



turn **on** solar energy

## ORION SERIES MODULE

**The Orion Series provides exceptional performance.**

Utilizing 60 grade A solar cells, Orion Series solar modules are perfect for residential rooftop to megawatt size utility scale projects. The poly crystalline module is manufactured to provide excellent conversion efficiency and maximum kilowatt/hour production. All cells are individually flash tested and each assembled module is quality assured to exceed warranty performance and quality.

## MODULE FEATURES

- High-efficiency solar cell construction
- Cell Conversion Efficiencies Up to 17.8%
- Nominal 24 V DC for standard output
- Non-leaded and tin coated ribbon and wash free soldering flux
- High transmissivity low-iron 1/8" tempered glass
- Light anodized aluminum frame to prevent the occurrence of water freezing and warping
- Cross-linking rated above 80%
- Fully automatic lamination technology
- 10 Years Performance Guarantee for 90% Performance Output
- 25 Years Performance Guarantee for 80% Performance Output

eco**Solargy**inc.

## ORION SERIES ECOXXS156P-60

POLY-CRYSTALLINE SOLAR MODULE



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POLY-CRYSTALLINE SOLAR MODULE

## ECOXXS156P-60

### Specifications and Data

Panel Dimensions	64.4" x 39.1" x 1.6" (1636mm x 994mm x 40mm)
Weight	41.9 lb (19 kg)
Cells	Poly-Crystalline 6" x 6" (156mm x 156mm)
Glass	1/8" (3.2mm) Tempered Glass
Frame	Anodized Aluminum Alloy; Color: Silver
Junction Box	IP65 Rated Junction Box with Bypass Diodes
Cable	4 mm <sup>2</sup> solar cable (RHW AWG #12)
Connector	Multi-Contact (MC4) PV plug connectors
EVA	EVA
Backsheet	TPT / TPE

### Temperature Coefficients

Nominal Operating Cell Temperature (NOCT)	115°F + 35°F (46°C + 2°C)
Temperature Coefficient of ISC (α)	0.0538% / °K
Temperature Coefficient of VOC (β)	-0.332% / °K
Temperature Coefficient of Pmax	-0.477% / °K

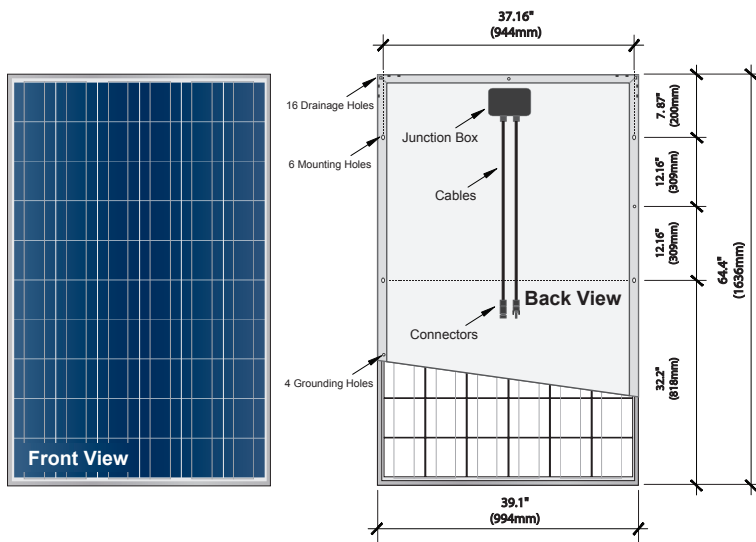
### Permissible Operating Conditions

Operating Temperature	-40°F to +185°F (-40°C to +85°C)
Maximum Hail Diameter @ 43Mph (80Km/h)	up to 1" (25mm)
Wind Impact	≤ 2400 Pa
Snow Impact	≤ 5400 Pa

### Electrical Data

Model	Pmax (±3%)	Vmp	Imp	Voc	Isc	Max System Voltage	Standard Test Conditions
ECO230S156P-60	230W	29.80V	7.71A	37.10V	8.21A	DC 600V (UL)	Irradiance: 1000W/m <sup>2</sup> AM: 1.5 Temperature: 77°F (25°C)
ECO235S156P-60	235W	30.10V	7.81A	37.30V	8.31A		
ECO240S156P-60	240W	30.30V	7.91A	37.50V	8.40A		
ECO245S156P-60	245W	30.70V	7.98A	37.70V	8.47A		
ECO250S156P-60	250W	31.00V	8.06A	37.80V	8.56A		
ECO255S156P-60	255W	31.30V	8.15A	37.90V	8.65A		
ECO260S156P-60	260W	31.60V	8.24A	38.00V	8.75A		

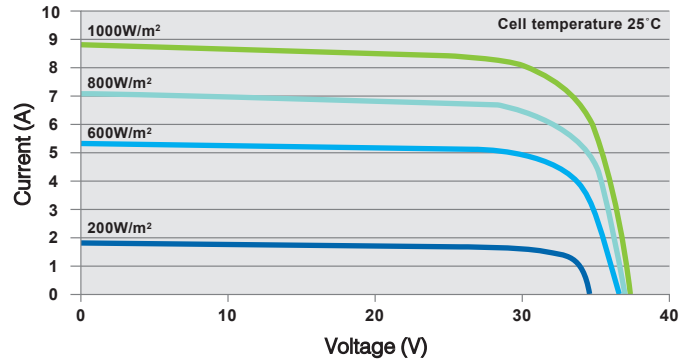
### Dimensions



CAUTION: READ INSTALLATION INSTRUCTIONS BEFORE HANDLING, INSTALLING, & OPERATING THIS PRODUCT. Technical Specifications & Data are subject to change without prior notice, contact ecoSolargy for latest data. © July 2011 ecoSolargy Incorporated. All rights reserved.

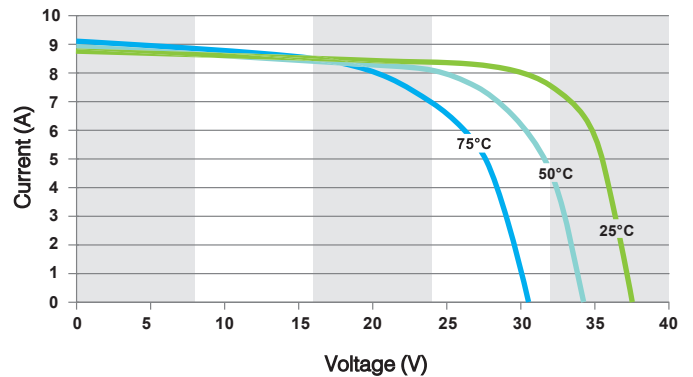
### ORION SERIES | 235 Watt

### IV Curve | Various Irradiance



### ORION SERIES | 235 Watt

### IV Curve | Various Cell Temp.



Values at Standard Test Conditions (STC) = Irradiance: 1000W/m<sup>2</sup>, Air Mass: 1.5, Module Temperature 77°F (25°C)



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