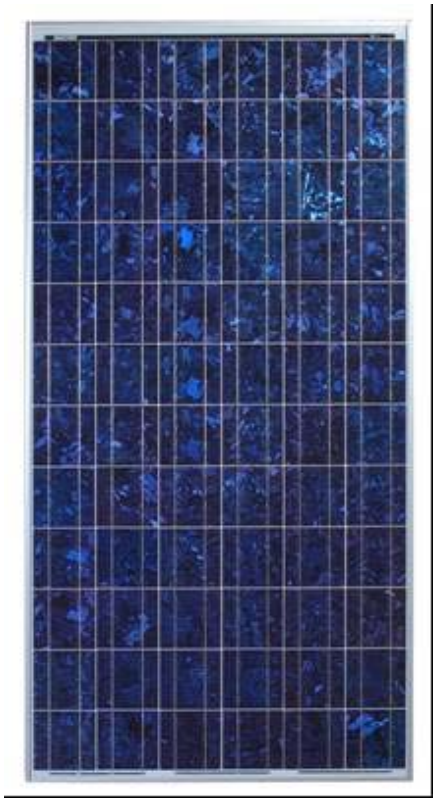
BP 3180

180 Watt Photovoltaic Module

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



Performance

Rated power (P_{max})	180W
Power tolerance	± 3%
Nominal voltage	24V
Limited Warranty[1]	25 years

Configuration

N BP 3180N Clear universal frame with Wirehold J-Box and polarized Multicontact (MC) connectors

Electrical Characteristics[2]

	BP3180
Maximum power (P_{max})[3]	180 W
Voltage at Pmax (V_{mp})	35.6V
Current at Pmax (I_{mp})	5.05A
Warranted minimum P_{max}	174.6W
Short-circuit current (I_{sc})	5.4 A
Open-circuit voltage (V_{oc})	43.6 V
Temperature coefficient of I_{sc}	(0.065±0.015)%/ °C
Temperature coefficient of V_{oc}	-(265±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	1000V (IEC 61730 Installation Class A)

Mechanical Characteristics

Dimensions	Length: 1593mm (62.8”) Width: 790mm (31.1”) Depth: 50mm (1.97”)
Weight	15.4 kg (33.9 pounds)
Solar Cells	72 cells (125mm x 125mm) in a 6x12 matrix connected in series
Output Cables	RHW-2 AWG# 12 (4mm^2) cable with polarized weatherproof DC rated Multicontact connectors with enhanced clip connection at module end; Asymmetrical lengths - 1250mm (-) and 800mm (+)
Diodes	***IntegraBus™*** technology includes Schottky by-pass diodes integrated into the printed circuit board bus
Construction	Front: High-transmission 3.2mm tempered anti reflective coated glass; White Back-sheet; Encapsulant: EVA
Frame	Clear anodized, aluminum alloy, 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. These data represent 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 up to 1% from typical P_{max}. All solar modules are individually tested prior to shipment; an allowance is made within our factory measurement to account for the typical power degradation (LID effect) which occurs during the first few days of deployment.

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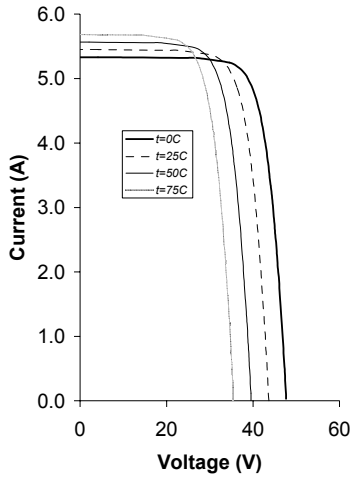
Quality and Safety

- Certified according to the extended version of the IEC 61215:2005 (Crystalline silicon terrestrial photovoltaic modules – Design qualification and type approval)
- Certified according to IEC 61730-1 and IEC 61730-2. (Photovoltaic module safety qualification, requirements for construction and testing.
- Listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating).
- Module electrical measurements are calibrated to World radiometric reference via third party international laboratories.
- Manufactured in ISO 9001 certified factories.

BP 3180 I-V Curves

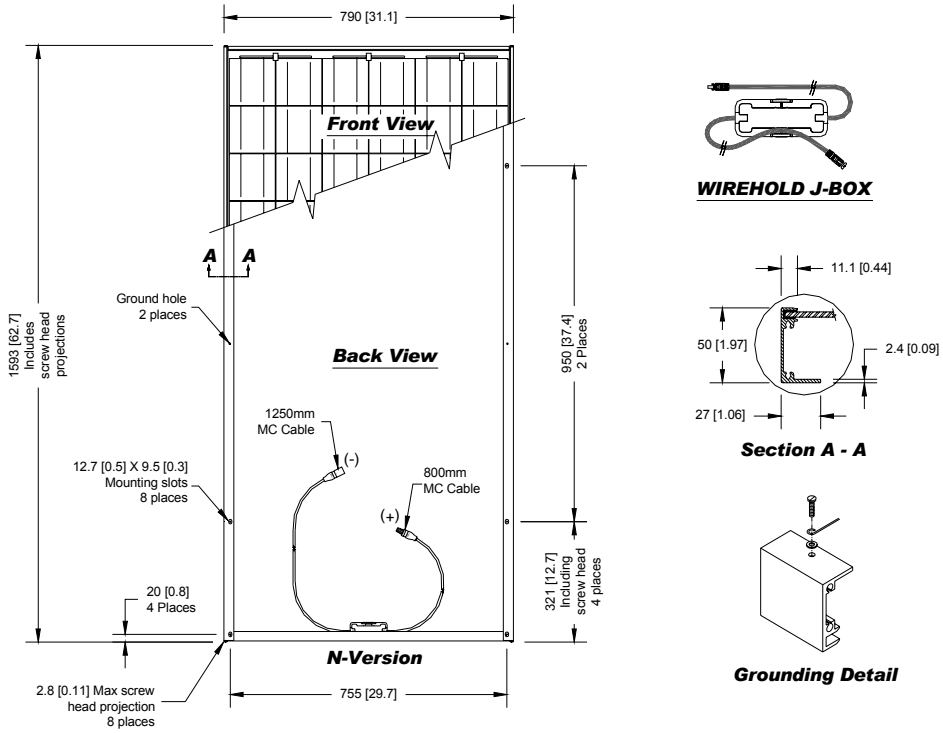


Qualification Test Parameters

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)	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 ±3mm (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**

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