

## 230 Watt Photovoltaic Module of Poly 3-Series

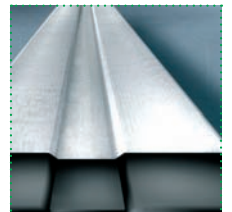
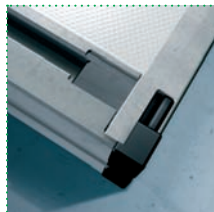
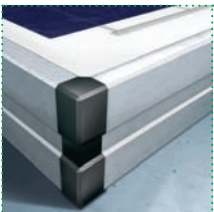
# ▶▶ BP 3230N



The BP 3230N is a high performance 230W<sub>p</sub> Poly 3-Series module. 60 high current cells, power classification that includes the LID effect and antireflective glass ensure excellent energy yields for grid connected systems. This product comes with our latest technological innovations such as: The new high strength frame developed with Porsche Engineering to withstand over 6m of fresh snow – over 900kg! In most modern mounting structures (clamp, inlay or bolt mounting) this load can actually be surpassed. Shock absorbing corners and a thick polyester backsheet protect the module against rough handling. The best in class weight per Watt ratio of 92g/W makes it easier to handle. All these features make the installation safer, whilst reducing installation time and saving costs.

### ▶▶ Generation Endura

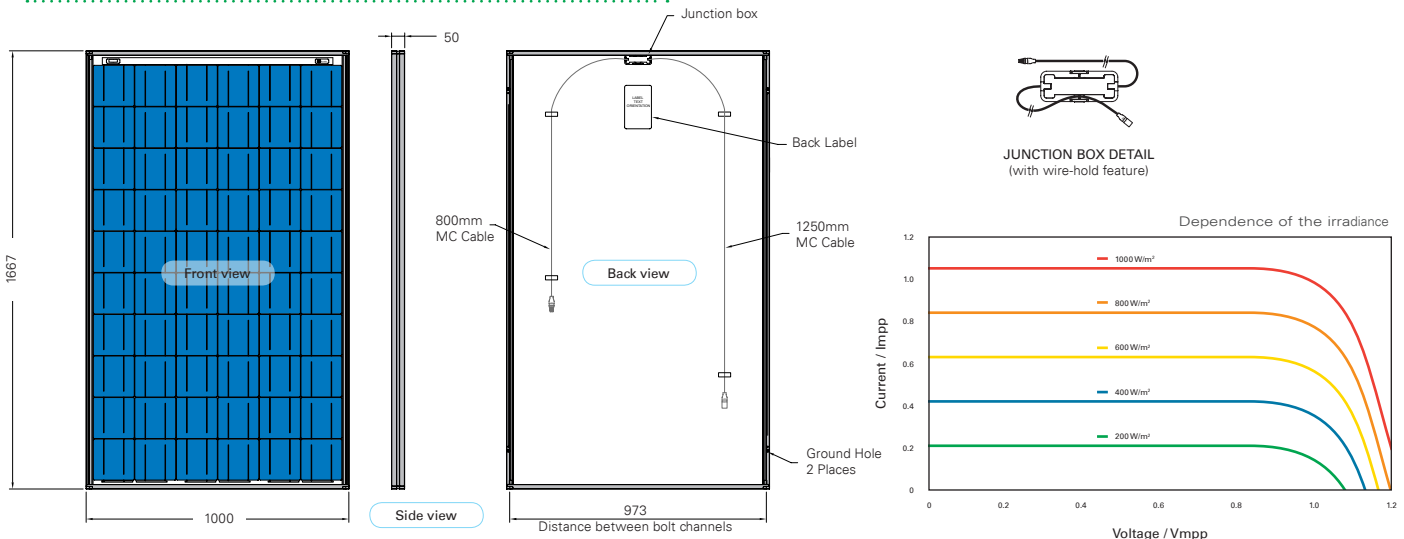
- High strength tubular frame developed with Porsche Engineering.
- Fast and flexible mounting using clamps, end channels or bolts.
- Robust corners with square drainage holes for safe handling and better drainage of condense water.
- Potted junction box with redundant electrical connection.
- Improved IntegraBus™ with 6 long-lasting diodes embedded in thick, durable back sheet.
- Round profiles for highest stability and better handling.
- Modern design according to haptic handling requirements.



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### Module Diagram



### Mechanical Characteristics

<b>Solar cells:</b>	60 polycrystalline silicon cells (156mm x 156mm) in series using low loss interconnects.
<b>Front cover:</b>	High transmission 3,2mm ARC glass.
<b>Encapsulant:</b>	EVA
<b>Back cover:</b>	White polyester.
<b>Frame:</b>	Silver anodised aluminium.
<b>Diodes:</b>	IntegraBus™ with 6 Schottky diodes
<b>Junction Box:</b>	Dimensions (mm): 39,60 x 100,60 x 13,20. Potted (IP67); certified to meet UL 1703 flammability test.
<b>Output cables:</b>	3,3 mm <sup>2</sup> cable with weatherproof Multi-Contact III connectors. Asymmetrical cable lengths 1250 mm (-) and 800 mm (+).
<b>Dimensions:</b>	1667±3 mm x 1000±3 mm x 50 mm
<b>Weight:</b>	19,4 kg

### Electrical Characteristics

<b>Nominal power (<math>P_{max}</math>):</b>	230W
<b>Tolerance:</b>	±3%
<b>Module efficiency:</b>	13.8%
<b>Efficiency reduction @ 200W/m<sup>2</sup>:</b>	<5% reduction of 13.1%
<b>Maximum power (<math>P_{max}</math>):</b>	STC* 230W    800** 165.6W
<b>Voltage at <math>P_{max}</math> (<math>V_{mp}</math>):</b>	29.2V    26.0V
<b>Current at <math>P_{max}</math> (<math>I_{mp}</math>):</b>	7.9A    6.3A
<b>Short circuit current (<math>I_{sc}</math>):</b>	8.7A    7.0A
<b>Open circuit voltage (<math>V_{oc}</math>):</b>	36.4V    33.1V
<b>Limiting reverse current:</b>	8.7A
<b>Temperature coefficient of <math>I_{sc}</math>:</b>	(0.065±0.015) %/K
<b>Temperature coefficient of <math>V_{oc}</math>:</b>	-(0.36 ±0.05) %/K
<b>Temperature coefficient of <math>P_{max}</math>:</b>	-(0.5±0.05) %/K
<b>NOCT:</b>	47±2°C
<b>Maximum series fuse rating:</b>	20A
<b>Application class:</b>	Class A
	1000V (IEC 61730:2007)

\*STC: Standard test conditions - irradiance of 1000W/m<sup>2</sup> at an AM1.5G solar spectrum and a temperature of 25°C.  
 \*\*W/m<sup>2</sup> NOCT. Values in accordance with EN 60904-3 (STC). All solar modules are individually tested prior to shipment; the typical power degradation during the first few days of deployment (LID effect), is incorporated in our factory measurement. All values are in accordance with EN 50380.

### Warranty and Certification

- Free from defects in materials and workmanship for 5 years
- 90% power output over 12 years
- 80% power output over 25 years

IEC 61215 extended wind load 2400Pa and 5400Pa snow load in endmounting, hailstone impact test, damp heat test.

According to IEC 61730-1 and IEC 61730-2. (Photovoltaic module safety qualification, requirements for construction and testing).

Listed by Underwriters Laboratories for electrical and fire safety (Class C fire rating).

Manufactured in ISO 9001 and ISO 14001 certified factories.

This data sheet complies with the requirements of EN 50380.



This publication summarises product warranty and specifications which are subject to change without notice.

### Contact:

Your BP Solar Distributor