Grape Solar® Clean Power. Today.

High Efficiency Mono-crystalline Photovoltaic Module



Overview

- High efficiency solar cells (approx. 19%) with quality silicon material for high module conversion efficiency and long term output stability and reliability.
- · Rigorous quality control to meet the highest international standards.
- · High transmittance, low iron tempered glass with enhanced stiffness and impact resistance.
- · Unique frame design with strong mechanical strength for easy installation.
- Advanced encapsulation material with multilayer sheet lamination to provide long-life and enhanced cell performance.
- Outstanding electrical performance under high temperature and weak light environments.

Applications

- Any large or small on-grid /off-grid solar power stations.
- · Commercial/industrial building roof-top and ground systems.
- Residential roof-top and ground systems.

Warranty

- 10 year limited product warranty on materials and workmanship.
- 25 year warranty on >80% power output and 10 year warranty on >90% power output.
- Refer to warranty document for detailed warranty information.

Certifications

- ETL UL-1703 ISO 9000:2000
- CE TUV IEC61215 IEC61730





Mechanical Specifications

Characteristic	Details
Cell Size	156mm x 156mm (6.14" x 6.14")
Module Dimension (L x W x T)	1474mm x 660mm x 40mm (58.0" x 26.0" x 1.57")
No. of Cells	4 x 9 = 36
Weight	12.0 kg (26.4 lbs)
Cable Length	900mm (35.4") for positive (+) and negative (-)
Type of Connector	MC4
Junction Box	IP65 or IP67 Rated
No. of Holes in Frame	8 draining holes, 8 installation holes, 2 grounding holes



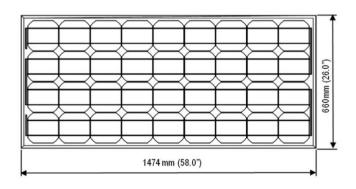
Electrical Specifications

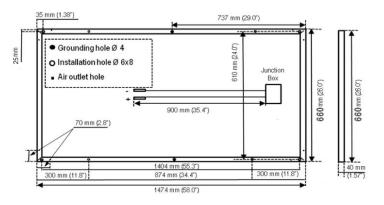
(STC* = 25 $^{\circ}$ C, 1000W/m² irradiance and AM=1.5)

Model	GS-S-160-Fab8	
Max System Voltage (IEC/UL)	1000V / 600V	
Maximum Power P _{max}	160 W (-5%, +5%)	
CEC Listed PTC Power	132.0 W	
Voltage at Maximum Power Point V _{mpp}	18.5 V	
Current at Maximum Power Point Impp	8.65 A	
Open Circuit Voltage Voc	22.2 V	
Short Circuit Current Isc	9.46 A	
Module Efficiency (%)	16.4%	
Temperature Coefficient of V₀c	-0.084 V/°C (-0.38% /°C)	
Temperature Coefficient of Isc	4.6x10 ⁻³ A/°C (0.05% /°C)	
Temperature Coefficient of P _{max}	-0.79 W/°C (-0.50% /°C)	

^{*}Standard Test Conditions

Physical Specifications mm (inch)





Other Performance Data

Power Tolerance	Operating Temperature	Max Series Fuse Rating	NOCT*
0-5%, +5%	-40 °C to +85 °C	15 A	46 °C ± 2 °C

^{*}Normal Operating Cell Temperature

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