

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

Performance

| | |
|-------------------------------|----------|
| Rated power (P_{max}) | 50W |
| Power tolerance | ± 10% |
| Nominal voltage | 12V |
| Limited Warranty ¹ | 25 years |

Configuration

J Clear universal frame and standard J-Box

Electrical Characteristics²

| | BP 350 |
|---|-----------------------------------|
| Maximum power (P_{max}) ³ | 50W |
| Voltage at Pmax (V_{mp}) | 17.5V |
| Current at Pmax (I_{mp}) | 2.9A |
| Warranted minimum P_{max} | 45W |
| Short-circuit current (I_{sc}) | 3.2A |
| Open-circuit voltage (V_{oc}) | 21.8V |
| 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 | 20A |
| Maximum system voltage | 50V (U.S. NEC & IEC 61215 rating) |






Mechanical Characteristics

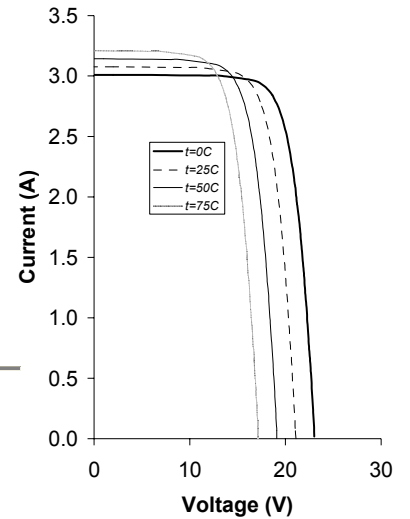
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|--------------|--|----------------------|---------------------|
| Dimensions | Length: 839mm (33") | Width: 537mm (21.1") | Depth: 50mm (1.97") |
| Weight | 6.0 kg (13.2 pounds) | | |
| Solar Cells | 72 cells (42mm x 125mm) in a 4x18 matrix connected in 2 parallel strings of 36 in series | | |
| Junction Box | 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. | | |
| Diodes | One 9A, 45V Schottky by-pass diode included | | |
| Construction | Front: High-transmission 3mm (1/8 th inch) tempered glass; Back: White 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. This data represents the performance of typical BP modules, 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 approx. 1% from typical P_{max} .

Quality and Safety

| | |
|---|---|
|  | Manufactured in ISO 9001-certified factories; conforms to European Community Directives 89/33/EEC, 73/23/EEC, 93/68/EEC; certified to IEC 61215 |
| ESTI | Module power measurements calibrated to World Radiometric Reference through ESTI |
|  | 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. |

BP350 I-V Curves

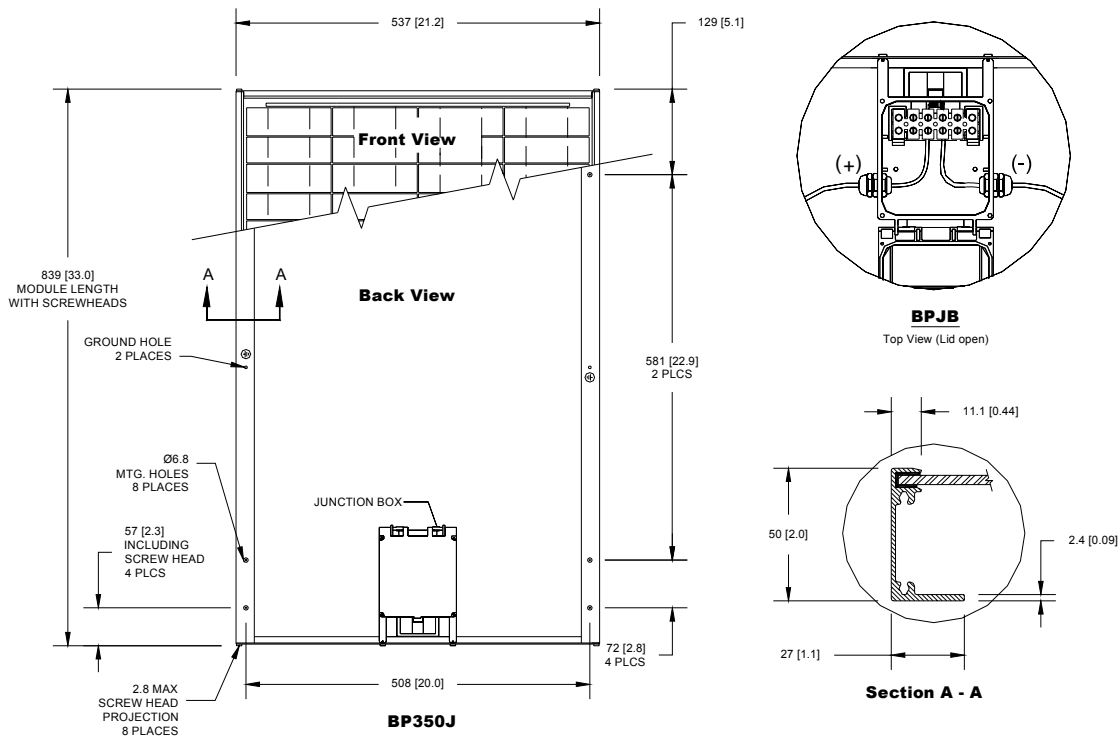


Qualification Test Parameters

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|--|---------------------------------|
| 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) | 50psf (2400 pascals) |
| Front loading (e.g. snow) | 113psf (5400 pascals) |
| Hailstone impact | 25mm (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 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