

# Sunny Apex

## 230W Solar Module

## High Power Series

### Key Features

Reduce hot spot effect and enhance modules performance

High module conversion efficiency above 18%

Innovative production process to ensure reliability and durability

Product is certified to IEC 61215 and 61730 by TUV

### 5 Hours Shading Test



Maximum Value 47.3°C  
Average Value 23.9°C  
Minimum Value 15.6°C

### Electrical Specifications

Model Type	GW-ES230A	GW-ES225A
Peak Power (Pmax)	230W	225W
Module Efficiency	19.15%	18.70%
Maximum Power Voltage (Vmp)	27.55V	27.3V
Maximum Power Current (Imp)	8.35A	8.25A
Open Circuit Voltage (Voc)	33.95V	33.7V
Short Circuit Current (Isc)	8.69A	8.5A
Power Tolerance	- 1W ~ + 4.99W	
Maximum System Voltage	1000V	
Normal Operating Cell Temp.	45 °C (+/- 2)	

### Mechanical Specifications

Cell type	Mono-crystalline
Dimensions	1530 x 785 x 35mm [60.24 x 30.91 x 1.38in]
Weight	13kg [28.66lbs]
Frame	anodized aluminum
Junction Box	IP 67 waterproof
Cables	4.00mm <sup>2</sup> , 1000mm
Connectors	MC4 compatible

### Temperature Coefficients

Power	-0.365%/ °C
Voltage (Voc)	-0.28%/ °C
Current (Isc)	+0.05%/ °C

Brand: GWSOLAR

### Warranties & Certifications

Warranties	2 years product warranty, 25 years limited power warranty of 80% of the minimum specified power rating
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Certificates: IEC 61215, 61730

Note: All electrical parameters are rated at standard test conditions (irradiance of 1000W/m<sup>2</sup>,

AM 1.5G, cell temp. 77°F/25°C)

Caution: Read Safety and Installation Instruction before using this product.

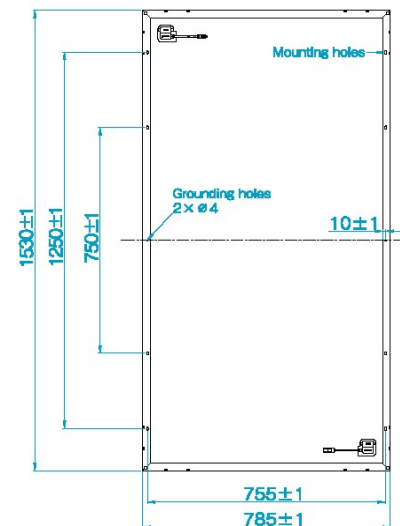
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GWSOLAR CORP. | Hong Kong Agent

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Unit: mm

