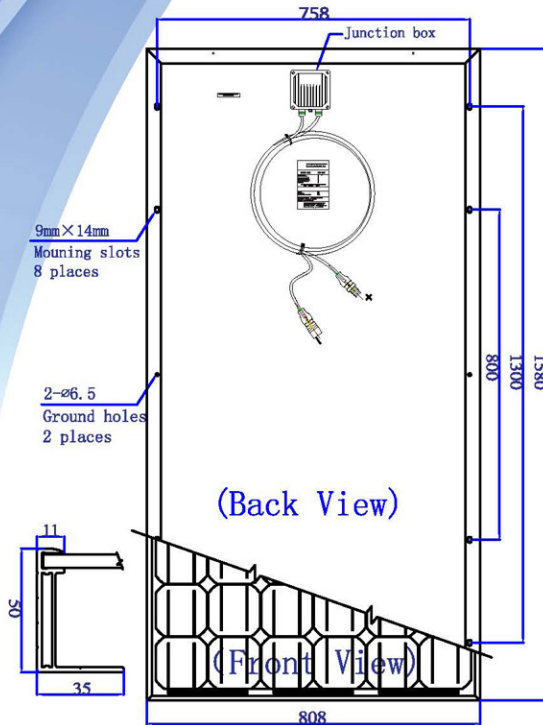
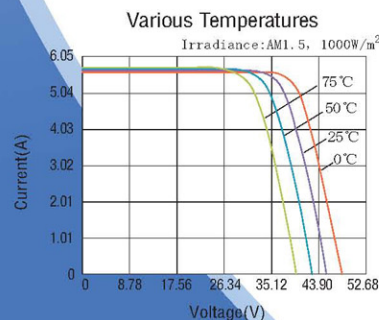
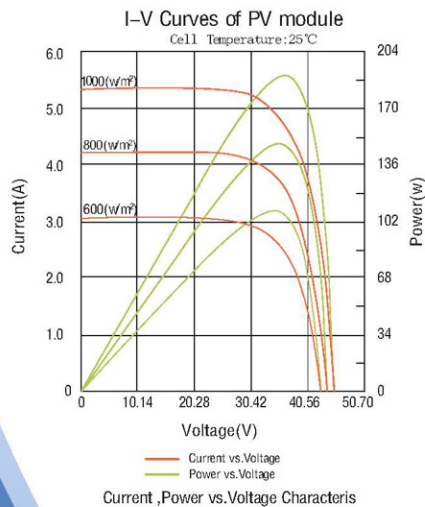


External dimensions



Characteristic curves



Electrical Characteristic

Maximum power (P_{max})	179W	180W	183W	190W	193W	200W	203W
Voltage at P_{max} (V_{mp})	35.76V	36.43V	37.17V	37.85V	38.61V	39.37V	40.12V
Current at P_{max} (I_{mp})	4.89A	4.94A	4.98A	5.02A	5.05A	5.08A	5.11A
Open-circuit voltage (V_{oc})	45.07V	45.29V	45.58V	45.86V	46.15V	47.43V	48.33V
Short-circuit current (I_{sc})	5.32A	5.37A	5.41A	5.45A	5.49A	5.52A	5.55A
Module efficiency(%)	13.7	14.1	14.5	14.9	15.3	15.7	16.1
Power tolerance	± 1%						
Temperature coefficient of I_{sc}	(0.06 ± 0.005)%/°C						
Temperature coefficient of V_{oc}	-(0.33 ± 0.005)%/°C						
Temperature coefficient of power	-(0.45 ± 0.02)%/°C						
NOCT (Air 20°C; Sun 0.8kW/m ² ; wind 1m/s)	45 ± 2°C						
Maximum series fuse rating	10A						
Maximum system voltage	1000VDC						

This data represents the performance of typical products, and is based on measurements made in accordance with IEC61215 corrected to STC (irradiance: 1000W/m², module temperature: 25°C, AM1.5).

Mechanical Characteristics

Dimensions	Length:1580mm Width:808mm Depth:50mm
Weight	16.5KG
Solar Cells	72 Mono-crystalline Silicon Cells (125mm*125mm) in a 6*12 matrix connected in series
Output cables	PVI-F 1*4, cable with polarized weatherproof DC rated ZJRH connectors (MC3 type), symmetrical lengths - 1000mm (-) and 1000mm (+)
Diodes	Schottky by-pass diodes
Construction	Front: High-transmission low-iron, 3.2mm tempered glass; Back: PVDF; Encapsulant: EVA
Frame	Anodized aluminum alloy type 6063T5 Universal frame; Color: silver

Qualification Test Parameters

Temperature cycling range	- 40°C to + 85°C
Humidity freeze, damp heat	85% RH
Static load front and back (e.g. wind)	2,400 pa
Front loading (e.g. snow)	5,400 pa
Hailstone impact	25mm ø at 23 m/s

Module warranty:

10-year limited warranty of materials and workmanship;
10-year limited warranty of 90% power output;
25-year limited warranty of 80% power output.



CHINALIGHT SOLAR

Solar module CLS-190M



High efficiency

- ★ Applying the high conversion efficiency cells, the maximum power of the module can reach as high as 205W.
- ★ Excellent low light performance inspected by TUV guarantees our modules work superiorly even under the weak light conditions such as cloudy, foggy and rainy days.



Extended module service life

- ★ Using UV rays-resistant EVA to maintain the stable output of module.
- ★ Resistance corrosive Anodize Aluminum Frame makes module possess extraordinary anti-pressure ability to meet 5400 Pa loading requirements.
- ★ Weather fastness and waterproof back field offer an excellent product quality.



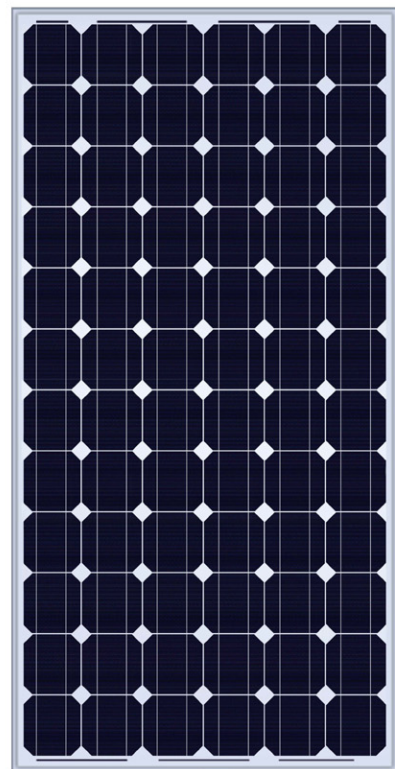
Simple installation

- ★ Supply contact plug adaptation to general standard in order to reduce the installation costs.
- ★ Narrow power tolerance $\pm 1\%$ simplifies PV system matching procedure.



Warranty

- ★ 10 years product warranty;
- ★ 10 years minimum 90% output;
- ★ 25 years minimum 80% output
- ★ Global top insurance company covers the quality of products, perfect compensation procedure to ensure the customers' benefit



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