

High-efficiency photovoltaic module using silicon nitride multicrystalline silicon cells.

Performance

Rated power (P_{max})	140W
Power tolerance	± 9%
Nominal voltage	12V
Limited Warranty ¹	25 years

Configuration

J SX 3140J Clear universal frame and standard J-Box

Electrical Characteristics²

	SX3140	SX3130
Maximum power (P_{max}) ³	140W	130W
Voltage at Pmax (V_{mp})	17.5V	17.3V
Current at Pmax (I_{mp})	8.0A	7.5A
Warranted minimum P_{max}	127.4W	118.3W
Short-circuit current (I_{sc})	8.2A	8.2A
Open-circuit voltage (V_{oc})	22.0V	22.0V
Temperature coefficient of I_{sc}	(0.065±0.015)%/ °C	
Temperature coefficient of V_{oc}	-(80±10)mV/°C	
Temperature coefficient of power	-(0.5±0.05)%/ °C	
NOCT (Air 20°C; Sun 0.8kW/m ² ; wind 1m/s)	47±2°C	
Maximum series fuse rating	15A (S); 20A (J)	
Maximum system voltage	600V (US NEC rating) 1000V (TÜV Rheinland rating) 1000V (IEC 61215 rating)	



Mechanical Characteristics

Dimensions Length: 1510mm (59.4") Width: 674mm (26.5") Depth: 50mm (1.97")

Weight 12.0 kg (26.5 pounds)

Solar Cells 36 cells (156mm x 156mm) in a 4x9 matrix connected in series

Junction Box J-Version junction box with 6-terminal connection block; IP 65, accepts PG 13.5, M20, ½ inch conduit, or cable fittings accepting 6-12mm diameter cable. Terminals accept 2.5 to 10mm² (8 to 14 AWG) wire.

Diodes **IntegraBus™** technology includes Schottky by-pass diodes integrated into the printed circuit board bus

Construction Front: High-transmission 3mm (1/8th inch) tempered glass; Back: Polyester; Encapsulant: EVA

Frame Clear anodized aluminum alloy type 6063T6 Universal frame; Color: silver

1. Module Warranty: 25-year limited warranty of 80% power output; 12-year limited warranty of 90% power output; 5-year limited warranty of materials and workmanship. See your local representative for full terms of these warranties.
2. These data represent the performance of typical SX 3130 products, and are based on measurements made in accordance with ASTM E1036 corrected to SRC (STC.)
3. During the stabilization process that occurs during the first few months of deployment, module power may decrease by up to 9% from typical P_{max} .

Quality and Safety

ESTI

Module power measurements calibrated to World Radiometric Reference through ESTI (European Solar Test Installation at Ispra, Italy)



Listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

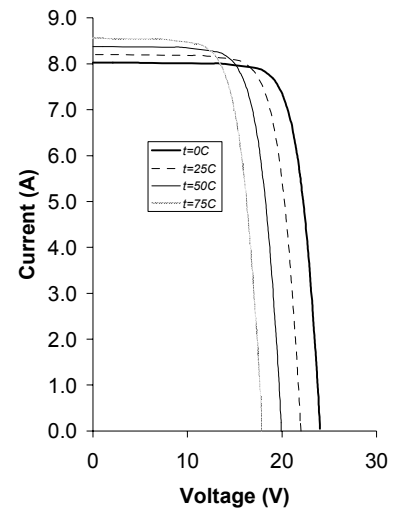


Approved by Factory Mutual Research in NEC Class 1, Division 2, Groups C & D hazardous locations (U)

Qualification Test Parameters

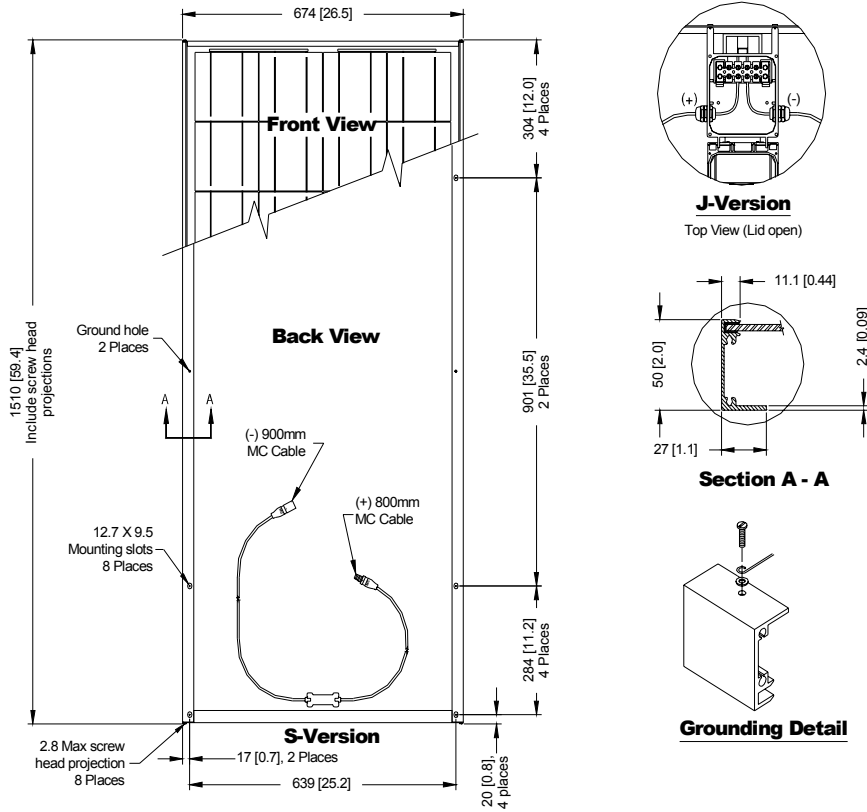
Temperature cycling range	-40°C to +85°C (-40°F to 185°F)
Humidity freeze, damp heat	85% RH
Static load front and back (e.g. wind)	2,400 pa (50psf)
Front loading (e.g. snow)	5,400 pa (113psf)
Hailstone impact	25mm Ø (1 inch) at 23 m/s (52mph)

SX 3130 I-V Curves



Module Diagram

Dimensions in brackets are in inches. Un-bracketed dimensions are in millimeters. Overall tolerances $\pm 3\text{mm}$ (1/8")



Included with each module: self-tapping grounding screw, instruction sheet, and warranty document.

Note: This publication summarizes product warranty and specifications, which are subject to change without notice. Additional information may be found on our web site: www.bpsolar.com