

175 Watt Photovoltaic Module

BP 4175

The BP 4175 is an advanced 175W module utilising monocrystalline cells with anti-reflective SiN coating. The BP 4175 has been especially designed for grid connect applications such as large commercial roofs, residential systems, photovoltaic power plants along with remote off-grid applications such as telecommunications, water pumping and home systems. This 72 cell module offers a superior price – performance, with a white polyester back sheet and innovative, larger high-efficiency cells, providing superior power density.

Performance	BP 4175	BP 4165
Rated power	175W	165W
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 4175S	Universal frame, a sealed junction box with output cables and polarised Multicontact (MC) connectors
BP 4175J	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 & rear static load test (eg: wind)	2400 Pa
Front load test (eg: snow)	5400 Pa
Hailstone impact test	25mm hail at 23m/s

Quality and Safety

- Manufactured in ISO 9001 and ISO 14003 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

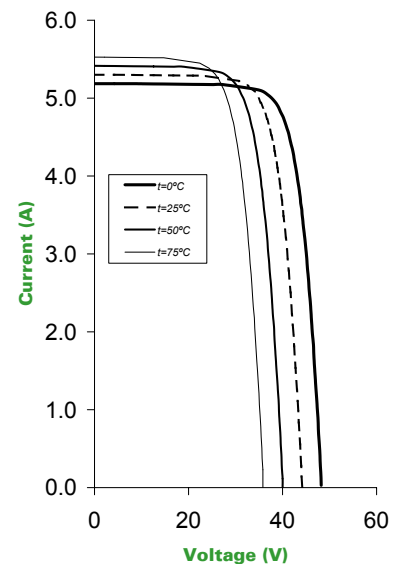
Framed modules listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

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



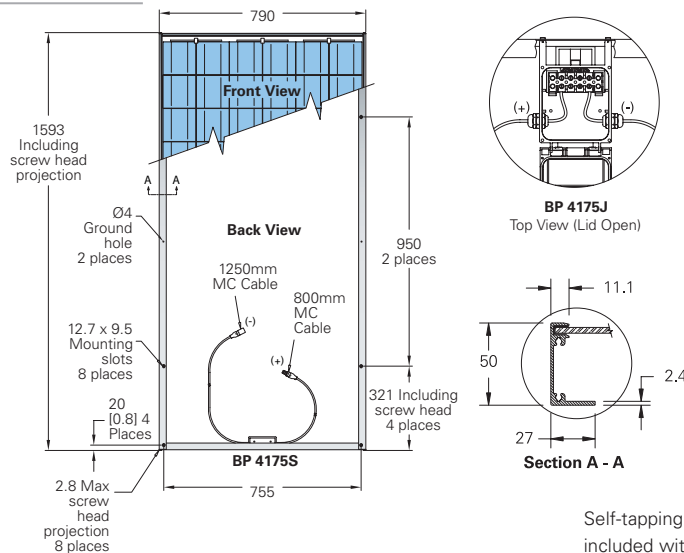
BP 4175

BP 4175 I-V Curves



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Module Diagram



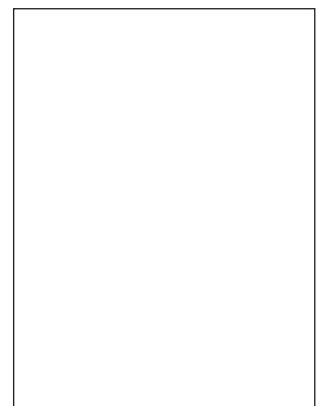
Typical Electrical Characteristics

	BP 4175	BP 4165 ³
Rated Power (P_{max}) ¹	175W	165W
Warranted minimum power	170W	160W
Voltage at P_{max} (V_{mp})	35.4V	34.3V
Current at P_{max} (I_{mp})	4.9A	4.8A
Short circuit current (I_{sc})	5.5A	5.4A
Open circuit voltage (V_{oc})	44.5V	43.7V
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 4175S) / 20A (BP 4175J)	
Maximum system voltage	600V (IEC 61215 rating) 1000V (TÜV Rheinland rating)	

Mechanical Characteristics

	BP 4175S / BP4175J ⁴
Dimensions (mm) (Overall tolerances +/-3mm)	1593 x 790 x 50
Weight (kg)	15.4
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 4175S)	RHW AWG# 12 (4mm ²) cable with polarised weatherproof DC rated Multicontact (MC) connectors; asymmetrical lengths 1250 (-) and 800mm (+).
Junction box (BP 4175J)	IP65 junction box with 4 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	Three 9A, 45V Schottky by-pass diodes included.
Construction	Front: High transmission 3mm tempered glass Rear: White polyester; Encapsulant: EVA.

Your BP Solar Distributor:



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 4165 is assembled using cells of slightly lower power than the BP 4175.
4. The mechanical characteristics of the BP 4165 and BP 4175 are identical.