

175 watt photovoltaic module

BP 4175

The BP 4175 is an advanced monocrystalline 175W solar module that incorporates anti-reflective coated cells and glass to generate more energy (more kWh per kWp) in your installation. This module has undergone the most rigorous testing to ensure reliable long term performance and is certified to comply with the latest safety standards (IEC 61730 & UL 1703). Three bypass diodes mounted on our IntegraBus™ circuit board and laminated in the module provide effective protection of the solar cells from overheating when shaded and ensure long term reliability. All interconnections are made using lead free soldering making these modules even friendlier with the environment.

Performance

| | |
|-----------------|--|
| Rated power | 175W |
| Tolerance | -3/+5% |
| Nominal voltage | 24V |
| Warranty* | 90% power output over 12 years 80% power output over 25 years Free from defects in materials and workmanship for 5 years |

*Refer to BP Solar's Warranty document for terms and conditions

Configuration

| | |
|----------|---|
| BP 4175N | Universal frame, a sealed junction box with output cables and polarised Multicontact (MC III) connectors. |
| BP 4175J | Universal frame with an accessible junction box for cable connection. |

Qualification test parameters

| | |
|--|--|
| Temperature cycling range | -40°C to +85°C for 200 cycles |
| Damp heat test | 85°C and 85% relative humidity for 1000h |
| Front & rear static load test (eg: wind) | 2400Pa (equivalent to 245kg/m ² load distributed) |
| Front load test (eg: snow and wind) | 5400Pa* (equivalent to 550kg/m ² load distributed) |
| Hailstone impact test | 25mm hail at 23m/s from 1m distance |
| Impulse voltage test | 8000 V waveform impulse according to high voltage test techniques IEC 60060-1 standard |
| Reverse current overload test | 135% of the overcurrent protection rating for two hours |

*When mounted in accordance with BP Solar's installation instructions.

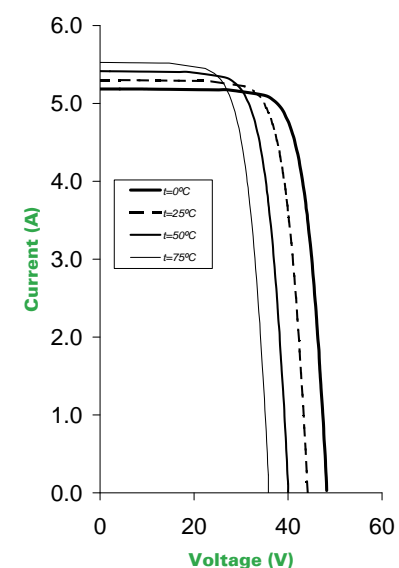
Quality and safety

- Conforms to European directives.
- 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 modules safety qualification, requirements for construction and testing).
- Listed by Underwriter's Laboratories for electrical and fire safety (UL 1703 - Class C fire rating).
- Module electrical measurements are calibrated to World radiometric reference via third party international laboratories.
- Manufactured in ISO 9001 and ISO 14001 certified factories.
- This data sheet complies with the requirements of EN 50380.



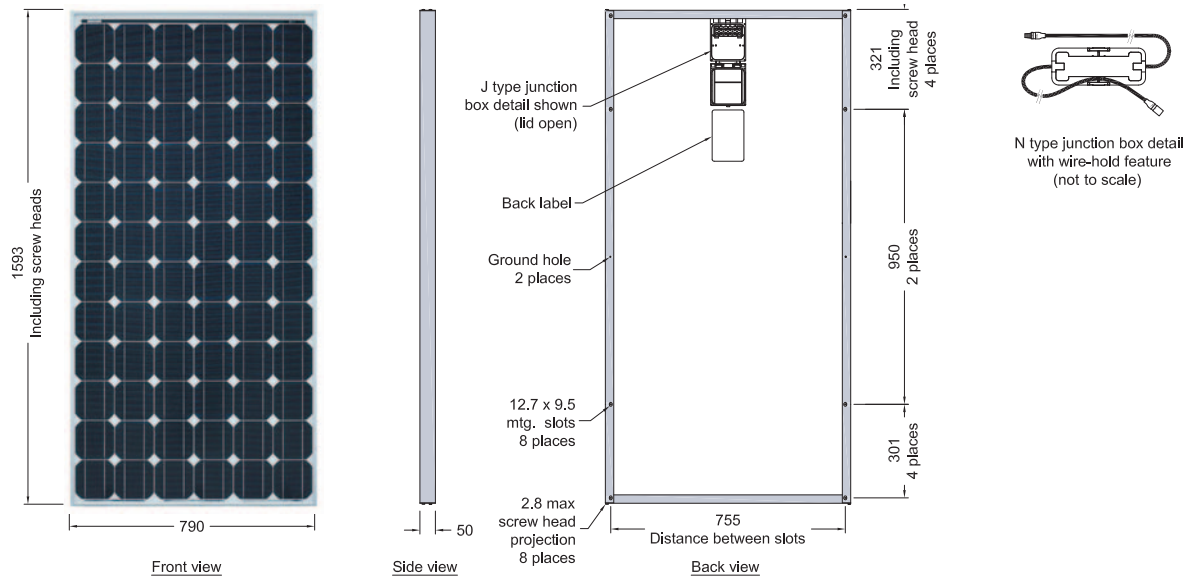
BP 4175

BP 4175 I-V Curves



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Module diagram



Electrical characteristics

1000W/m² (STC¹)

800W/m² (NOCT²)

| | | |
|--|-------|-------|
| Maximum Power (P _{max}) | 175W | 126W |
| Voltage at P _{max} (V _{mp}) | 35.4V | 31.5V |
| Current at P _{max} (I _{mp}) | 4.94A | 3.9A |
| Short circuit current (I _{sc}) | 5.54A | 4.4A |
| Open circuit voltage (V _{oc}) | 43.6V | 39.7V |

| | |
|---|----------------------------------|
| Efficiency reduction at 200W/m ² | <3% reduction (efficiency 13.5%) |
| Limiting reverse current | 5.45A |
| Temperature coefficient of I _{sc} | (0.065±0.015)%/°C |
| Temperature coefficient of V _{oc} | -(0.36±0.05)%/°C |
| Temperature coefficient of P | -(0.5±0.05)%/°C |
| NOCT ³ | 47±2°C |
| Maximum series fuse rating | 15A |

Application class (According to IEC 61730:2007) Class A (1000V)

¹ Standard test conditions (STC), irradiance of 1000W/m² at an AM1.5G solar spectrum and a cell temperature of 25°C.

² 800W/m², NOCT, AM 1.5G solar spectrum.

³ NOCT, Nominal Operating Cell Temperature sun 800W/m², air 20°C, winds speed 1m/s.

Mechanical characteristics

| | |
|-----------------|---|
| Solar cells | 72 monocrystalline (125mm x 125mm) connected in series. |
| Front cover | High transmission 3.2mm tempered anti-reflective coated glass. |
| Encapsulant | EVA |
| Back cover | White polyester |
| Frame | Silver anodised aluminium |
| Diodes | IntegraBus™ technology includes three Schottky bypass diodes - one for every 24 cells - on a printed circuit board. |
| Junction box | Dimensions (mm) 39.60 x 100.60 x 13.2 Potted (IP67); certified to meet UL1703 flammability test. |
| Output cables | 3.3mm ² cable with weatherproof multi-contact III connectors. Asymmetrical cable lengths 1250mm (-) and 800mm (+). |
| Dimensions (mm) | 1593±3 x 790±3 x 50 |
| Weight (kg) | 15.4 |

All dimensions tolerance within ±1% unless otherwise stated.

This publication summarises product warranty and specifications which are subject to change without notice. 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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Your BP Solar representative:



www.bpsolar.com.au

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