

## 215W Photovoltaic module

# BP 3215B

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BP Solar has been manufacturing solar wafers, cells and modules for more than 35 years. This experience shows that the best way to optimize module life and electrical energy production is to attend to every detail in the design and manufacture of our products, our process controls and testing methods. BP Solar's new 215W black module is designed to bring you the highest lifetime value and offers the following benefits:



### **Long lasting, innovative frame design**

The aluminum frame has a rounded profile for better handling comfort and is optimized for use with anti-theft bolts to increase security.



### **Uniform appearance, aesthetically-pleasing**

Black frame and back sheet ensures the most attractive photovoltaic solution, maintaining the clean appearance of your roofline.



### **Improved reliability with effective cooling**

IntegraBus™ technology ensures reliable cable management while positioning the bypass diodes and junction box away from the cells for cooler operation and greater energy production.



### **Flexible mounting and reduced soiling losses**

Increased distance between cells and frame, and an enhanced design to push the laminate to the front, ensures that dirt accumulation will not shadow cells, even in landscape mounting, thus maximizing energy production.

### **Enhanced warranty offer**

BP Solar launches an industry leading warranty offer, with lower degradation rates on our modules manufactured beginning January 1st, 2010. Our internal testing standards that go well beyond international requirements back this innovative offer.

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### Electrical characteristics

	(1) STC 1000W/m <sup>2</sup>	(2) NOCT 800W/m <sup>2</sup>
Maximum power (P <sub>max</sub> )	215W	154.8W
Voltage at P <sub>max</sub> (V <sub>mpp</sub> )	29.1V	25.9V
Current at P <sub>max</sub> (I <sub>mpp</sub> )	7.4A	5.92A
Short circuit current (I <sub>sc</sub> )	8.10A	6.56A
Open circuit voltage (V <sub>oc</sub> )	36.5V	33.2V
Module efficiency	12.9%	
Tolerance P <sub>max</sub>	-3/+5%	
Nominal voltage	20V	
Efficiency reduction at 200W/m <sup>2</sup>	<5% reduction (efficiency 12.2%)	
Limiting reverse current	8.10A	
Temperature coefficient of I <sub>sc</sub>	0.105%/ °C	
Temperature coefficient of V <sub>oc</sub>	-0.360%/ °C	
Temperature coefficient of P <sub>max</sub>	-0.45%/ °C	
(3) NOCT	47±2°C	
Maximum series fuse rating	20A	
Application class (according to IEC 61730:2007)	Class A	
Maximum system voltage	600V (U.S. NEC rating); 1000V (IEC 61730:2007)	

1: Values at Standard Test Conditions (STC): 1000W/m<sup>2</sup> irradiance, AM1.5 solar spectrum and 25°C module temperature  
 2: Values at 800W/m<sup>2</sup> irradiance, Nominal Operation Cell Temperature (NOCT) and AM1.5 solar spectrum  
 3: Nominal Operation Cell Temperature: Module operation temperature at 800W/m<sup>2</sup> irradiance, 20°C air temperature, 1m/s wind speed

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.

### Mechanical characteristics

Solar cells	60 polycrystalline 6" silicon cells (156x156mm) in series
Front cover	High transmission 3.2mm (1/8th in) glass
Encapsulant	EVA
Back cover	Black polyester
Frame	Black anodized aluminum (Universal II)
Diodes	IntegraBus™ with 6 Schottky diodes
Junction box	Potted (IP 67); certified to meet UL 1703 flammability test 4mm <sup>2</sup> cable with latching MC4 connectors
Output cables	Asymmetrical cable lengths: (-)1250mm (49.21in) / (+)800mm (31.50in) Certified as PV Wire according to UL4703 and PV1-F according to VDE EPV 01:2008-02 standards
Dimensions	1667x1000x50mm / 65.6x39.4x2in
Weight	19.4kg / 42.8lbs

All dimensional tolerances within ±1% unless otherwise stated.

### Warranty

- Free from defects in materials and workmanship for 5 years
- 93% min. power output over 12 years
- 85% min. power output over 25 years

### Certification

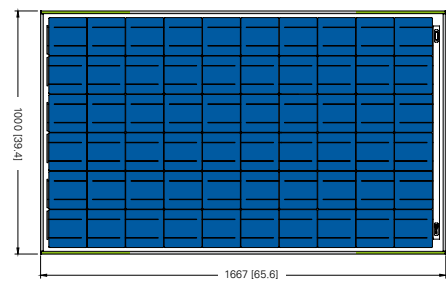
Certified according to the extended version of the IEC 61215 2005 (Crystalline silicon terrestrial photovoltaic modules - Design qualification and type approval)

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

Listed to UL 1703 and ULC ORD-C1703 Standard for Safety by Intertek ETL

Manufactured in ISO 9001 and ISO 14001 certified factories

Module electrical measurements are calibrated to World radiometric reference via third party international laboratories

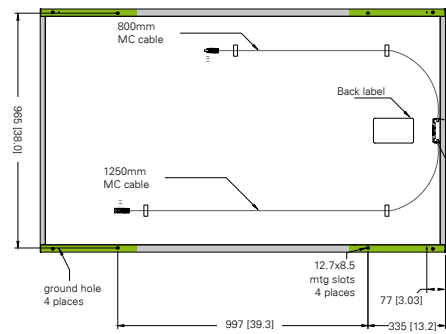


front view

Permitted mounting area for 3800Pa (80psf) load

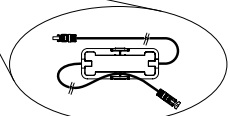


side view



back view

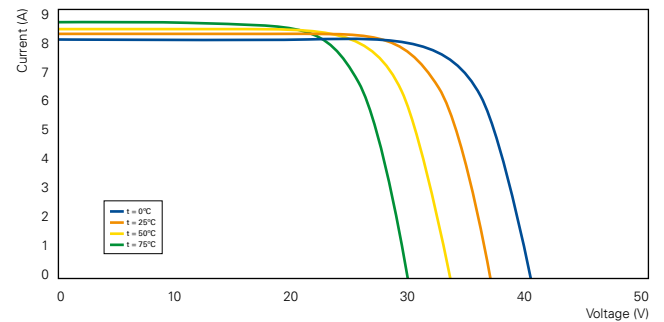
\* Permitted mounting area for 3800Pa (80psf) load



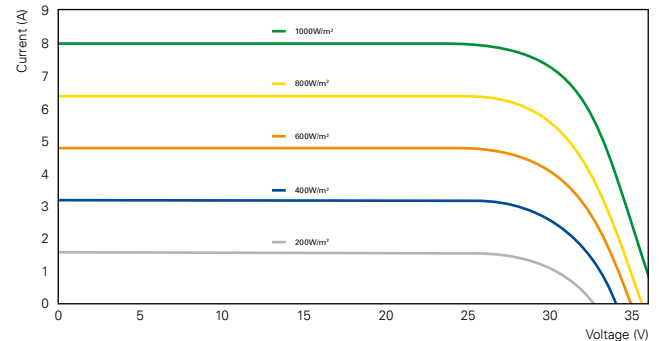
**JUNCTION BOX DETAIL**  
(with wire-hold feature)  
39.60 x 100.60 x 13.20 (mm)  
1.56 x 3.96 x 0.52 (in)

Dimensions in mm [in]  
 (\*) Allows 5400Pa (112psf) load when mounted at the holes

### Dependence of the temperature



### Dependence of the irradiance



### Contact:

Your BP Solar partner