



# SONALI SOLAR

**“ENERGY INSPIRED BY NATURE” SS 160 to 220 (12V) Series**



### Quality Product

All Manufactured modules are tested 100% by EL (Electroluminescence) during the Production Process & Free from micro cracks.

Our high-performance modules are highly efficient, reliable and provide optimal output. The company manufactures solar modules in compliance with global standard including MNRE, IEC 61215, 61730-1, 61730-2, 61701, UL 1703, ISO 9001:2008 & ISO 14001:2008 & 18001:2007.

### High Efficiency

High Module efficiency is obtaining top performance even in diffused light conditions. We are leaders in providing our customers with maximum sunlight conversion.

### Application Possibilities

Residential and Commercial rooftops, Car ports, Solar Farming, Balconies, Awnings, Street lights, Fences, and Canopies.

### Our Team

We have a team of qualified experts and engineers making sure that modules produce maximum power. We pride ourselves in caring for each individual customer needs with detailed attention. Our end goal is to give a highly efficient product with exceptional customer service.

### Guarantee

Our product is durable and has 25 years performance warranty. Integrated manufacturing of cells & modules in one production line guarantees optimum performance.

### RFID

RFID is an Radio Frequency Identification Technology - enables every individual modules to be uniquely identified. We can provide RFID tag as per customer's request.

### US Manufacturing Facility:

Sonali Energiees USA LLC.,  
Michigan, USA  
Tel: 201-568-1424  
Toll Free: 1.888.58.SOLAR  
info@sonalisolar.com

### US OFFICE:

Sonali Energiees USA LLC.,  
409 Grand Avenue, Suite 3,  
Englewood, NJ 07631  
Tel: 201-568-1424  
Toll Free: 1.888.58.SOLAR  
salesusa@sonalisolar.com

### Europe Office :

Sonali Solar Europe Limited  
Moore Stephens (South)  
City Gates, 2-4 South Gate,  
Chichester, W. Sussex,  
PO 19 8 DJ  
saleseurope@sonalisolar.com

### Manufacturing Facility:

Plot No. 180-199  
Surat Special Economic Zone  
Sachin-Dist. Surat 394230  
Gujarat, India  
Tel: +91 0261 2399910 / 2398007  
Mobile : +91 997 896 8011  
sales@sonalisolar.com  
marketing@sonalisolar.com



## Electrical Specifications

	160W (12v)	175W (12v)	180W (12v)	190W (12v)	200W (12v)	220W (12v)
Nominal Maximum Power (Pmax)						
Optimum Operating Voltage (Vmp)	17.64	17.64	17.64	17.64	17.64	17.64
Optimum Operating Current (Imp)	9.07	9.92	10.2	10.77	11.37	12.47
Open Circuit Voltage (Voc)	21.6	21.6	21.6	21.6	21.6	21.6
Short Circuit Current (Isc)	9.71	10.62	10.92	11.52	12.13	13.3

## Mechanical Specification

Module Dimensions (LXWXH)	1265X981X33 mm	1265X981X33 mm	1265X981X33 mm	1265X981X33 mm	1485X981X33 mm	1485X981X33 mm
Weight	17.5kg	17.5kg	17.5kg	17.5kg	18kg	18kg
Cell Arrangement	72 (12X6)	72 (12X6)	72 (12X6)	72 (12X6)	72 (12X6)	72 (12X6)
Front Cover (Tempered Glass)	3.2mm	3.2mm	3.2mm	3.2mm	3.2mm	3.2mm
Encapsulate	EVA	EVA	EVA	EVA	EVA	EVA
Back Cover	Composite sheet	Composite sheet	Composite sheet	Composite sheet	Composite sheet	Composite sheet
Junction Box	4 terminal	4 terminal	4 terminal	4 terminal	4 terminal	4 terminal
Mounting Holes Pitch (Y)-mm	285	285	285	285	285	285
Mounting Holes Pitch (X)-mm	940	940	940	940	940	940

\* Maximum System Voltage : 1000 V (IEC), 600 V (UL) \* Measurement Power Tolerance on Power  $\pm 3\%$ , 0 /+ Tolerance on Max power Available upon request.

\* Under Standard Test Conditions (STC) of irradiance of 1000W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25 °C

## Other Characteristics

Junction Box : Weather proof Nylon 6  
 Type of Cell : Mono / Multi Crystalline Silicone  
 Temp. Coefficients : Coefficient of Current ( $\alpha$ ) - (0.060 %/°C)  
 Coefficient of Voltage ( $\beta$ ) - (-0.35 %/°C)  
 Coefficient of Power ( $\lambda$ ) - (-0.45%/°C)

## Tested Operating Conditions:

Temperature Cycling Range : (-40°C~+85°C)  
 humidity Freeze, Damp Heat : 85 % RH

\* Certification : Complied to IEC 61215, 61730-1, 61730-2 & 61701, UL1703, MNRE Approved.

\* All Modules of 120Wp & Above are supplied with screw-less hollow section frames.

\* Due to constant product modifications, SONALI SOLAR reserves the right to amend.

\* Warranty : Up to 10 Years Limited Product Warranty

www.sonalisolar.com

## Mounting Details

All dimensions in mm and tolerances  $\pm 2$ mm

