

165 Watt Photovoltaic Module

BP 3165

4052E-2 03/07

The BP 3165 is an advanced 165W module that uses cells with anti-reflective SiN coating. The BP 3165 has a tight power tolerance of 3% so a higher average power output is guaranteed. This module is ideally suited for grid connect applications such as large commercial roofs and free field systems. This module offers a superior price performance ratio due to its 72 advanced polycrystalline cells connected in series.

Performance

| | |
|-------------------|--|
| Rated power | 165W |
| Tolerance | +/-3% |
| Module efficiency | 13.1% |
| 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 |

Configuration

| | |
|----------|--|
| BP 3165N | Clear Universal frame with output cables and Multi-Contact connectors. |
|----------|--|

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 load test (eg: wind) | 2400Pa |
| Front load test (eg: snow and wind) | 5400Pa |
| Hailstone impact test | 25mm hail at 23m/s from 1m distance |

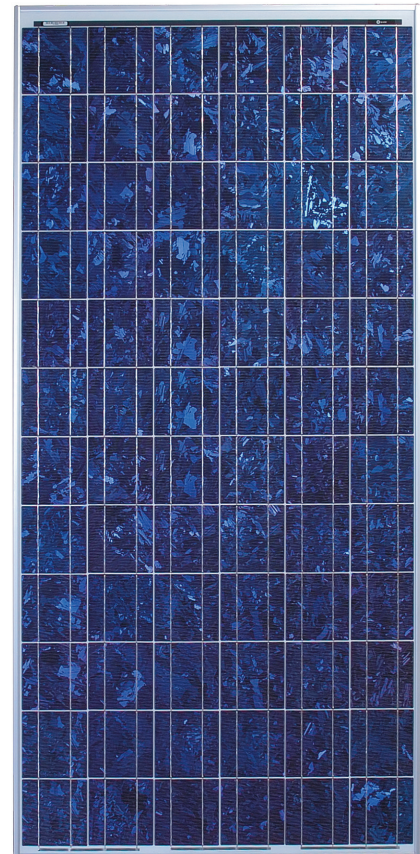
Quality and Safety

- 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 the World Radiometric Reference from ESTI (European Solar Test Installation) at Ispra, Italy.

Modules of type 3165N are certified by TÜV Rheinland as Safety Class II (IEC 60364) equipment for use in systems up to 1000V.

Modules of type 3165N are listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating).

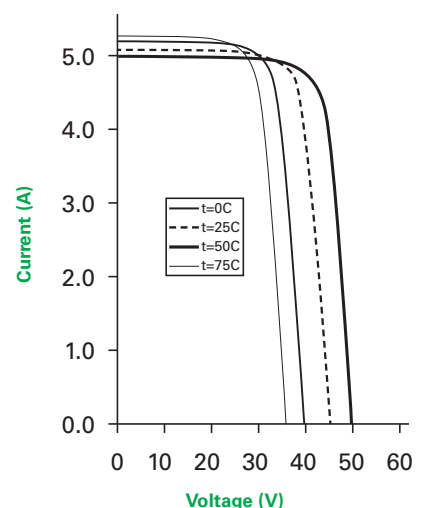


BP 3165N scale 1:14

Efficiency (%)

| | | | | |
|------|-------|-------|-------|-------|
| 9-11 | 11-12 | 12-13 | 13-14 | 14-15 |
|------|-------|-------|-------|-------|

BP 3165N I-V Curves

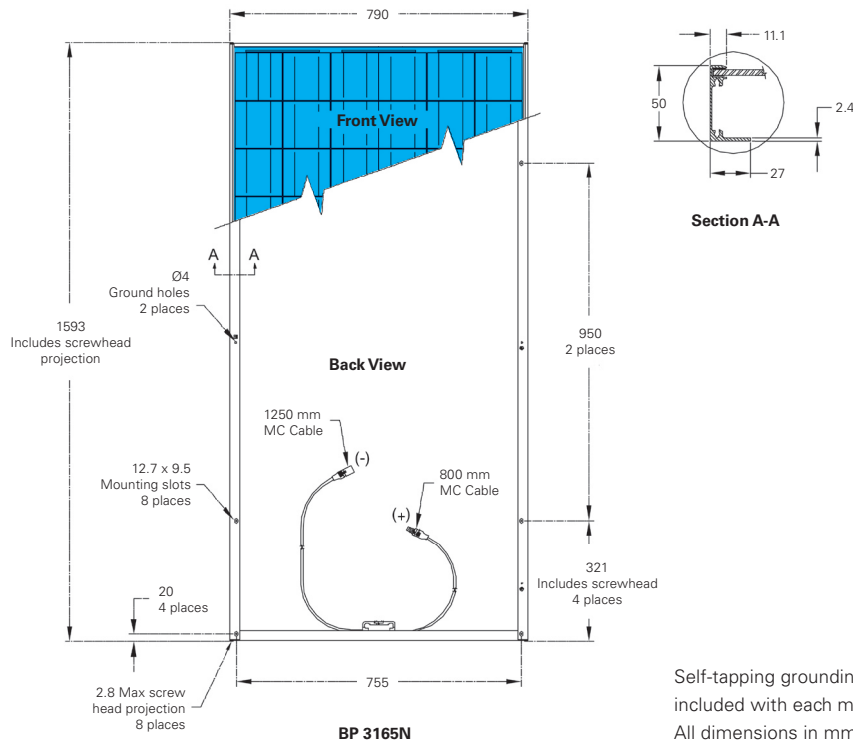


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Module Diagram



Self-tapping grounding screw, instruction sheet and warranty document included with each module.
All dimensions in mm with a tolerance of +/-3 mm.

Typical Electrical Characteristics

BP 3165

| | |
|--|-------------------------|
| Nominal power (P_{nom}) | 165W |
| Voltage at MPP (V_{mpp}) | 35.2V |
| Current at MPP (I_{mpp}) | 4.7A |
| Short circuit current (I_{sc}) | 5.1A |
| Open circuit voltage (V_{oc}) | 44.2V |
| Temperature coefficient of I_{sc} | $(0.065 \pm 0.015)\%/K$ |
| Temperature coefficient of V_{oc} | $-(160 \pm 20)mV/K$ |
| Temperature coefficient of P | $-(0.5 \pm 0.05)\%/K$ |
| NOCT (Air 20°C; Sun 800W/m ² ; wind speed 1m/s) | 47±2°C |
| Maximum series fuse rating | 15A |
| Maximum system voltage | 1000V |

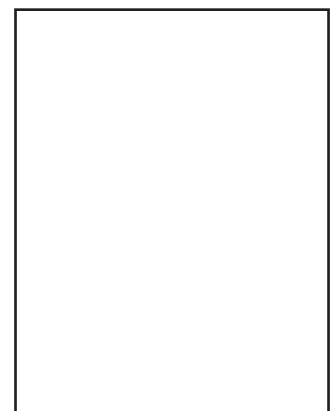
Standard test conditions - irradiance of 1000W/m² at an AM1.5G solar spectrum and a temperature of 25°C.

Mechanical Characteristics

BP 3165N

| | |
|--|---|
| Dimensions (mm) (Overall tolerances +/-3mm) | 1593 x 790 x 50 |
| Weight (kg) | 15.4 |
| Frame | Clear anodised aluminium alloy type 6063T6. Silver Universal frame. |
| Solar cells | 72 cells (125mm x 125mm) configured geometrically for a 6 x 12 matrix connected in series. |
| Output cables | 3.3mm ² cable with weatherproof Multi-Contact connectors. Asymmetrical cable lengths 1250mm (-) and 800mm (+). |
| Diodes | IntegraBus™ technology includes 3 Schottky bypass diodes - one for every 24 cells - on a printed circuit board. |
| Construction | Front: High transmission 3.2mm tempered glass. Rear: White polyester; encapsulant: EVA. |

Your BP Solar Distributor:



www.bpsolar.com