

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

# **Performance**

 $\begin{array}{ll} \text{Rated power } (P_{max}) & 10 W \\ \text{Power tolerance} & \pm 10 \% \\ \text{Nominal voltage} & 12 V \\ \text{Limited Warranty}^1 & 12 \text{ years} \end{array}$ 

## Configuration

M Multimount frame with lo-pro J-Box and output cable

J Clear universal frame and standard J-Box

Electrical Characteristics <sup>2</sup>	SX310
Maximum power $(P_{max})^3$	10W
Voltage at Pmax (V <sub>mp</sub> )	16.8V
Current at Pmax $(I_{mp})$	0.59A
Warranted minimum P <sub>max</sub>	9W
Short-circuit current (I <sub>sc</sub> )	0.69A
Open-circuit voltage (V <sub>oc</sub> )	21.0V
Temperature coefficient of I <sub>sc</sub>	(0.065±0.015)%/°C
Temperature coefficient of V <sub>oc</sub>	-(80±10)mV/°C
Temperature coefficient of power	-(0.5±0.05)%/°C
NOCT (Air 20°C; Sun 0.8kW/m <sup>2</sup> ; wind 1m/s)	47±2°C
Maximum series fuse rating	1A (M/J)
Maximum system voltage	50V (US NEC rating)
	)



#### **Mechanical Characteristics**

Dimensions	M J	Length: 421mm (16.57") Length: 425mm (16.73")	Width: 269mm (10.59") Width: 273mm (10.74")	Depth: 23mm (0.90") Depth: 50mm (1.97")			
Weight	M J	1.5 kg (3.3 pounds) 1.9 kg (4.2 pounds)					
Solar Cells		36 cells (57mm x 38) in a 4x9 matrix connected in series					
Junction Box	J	J-Version junction box with 4-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 10mm <sup>2</sup> (8 to 14 AWG) wire.					
Output Cable	es M	AWG# 18 (0.75mm <sup>2</sup> ) 2 core	ITC/PLTC; length - 4572m	n			
Construction		Front: High-transmission 3mm (1/8 <sup>th</sup> inch) tempered glass; Back: Polyester; Encapsulant: EVA					
Frame	M J	M Clear anodized aluminum alloy type 6063T6 Multimount frame; Color: silver  J Clear anodized aluminum alloy type 6063T6 Universal frame; Color: silver					

<sup>1.</sup> Module Warranty: 12-year limited warranty of 90% power output; 2-year limited warranty of materials and workmanship. See your local representative for full terms of these warranties.

<sup>2.</sup> These data represent the performance of typical BP modules, and are based on measurements made in accordance with ASTM E1036 corrected to SRC (STC.)

<sup>3.</sup> During the stabilization process that occurs during the first few months of deployment, module power may decrease by approx. 1% from typical  $P_{max}$ .

## **Quality and Safety**



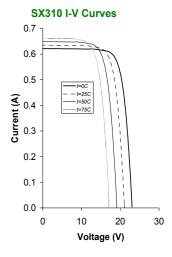
Listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)



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

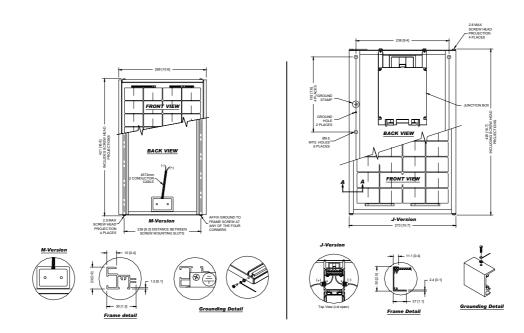
## **Qualification Test Parameters**

Temperature cycling range  $-40^{\circ}$ C to  $+85^{\circ}$ C ( $-40^{\circ}$ F to  $185^{\circ}$ 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) 25mm Ø (1 inch) at 23 m/s (52mph) Hailstone impact



## **Module Diagram**

Dimensions in brackets are in inches. Un-bracketed dimensions are in millimeters. Overall tolerances ±3mm (1/8")



Included with each module: self-tapping grounding screw (J-Version), 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



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