

85W and 90W Photovoltaic modules

BP 485J - BP 490J

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BP Solar has been pioneering photovoltaic (PV) solar for almost 40 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 latest generation of small area modules offers the following benefits:

Enhanced warranty

BP Solar provides an industry leading warranty, guaranteeing lower degradation rates on our modules manufactured beginning January 1st, 2010. Our superior long-term performance is proven by internal testing standards that go well beyond international requirements.



Module appearance may vary. Cells have rounded corners with either 165 or 150mm diameter.



Accessible junction box for off grid connections

BP J-type junction box has accessible terminals for easier module interconnections in off grid applications, and it allows fitting cable glands for various cable sections.



Improved reliability with effective cooling

IntegraBus™

technology ensures high quality interconnections while positioning the bypass diodes in a printed circuit board for cooler operation and greater reliability.



Thick, durable, scratch resistant back sheet

Our new thicker back sheet provides extra insulation and increased resistance to protect your module against rough handling. Made of white polyester, it ensures longer term performance and increased energy production.

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Electrical characteristics

	485J		490J	
	(1) STC 1000W/m ²	(2) NOCT 800W/m ²	(1) STC 1000W/m ²	(2) NOCT 800W/m ²
Maximum power (P _{max})	85W	61.2W	90W	64.8W
Voltage at P _{max} (V _{mpp})	17.8V	15.8V	17.9V	15.9V
Current at P _{max} (I _{mp})	4.78A	3.82A	5.03A	4.02A
Short circuit current (I _{sc})	5.35A	4.33A	5.58A	4.52A
Open circuit voltage (V _{oc})	22.2V	20.2V	22.2V	20.2V
Module efficiency	13.1%	-	13.9%	-
Tolerance P _{max}	±5%	-	±5%	-
Nominal voltage	12V	-	12V	-
Efficiency reduction at 200W/m ²	<5% reduction (efficiency 12.4%)		<5% reduction (efficiency 13.2%)	
Limiting reverse current	5.35A		5.58A	
Temperature coefficient of I _{sc}	0.105% / °C			
Temperature coefficient of V _{oc}	-0.360% / °C			
Temperature coefficient of P _{max}	-0.45% / °C			
(3) NOCT	47±2°C			
Maximum series fuse rating	20A			
Application class	Class A (according to IEC 61730:2007)			
Maximum system voltage	600V			

1: Values at Standard Test Conditions (STC): 1000W/m² irradiance, AM1.5 solar spectrum and 25°C module temperature
 2: Values at 800W/m² irradiance, Nominal Operation Cell Temperature (NOCT) and AM1.5 solar spectrum
 3: Nominal Operation Cell Temperature; Module operation temperature at 800W/m² 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	36 monocrystalline 5" silicon cells (125x125mm) in series (pseudo-square cells of 165 or 150mm diameter may be used)
Front cover	High transmission 3.2mm (1/8th in) glass
Encapsulant	EVA
Back cover	White polyester
Frame	Silver anodized aluminum
Diodes	IntegraBus™ with 2 Schottky bypass diodes
Junction box	IP65 with 4 terminal screw connection block; accepts PG 13.5, M20 13mm (½") conduit, or cable fittings accepting 6-12mm diameter cable. Terminals accept 2.5-10mm ² (8-14 AWG) wire
Dimensions	1209x537x50mm / 47.6x21.1x2.0in
Weight	7.7kg / 17.0lbs

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

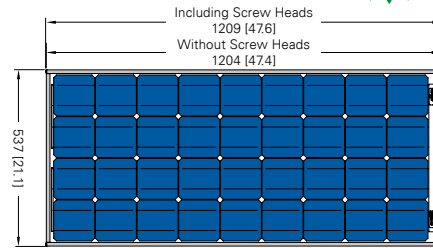
Certified according to the extended version of the IEC 61215 (ed.2), EN 61215:2005-08 (Crystalline silicon terrestrial photovoltaic modules - Design qualification and type approval)

Certified according to IEC 61730-1 and IEC 61730-2 (ed.1), EN 61730-1:2007-05 and EN 61730-2:2007-05. (Photovoltaic module safety qualification, requirements for construction and testing).

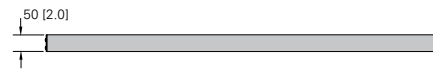
Listed to UL 1703 & ULC ORD-C1703 Standard for Safety by Intertek ETL

Approved by Intertek ETL according to FM 3611, Dec 2004, and according to CAN/CSA C22.2 No. 213-M1987, 1st Edition, Reaffirmed 2004, for use in a Class I, Division 2, Group A, B, C, D Hazardous (Classified) Location.

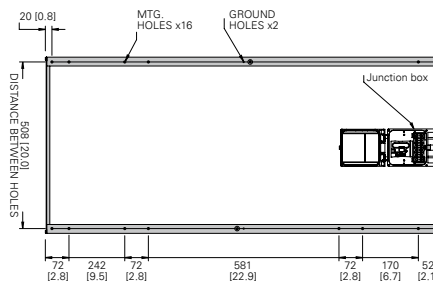
This data sheet complies with the EN 50380 requirements.
 This publication summarises product warranty and specifications which are subject to change without notice.



front view



side view



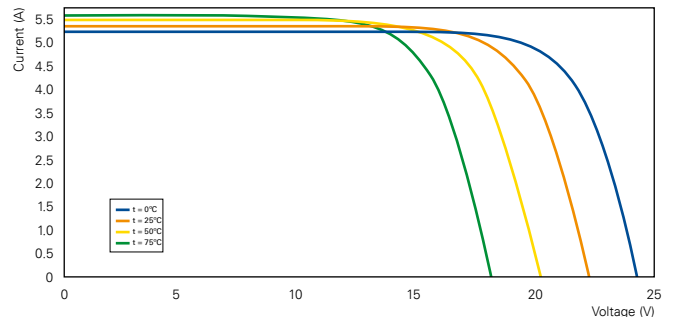
back view

Junction Box dimensions:
 163.50 x 112.50 x 37.50
 [6.4 x 4.4 x 1.5]

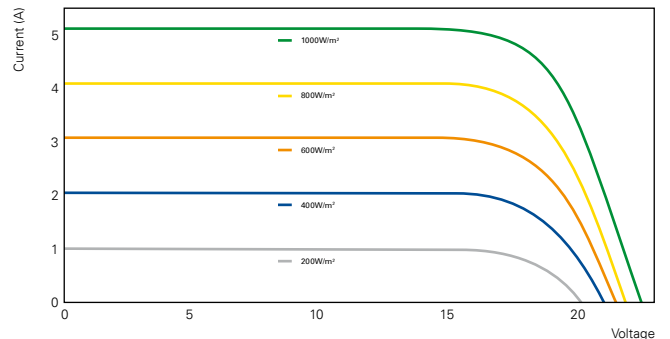
Dimensions in mm [in].

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Dependence of the temperature (BP 485J)



Dependence of the irradiance (BP 485J)



Contact:

Your BP Solar partner