

# 50W Monocrystalline Solar Panel

## GS-STAR-50W



### 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/CSA Rated Junction Box



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	166 mm x 41.5 mm (6.54 in x 1.63 in)
Module Dimension	440 mm x 715 mm x 35 mm (17.32 in x 28.15 in x 1.38 in)
Number of Cells	36
Weight	3.7 kg (8.2 lbs)
Mounting Hole Dimension	9 mm x 14mm / 0.35 in x 0.55 in
Cable Length	1200 mm / 47.2 in
Type of Connector	MC-IV comparable
Junction Box	IP65
Rated Snow / Wind Load	50 lbs./ft <sup>2</sup>

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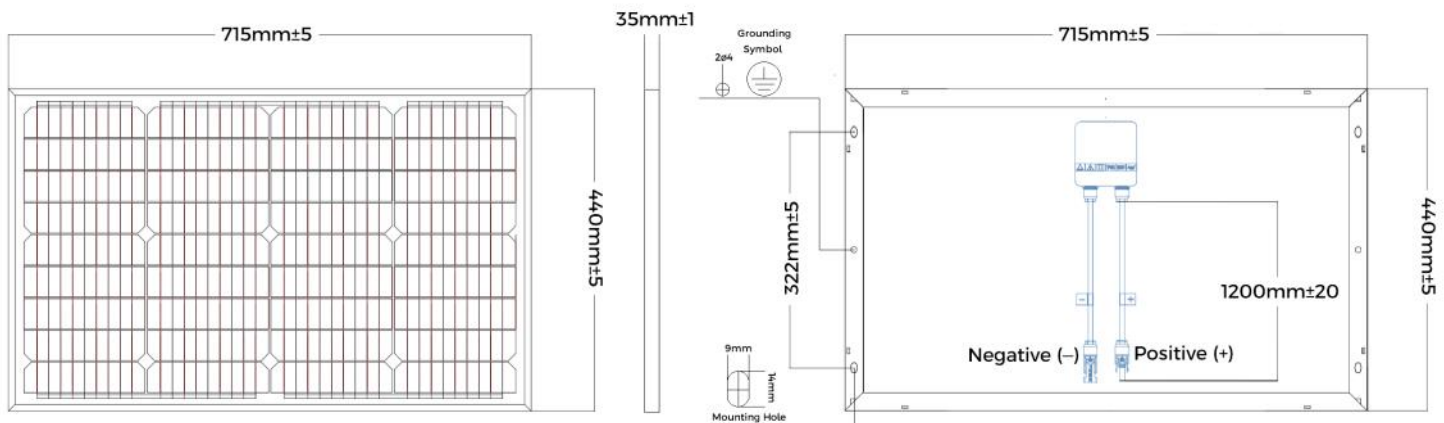


### Electrical Specifications

Max System Voltage	600V
Maximum Power $P_{max}$	50 W (0%,+3%)
Voltage at Maximum Power Point $V_{mpp}$	19.38 V
Current at Maximum Power Point $I_{mpp}$	2.58 A
Open Circuit Voltage $V_{oc}$	22.9 V
Short Circuit Current $I_{sc}$	3.02 A
Operating Temperature	-40°C to +85°C
Normal Operating Cell Temperature	45°C
Temperature Coefficient of $V_{oc}$	-0.30%/°C
Temperature Coefficient of $I_{sc}$	+0.06%/°C
Temperature Coefficient of $P_{max}$	-0.41%/°C
Max Series Fuse Rating	15 A

(Standard Test Conditions: 25°C, 1000W/m<sup>2</sup> irradiance, AM=1.5)

### Schematics



\*Diagram not strict to scale.

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

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



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[www.grapesolar.com](http://www.grapesolar.com)

Grape Solar, Inc.  
2635 West 7th Pl.  
Eugene, OR 97402  
U.S.A.