

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

Performance

Rated power (P_{max})	20W
Power tolerance	$\pm 10\%$
Nominal voltage	12V
Limited Warranty ¹	12 years

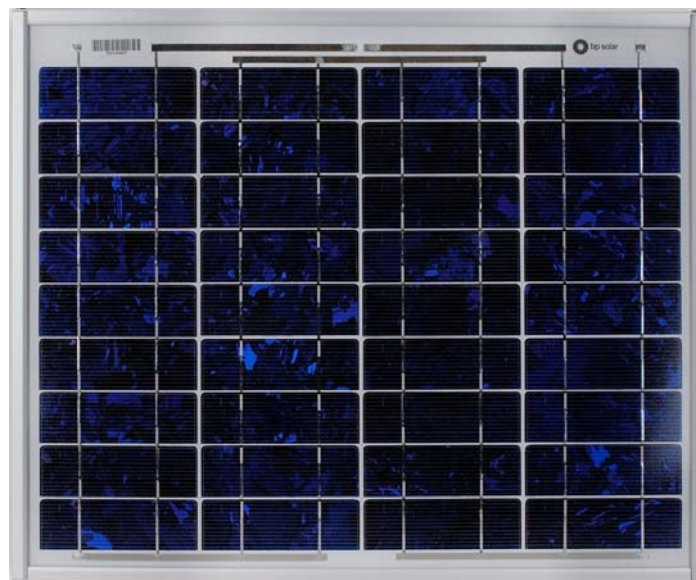
Configuration

- M** Multimount frame with lo-pro J-Box and output cable
- J** Clear universal frame and standard J-Box

Electrical Characteristics²

SX320

Maximum power (P_{max}) ³	20W
Voltage at P_{max} (V_{mp})	16.8V
Current at P_{max} (I_{mp})	1.19A
Warranted minimum P_{max}	18W
Short-circuit current (I_{sc})	1.29A
Open-circuit voltage (V_{oc})	21.0V
Temperature coefficient of I_{sc}	$(0.065 \pm 0.015)\%/^{\circ}C$
Temperature coefficient of V_{oc}	$-(80 \pm 10)mV/^{\circ}C$
Temperature coefficient of power	$-(0.5 \pm 0.05)\%/^{\circ}C$
NOCT (Air 20°C; Sun 0.8kW/m ² ; wind 1m/s)	47 $\pm$ 2°C
Maximum series fuse rating	3A
Maximum system voltage	50V (US NEC rating)



Mechanical Characteristics

Dimensions	M	Length: 421mm (16.6")	Width: 501mm (19.7")	Depth: 23mm (0.9")
	J	Length: 425mm (16.7")	Width: 502mm (19.7")	Depth: 50mm (1.97")
Weight	M	2.5 kg (5.5 pounds)		
	J	3.0 kg (6.6 pounds)		
Solar Cells		36 cells (38mm x 114mm) 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 ² (8 to 14 AWG) wire		
Output Cables	M	AWG# 18 (0.75mm ²) 2 core ITC/PLTC; length - 4572mm		
Construction		Front: High-transmission 3mm (1/8 th inch) tempered glass; Back: Polyester; Encapsulant: EVA		
Frame	M	Clear anodized aluminum alloy type 6063T6 Multimount frame; Color: silver		
	J	Clear anodized aluminum alloy type 6063T6 Universal frame; Color: silver		

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



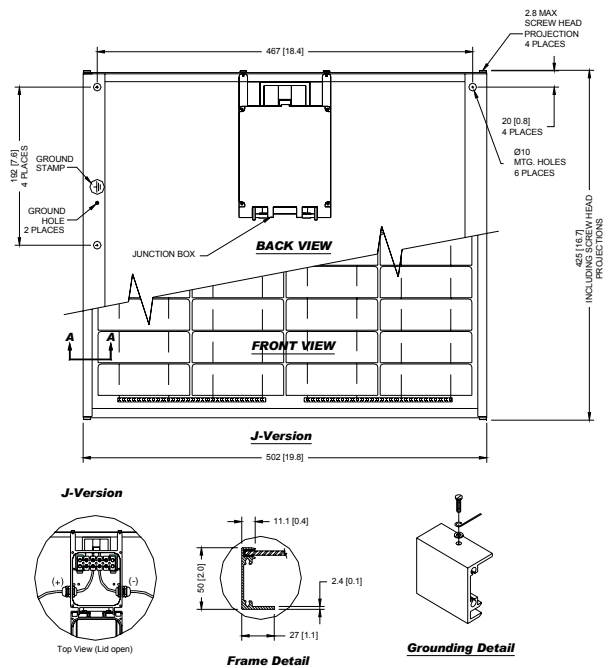
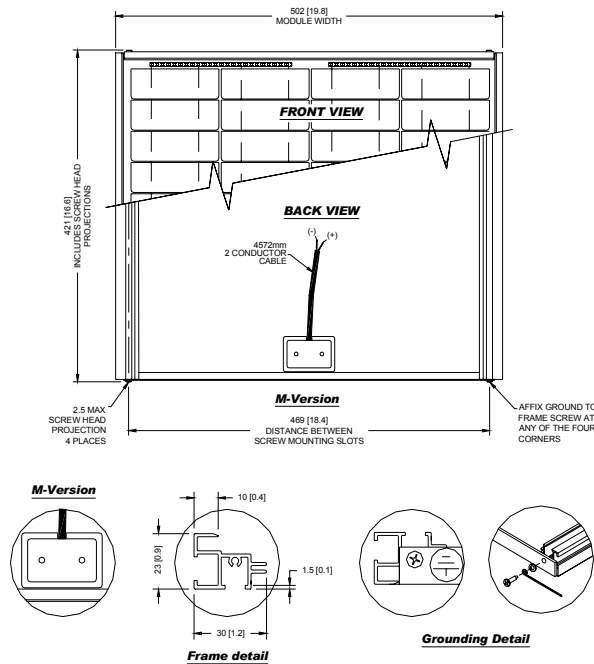
Approved by Factory Mutual Research in NEC Class 1, Division 2,
Groups C & D hazardous locations.

Qualification Test Parameters

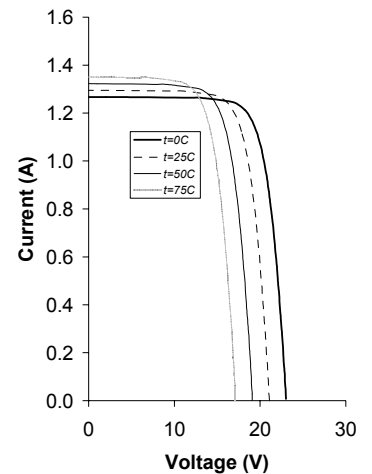
Temperature cycling range	-40°C to +85°C (-40°F to 185°F)
Humidity freeze, damp heat	85% RH
Static load front and back (e.g. wind)	2,400 pa (50psf)
Front loading (e.g. snow)	5,400 pa (113psf)
Hailstone impact	25mm Ø (1 inch) at 23 m/s (52mph)

Module Diagram

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



SX320 I-V Curves



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



For product and purchasing inquiries contact:

ecoDIRECT

CLEAN ENERGY SOLUTIONS

www.ecodirect.com