

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

Performance

Rated power (P_{max})	190W
Nominal voltage	16V
Limited Warranty ¹	25 years

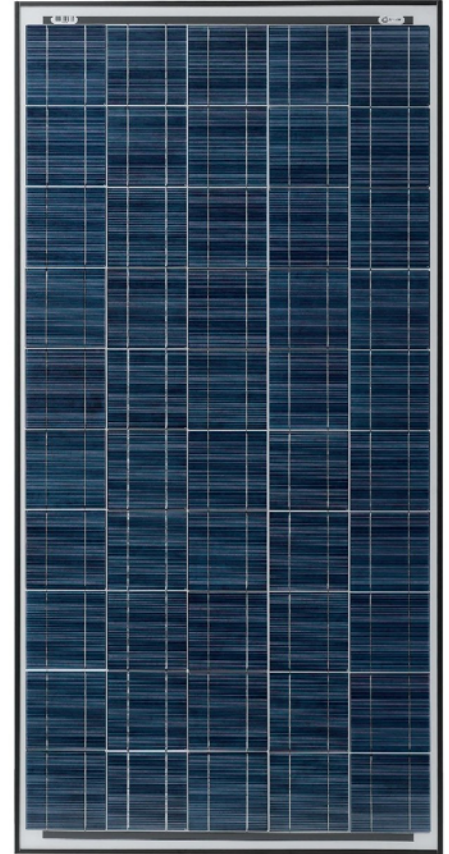
Configuration

SX3190W	Bronze frame with output cables and polarized Multicontact (MC) connectors
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Electrical Characteristics²

SX3190

Maximum power (P_{max}) ³	190W
Voltage at Pmax (V_{mp})	24.3V
Current at Pmax (I_{mp})	7.82A
Warranted minimum P_{max}	172.9W
Short-circuit current (I_{sc})	8.5A
Open-circuit voltage (V_{oc})	30.6V
Temperature coefficient of I_{sc}	(0.065±0.015)%/ °C
Temperature coefficient of V_{oc}	-(111±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
Maximum system voltage	600V (U.S. NEC rating)




Mechanical Characteristics

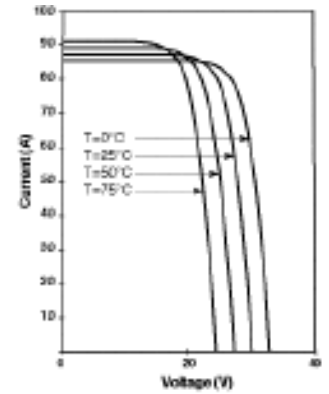
Dimensions	Length: 1680 (66.14")	Width: 837mm (32.95")	Depth: 50mm (1.97")
Weight	15.9 kg (35.05 pounds)		
Solar Cells	50 cells (156mm x 156mm) in a 5x10 matrix connected in series		
Output Cables	RHW-2 AWG# 12 (4mm ²) cable with polarized weatherproof DC rated Multicontact connectors; asymmetrical lengths - 1250mm (-) and 800mm (+)		
Diodes	IntegraBus™ technology includes Schottky by-pass diodes integrated into the printed circuit board bus		
Construction	Front: High-transmission and anti-reflective 3.2mm (1/8 th inch) tempered ARC glass; Back: White Polyester; Encapsulant: EVA		
Frame	Anodized aluminum alloy type 6063T6 Universal frame; Color: bronze		

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. This data represents the performance of typical SX 3190 products, and is 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 1% 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)

SX 3190 I-V Curves

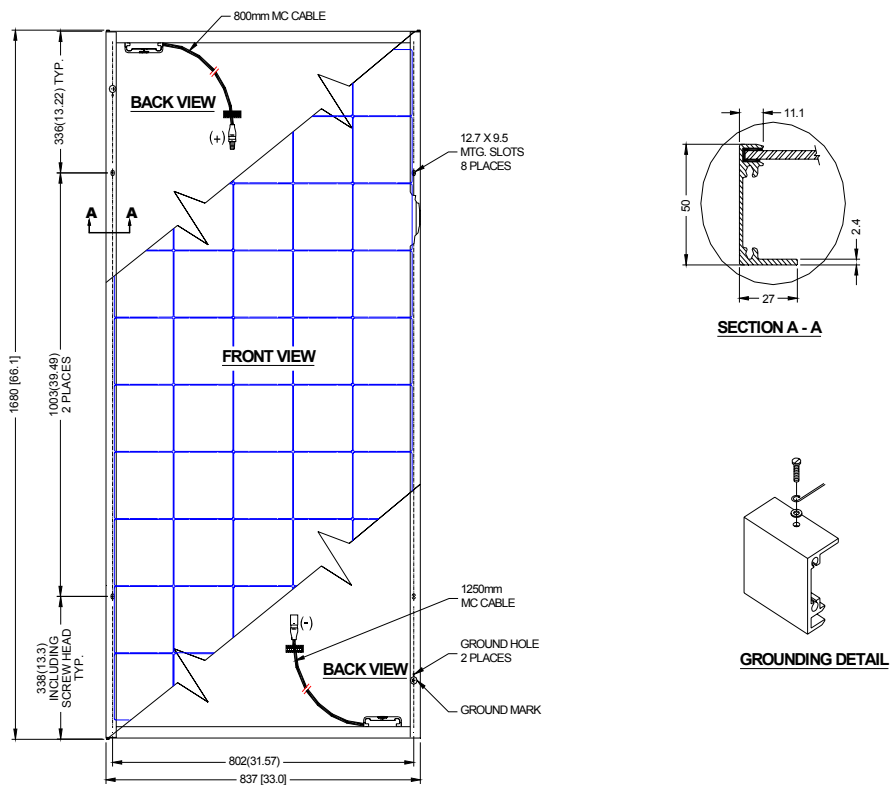


Qualification Test Parameters

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)

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 documents.

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.us