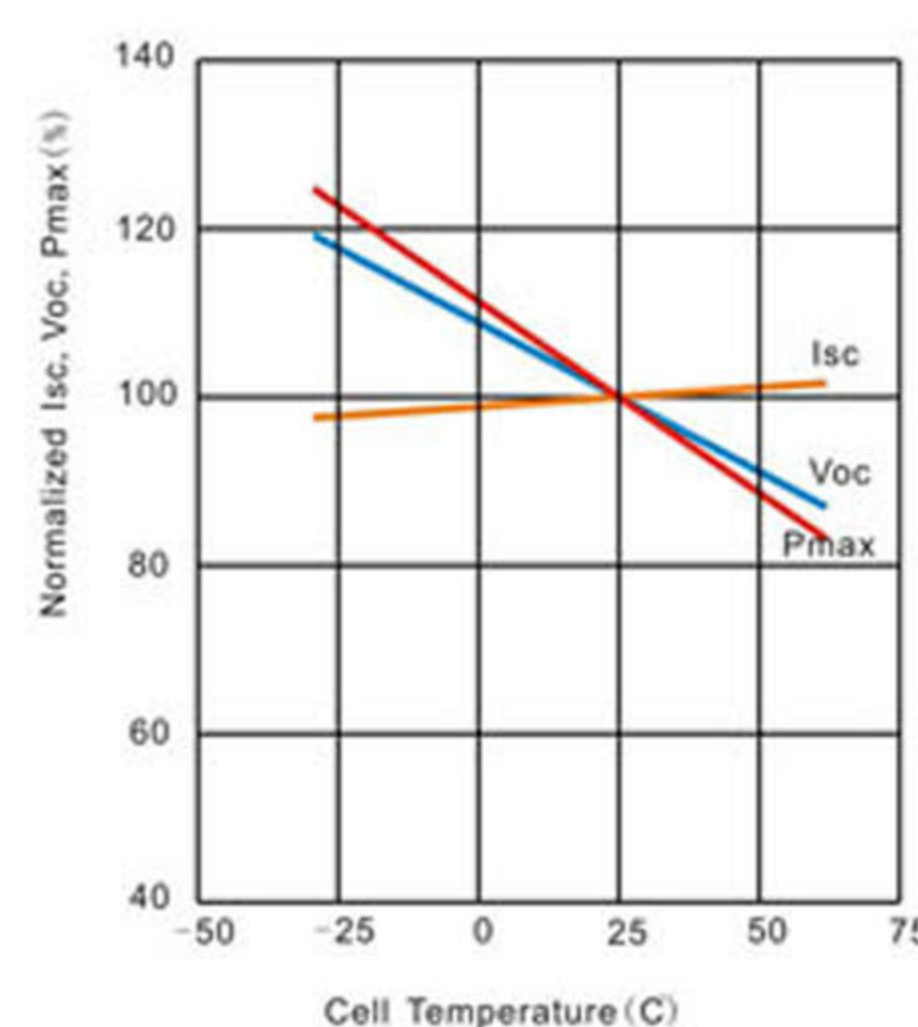
220W / 225W / 230W / 235W / 240W

Maximum Power (Pmax)	220W	225W	230W	235W	240W	245W
Power Tolerance (%)	±3	±3	±3	±3	±3	±3
Maximum Power Voltage (Vmp)	28.9	29.0	29.1	29.2	29.3	29.4
Maximum Power Current (Imp)	7.62	7.76	7.91	8.05	8.19	8.34
Open circuit Voltage (Voc)	36.4	36.5	36.6	36.7	36.8	36.9
Short circuit Current (Isc)	8.16	8.26	8.37	8.47	8.58	8.68
Maximum System Voltage (Vdc)	1000	1000	1000	1000	1000	1000
Module Efficiency	13.3%	13.6%	13.9%	14.2%	14.5%	14.8%
Temp coefficient Voc	-0.35%/°C					
Temp coefficient Isc	+0.05%/°C					
Temp coefficient Power	-0.45%/°C					
NOCT	45.5°C					

I-v curves (230W)



Temperature Dependence of Isc, Voc, Pmax



Standard Test Conditions

AM: 1.5

Irradiation: 1000W/m²

Tc 25°C

Mechanical Characteristics

Weight (Kg)	20Kg
Frame structure (Material, Corners)	Anodized Aluminium
Front side	Glass
Front glass thickness	3.2mm
Encapsulant	EVA
Back side	TPT
Junction Box	Ip65

Cells

Brand Name of Solar Cells	Sun-Earth
Cell Type	Poly Crystalline Cell
Cell Size	156×156mm
Number Cells	60 in series

Absolute Maximum Ratings

Application Class	A
Fire Resistance Class	C
Maximum Over-Current Rating:	16A
Operating Temperature	-40°C ~ +85°C
Storage Temperature	-40°C ~ +85°C
Maximum Load Capacity	200Kg/m²
Maximum Hail diameter@80Km/h	25mm
Snow load capacity (front)	500Kg/m²

Dimensions (tolerance ±2mm)

