



190W Monocrystalline Solar Panel

GS-STAR-190W-US

Overview

This Grape Solar Star series module is ideal for off-grid battery charging systems such as RVs, boats, electric fencing, lighting units, small pumps, electrical gadgets, emergency backup, and more.

- High conversion efficiency monocrystalline cells with long-term output stability and reliability.
- Outstanding electrical performance under high temperature and weak light environments.
- Rigorous quality control to meet the highest international solar panel standards.
- Built-in bypass diodes prevent reverse current flow and reduce shade losses.
- High-transmittance, low iron tempered glass with enhanced stiffness and impact resistance
- Advanced encapsulation material with multi-layer sheet lamination to provide enhanced longevity and performance.



UL/TUV Rated Solar Connectors



5-Year Material & 25-Year Power Output Warranties



STAR-Series Nominal For 12V Charging

Warranty

- 5 year limited product warranty
- 10 year limited 90% power output warranty
- 25 year limited 80% power output warranty

Refer to warranty document for details.

Mechanical Specifications

Cell Size	156mm x 156mm (6.14in. x 6.14in.)
Module Dimension	1480mm x 675mm x 40mm (58.27in. x 26.57in. x 1.57in.)
Number of Cells	36
Weight	12kg (26.5 lbs.)
Mounting Hole	4 (9 mm / 0.35 in diameter)
Cable Length	900 mm / 35.4 in
Type of Connector	MC-IV comparable
Junction Box	IP65
Rated Snow / Wind Load	50 lbs./ft ²



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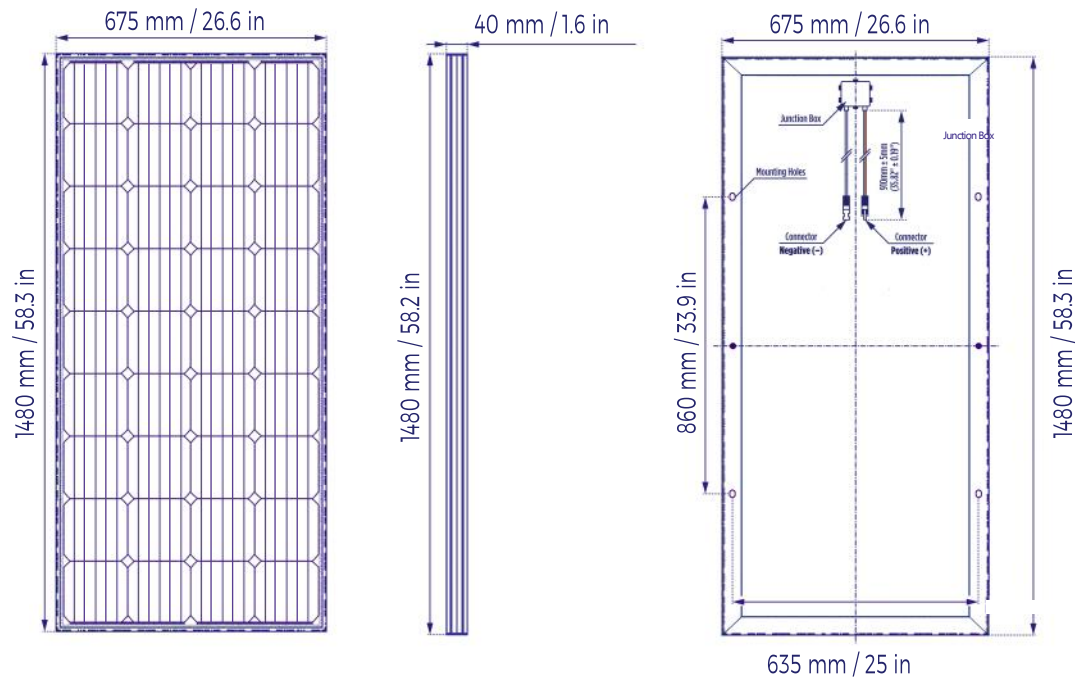
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Electrical Specifications

Max System Voltage	600V
Maximum Power P_{max}	190 W (0%,+3%)
Voltage at Maximum Power Point V_{mpp}	19.3 V
Current at Maximum Power Point I_{mpp}	9.8 A
Open Circuit Voltage V_{oc}	24.0 V
Short Circuit Current I_{sc}	10.2 A
Operating Temperature	-5°C to +60°C
Normal Operating Cell Temperature	45°C
Temperature Coefficient of V_{oc}	-0.28%/°C
Temperature Coefficient of I_{sc}	+0.04%/°C
Temperature Coefficient of P_{max}	-0.38%/°C
Max Series Fuse Rating	20 A

(Standard Test Conditions: 25°C, 1000W/m² irradiance, AM=1.5)

Schematics



Grape Solar reserves the right to modify these specifications without notice.

For service or support call
1-541-349-9000



Grape Solar[®]
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