

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 |

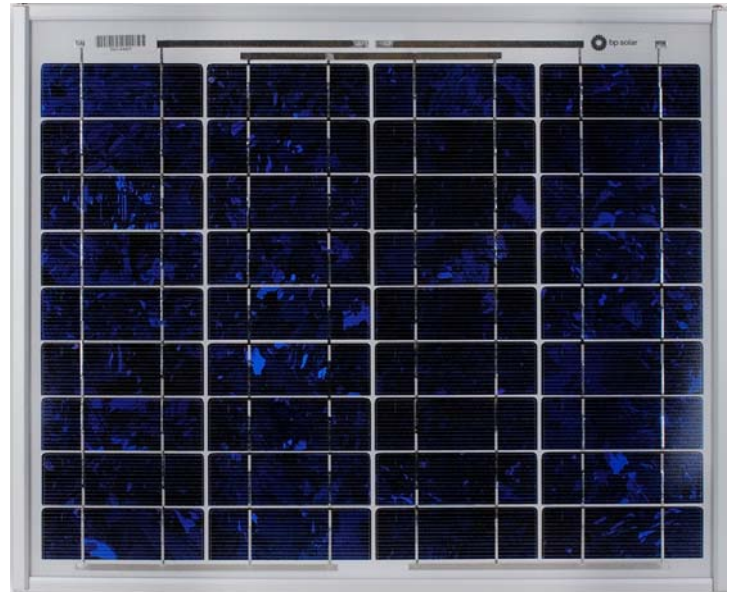
Configuration

- 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 Pmax (V_{mp}) | 16.8V |
| Current at Pmax (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 to UL 1703 Standard for safety by Intertek ETL (Class C fire rating)

Approved by Intertek ETL for use in NEC Class 1, Division 2, Groups A to D hazardous locations.

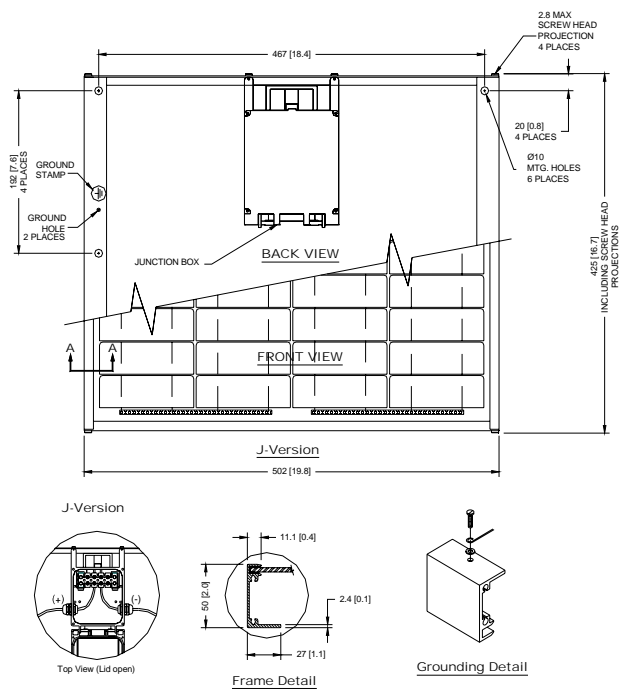
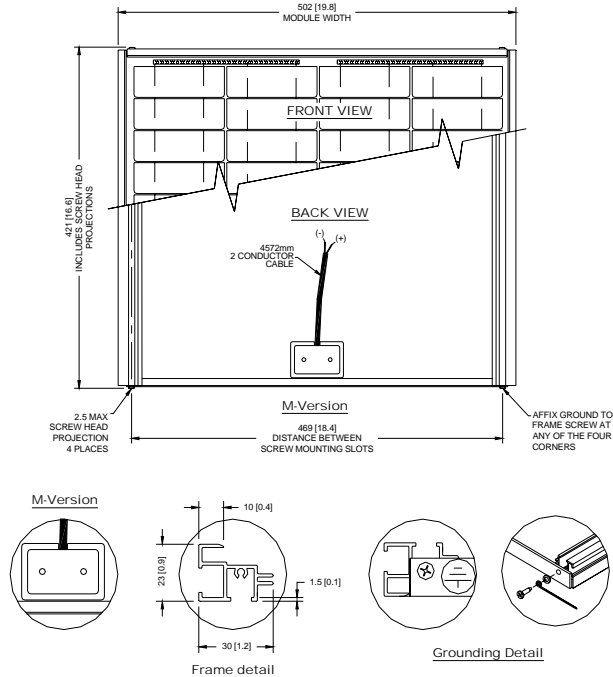
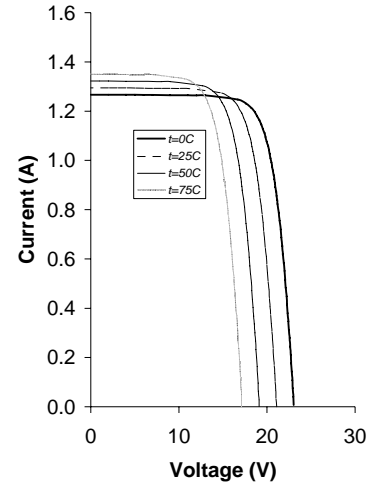
Qualification Test Parameters

| | |
|--|-----------------------------------|
| 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