

175 watt photovoltaic module

BP 3175

The BP 3175 is an advanced 175 watt module utilising anti-reflective coatings on both its multicrystalline cells and glass. The module also features IntegraBus™ technology which is a printed circuit board with integrated diodes that has been designed to ensure reliability whilst conducting higher currents. The BP 3175 has been designed for grid connect solar applications, such as large commercial roofs, residential systems and photovoltaic (PV) power plants, as well as remote off-grid applications such as telecommunications, water pumping and residential systems. This 72-cell module offers superior value – greater performance from a white polyester back-sheet and innovative, high-efficiency cells.

Performance	BP 3175	BP 3170
Rated power	175W	170W
Power tolerance	±3%	±3%
Nominal voltage	24V	24V
Warranty	90% of minimum warranted power output over 12 years 80% of minimum warranted power output over 25 years Free from defects in materials and workmanship for 5 years	

Configuration

BP 3175N	Universal frame, a sealed junction box with output cables and polarised Multi-Contact (MC) connectors
BP 3175J	Universal frame with an accessible junction box for cable connection

Qualification test parameters

Temperature cycling range	-40°C to +85°C
Damp heat test	85°C and 85% relative humidity
Front and rear static load test (eg: wind)	2400Pa* (equivalent to 245kg/m ² load distributed)
Front load test (eg: snow)	5400Pa* (equivalent to 550kg/m ² load distributed)
Hailstone impact test	25mm hail at 23m/s

* Module mounted according to installation instructions

Quality and safety

- Manufactured in ISO 9001 and ISO 14001 certified factories
- Conforms to European Community Directive 89/33/EEC, 73/23/EEC, 93/68/EEC
- Certified to IEC 61215

Module power measurements calibrated to World Radiometric Reference through ESTI (European Solar Test Installation at Ispra, Italy)

Framed modules certified by TÜV Rheinland as Safety Class II (IEC 60364) equipment for use in systems up to 1000 VDC

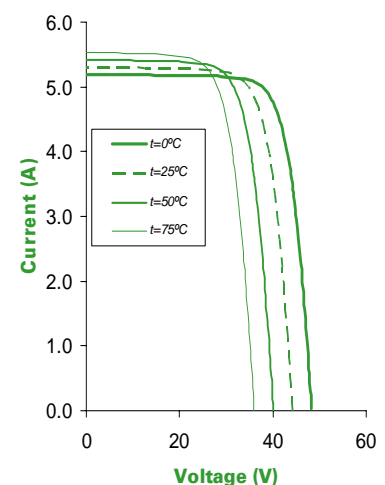
Framed modules listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

Approved by Factory Mutual Research in NEC Class 1, Division 2, Groups C and D hazardous locations (BP ####J)



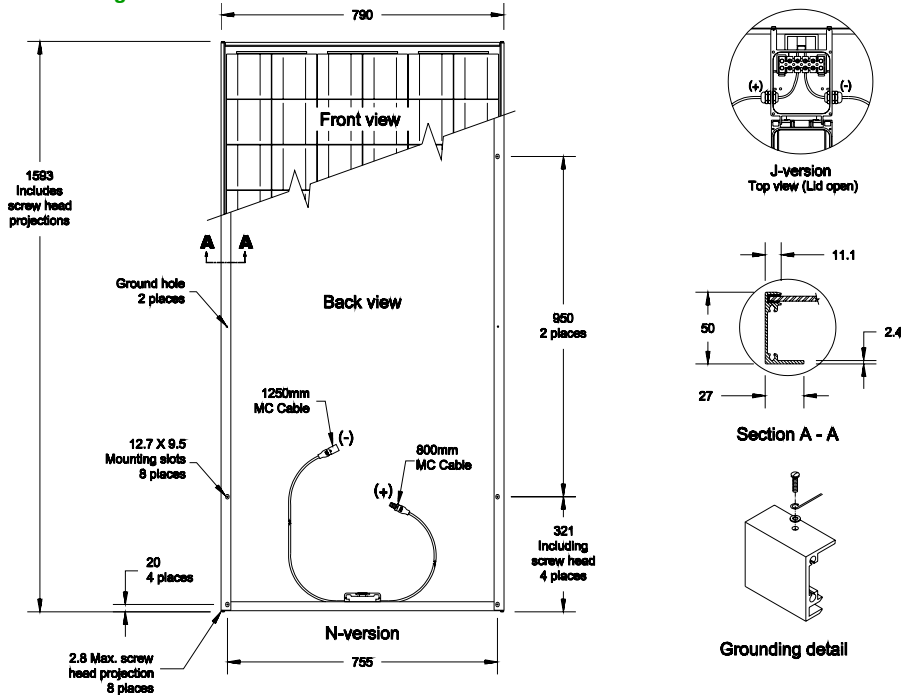
BP 3175

BP 3175 I-V Curves



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Module diagram

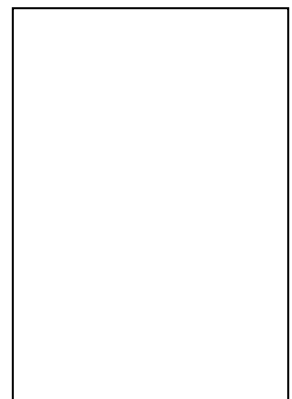


Typical electrical characteristics	BP 3175	BP 3170 ³
Rated power (P_{max}) ¹	175W	170W
Warranted minimum power	170W	165W
Voltage at P_{max} (V_{mp})	36.1V	35.6V
Current at P_{max} (I_{mp})	4.9A	4.8A
Short circuit current (I_{sc})	5.3A	5.2A
Open circuit voltage (V_{oc})	44.2V	44.2V
Temperature coefficient of I_{sc}	(0.065±0.015)%/°C	
Temperature coefficient of V_{oc}	-(160±20)mV/°C	
Temperature coefficient of P_{max}	-(0.5±0.05)%/°C	
NOCT ²	47±2°C	
Maximum series fuse rating	15A (BP 3175N) / 20A (BP 3175J)	
Maximum system voltage	1000V (IEC 61215 rating) 1000V (TÜV Rheinland rating)	

Mechanical characteristics BP 3175N/BP 3175J⁴

Dimensions	1593 x 790 x 50mm (overall tolerances +/-3mm)
Weight	15.4kg
Frame	Clear anodised aluminium, alloy type 6063T6. Colour: silver.
Solar cells	72 cells (125mm x 125mm) configured geometrically for a 12 x 6 matrix connected in series.
Output cables (BP 3175N)	RHW AWG# 12 (3.3mm ²) cable with polarised weatherproof DC rated MC III connectors; asymmetrical lengths 1250 (-) and 800mm (+).
Junction box (BP 3175J)	IP65 junction box with four terminal screw connection block, accepts PG 13.5, M20, 13mm conduit, or cable fittings accepting 6–12mm diameter cable. Terminals accept 2.5–10mm ² (8 to 14 AWG) wire.
Diodes	IntegraBus™ technology includes Schottky bypass diode integrated into the printed circuit board bus.
Construction	Front: high transmission 3.2mm tempered anti-reflective coated glass. Rear: white polyester; encapsulant: EVA.

Your BP Solar Dealer:



1. Standard test conditions (STC), irradiance of 1000W/m² at an AM1.5G solar spectrum and a cell temperature of 25°C.
 2. Normal operating cell temperature (NOCT) air temperature of 20°C; irradiance 800W/m²; wind speed 1m/s.
 3. Power of solar cells varies in the normal course of production; the BP 3170 is assembled using cells of slightly lower power than the BP 3175.
 4. The mechanical characteristics of the BP 3175 and BP 3170 are identical.