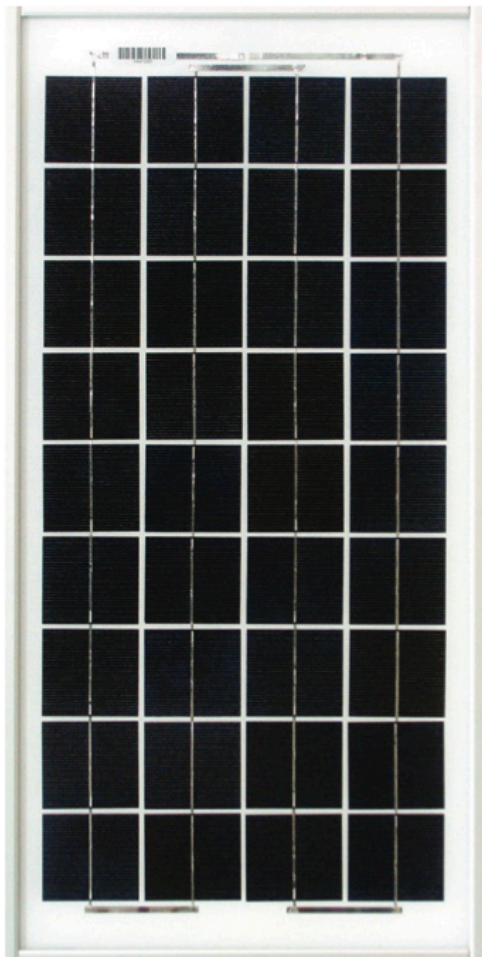




**SOLAR  
ELECTRIC  
SUPPLY, INC.**



Module appearance may vary.  
Cells have rounded corners with  
either 165 or 150mm diameter.

## 30W Photovoltaic module

# 330J

Our latest generation of small area modules offers the following benefits:

### **Built to last**

From mountaintops to off-shore platforms, on weather stations in the bitter cold of Antarctica and on telephone signal repeaters in the hot Australian outback, the technology has been proven in the harshest environments.

### **Accessible junction box for off grid connections**

J-type junction box has accessible terminals for easier module interconnections in off grid applications, and it allows fitting cable glands for various cable sections.



### **Improved reliability with effective cooling**

Cell interconnections and diode placement use well-established industry practice and are field-proven to provide excellent reliability.



### **Thick, durable, scratch resistant back sheet**

The thick back sheet provides extra insulation and increased resistance to protect your module against rough handling. The white polyester material lasts longer and increases energy production.



# 30W Photovoltaic module – 330J

## Electrical characteristics

	(1) STC 1000W/m <sup>2</sup>	(2) NOCT 800W/m <sup>2</sup>
Maximum power (P <sub>max</sub> )	30W	21.6W
Voltage at P <sub>max</sub> (V <sub>mpp</sub> )	16.8V	15.0V
Current at P <sub>max</sub> (I <sub>mpp</sub> )	1.78A	1.42A
Short circuit current (I <sub>sc</sub> )	1.94A	1.57A
Open circuit voltage (V <sub>oc</sub> )	21.0V	19.1V
Module efficiency	10.5%	
Tolerance P <sub>max</sub>	± 10%	
Nominal voltage	12V	
Efficiency reduction at 200W/m <sup>2</sup>	<5% reduction (efficiency 10%)	
Limiting reverse current	1.94A	
Temperature coefficient of I <sub>sc</sub>	0.105%/ °C	
Temperature coefficient of V <sub>oc</sub>	-0.360%/ °C	
Temperature coefficient of P <sub>max</sub>	-0.45%/ °C	
(3) NOCT	47 ±2 °C	
Maximum series fuse rating	5A	
Application class	Class C (according to IEC 61730-2007)	
Maximum system voltage	50V	

1: Values at Standard Test Conditions (STC): 1000W/m<sup>2</sup> irradiance, AM1.5 solar spectrum and 25°C module temperature  
 2: Values at 800W/m<sup>2</sup> irradiance, Nominal Operation Cell Temperature (NOCT) and AM1.5 solar spectrum  
 3: Nominal Operation Cell Temperature: Module operation temperature at 800W/m<sup>2</sup> irradiance, 20°C air temperature, 1m/s wind speed

All solar modules are individually tested prior to shipment; an allowance is made within our factory measurement to account for the typical power degradation (LLD effect) which occurs during the first few days of deployment.

## SES MAPPS Solar Module Mechanical characteristics

Solar cells	36 polycrystalline 3" silicon cells in series
Front cover	High transmission 3.2mm (1/8") glass
Encapsulant	EVA
Back cover	White polyester
Frame	Silver anodized aluminum
Junction box	IP65 with 4 terminal screw connection block; accepts PG 13.5, M20 13mm (1/2") conduit, or cable fittings accepting 6-12mm diameter cable.
Terminals	accept 2.5-10mm <sup>2</sup> (8-14 AWG) wire
Dimensions	796 x 358 x 50mm / 31.3 x 14.1 x 2in
Weight	3.9kg / 8.6lbs

All dimensional tolerances within ±1% unless otherwise stated.

## Warranty\*

- Free from defects in materials and workmanship for 2 years
- 90% Min power output for 12 years
- Optional 25 years available \*Refer to limited warranty certificate for terms and conditions

## SES MAPPS Solar Module Certification

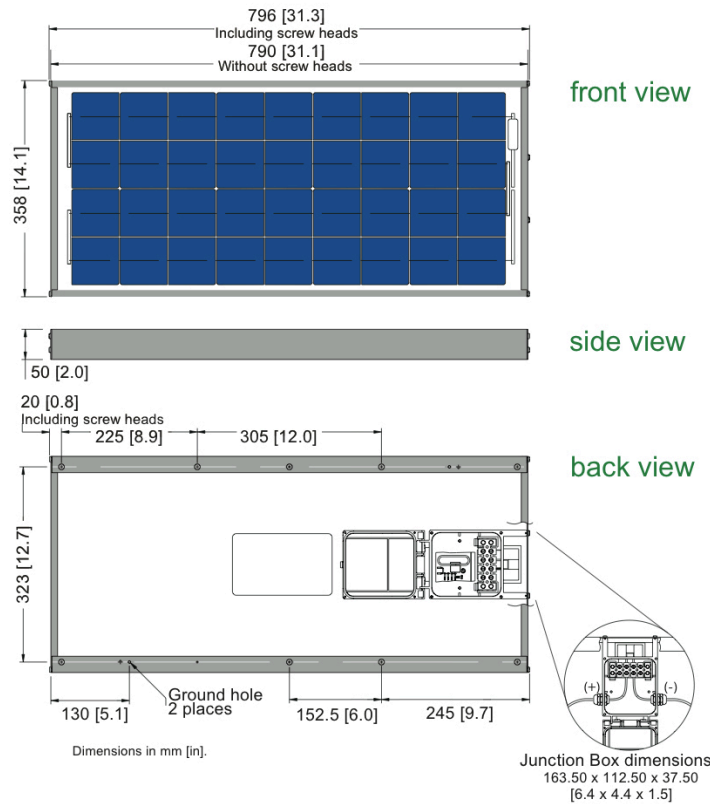
Certified according to the extended version of the IEC 61215 (ed. 2), EC 61215:2005-08 (Crystalline silicon terrestrial photovoltaic modules - Design qualification and type approval)

Certified according to IEC 61730-1 and IEC 61730-2 (ed. 1), EN 61730-1:2007-05 and EN 61730-2:2007-05. (photovoltaic module safety qualification, requirements for construction and testing).

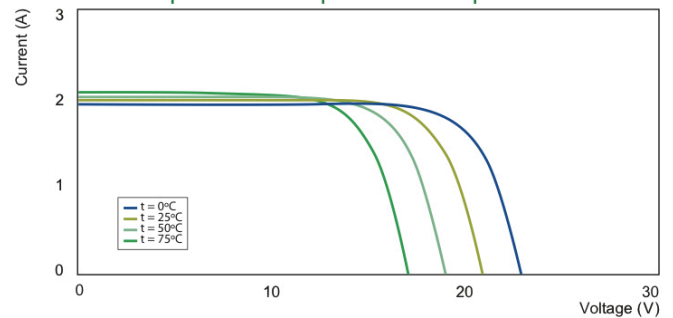
Listed to UL 1703 & ULC ORD-C1703 Standard for Safety by Intertek ETL. Class C Fire Rating.

Approved by Intertek ETL according to FM 3611, Dec 2004, and according to CAN/CSA C22.2 No. 213-M1987, 1st Edition, Reaffirmed 2004, for use in a Class I Division 2, Group A, B, C, D Hazardous (Classified) Location.

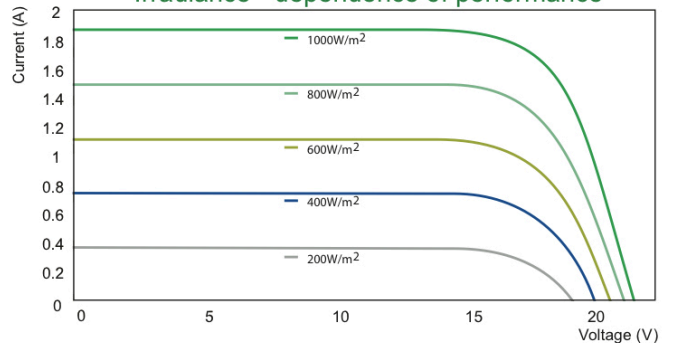
ISO 9001 factory certification ensures that our manufacturing facilities use proven manufacturing and control processes.



## Temperature - dependence of performance



## Irradiance - dependence of performance



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