

185W Photovoltaic module - Saturn Technology

BP 7185

3046E-1 04/08

The BP 7185N forms part of the high efficiency Saturn 7 Series "Real Power" range of solar modules. Our industry leading power tolerance means that modules always have a power output above nominal, which even includes the initial LID effect, delivering more energy for a longer period of time. The bypass diodes use the IntegraBus™ technology, which limits the loss of energy in the event that partial shadowing affects the module. The BP 7185N with its antireflective glass ensures maximised energy yields in a limited area. The BP 7185N has been especially designed for grid connect applications such as large commercial roofs, residential systems and photovoltaic power plants. This N-Series module comes with the highest safety standard ensuring longevity, durability and high operational security covered by an outstanding 25 year power warranty and a 5 year product warranty.

Performance

Rated power	185W
Tolerance	0/+5%
Module efficiency	14.7%
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.

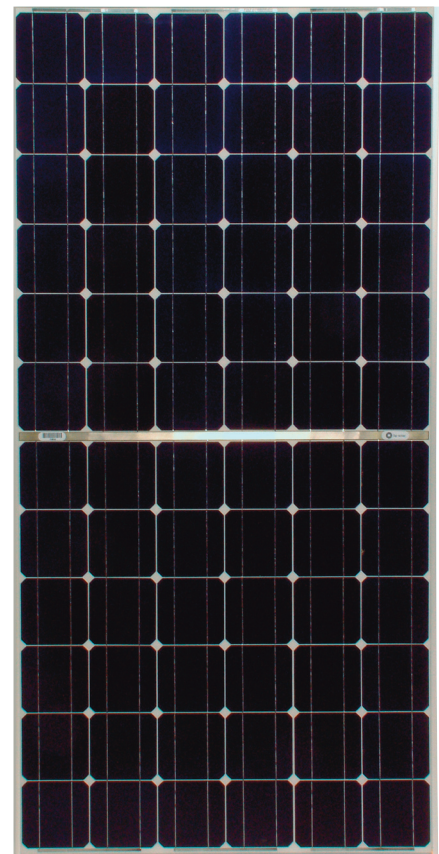
Qualification test parameters

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 (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	8000V 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 module safety qualification, requirements for construction and testing).
- Listed by Underwriters 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.

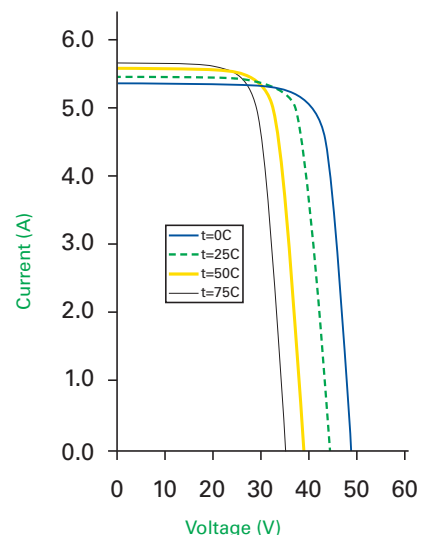


BP 7185N scale 1:14

Efficiency (%)

11 - 12	12 - 13	13 - 14	14 - 15	15 - 16
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BP 7185N I-V Curves

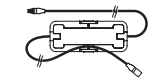
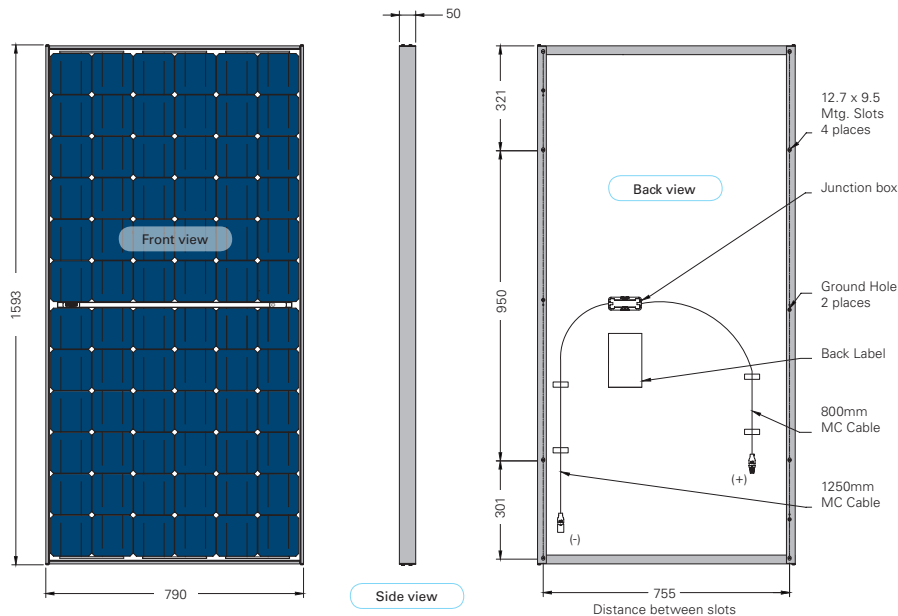


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Module diagram



JUNCTION BOX DETAIL
(with wire-hold feature)

Electrical characteristics

	1000W/m ² (STC) ¹	800W/m ² (NOCT) ²
Maximum power (P _{max})	185W	133W
Voltage at MPP (V _{mpp})	36.0V	32.0V
Current at MPP (I _{mpp})	5.1A	4.1A
Short circuit current (I _{sc})	5.4A	4.4A
Open circuit voltage (V _{oc})	44.2V	40.2V
Efficiency reduction at 200W/m ²	< 3% reduction (efficiency 14.2)	
Limiting reverse current	5.4A	
Temperature coefficient of I _{sc}	(0.065±0.015)%/K	
Temperature coefficient of V _{oc}	-(0.36±0.05)%/K	
Temperature coefficient of P	-(0.5±0.05)%/K	
NOCT ³	47±2°C	
Maximum series fuse rating	15A	
Application class (According to IEC 61730:2007)	Class A (1000V)	

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

²800W/m², NOCT, AM 1.5G solar spectrum.

³NOCT: Nominal Operation Cell Temperature Sun 800W/m²; Air 20°C; wind speed 1m/s.

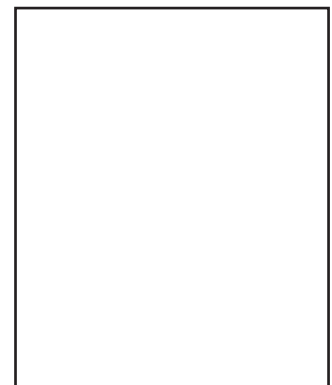
Mechanical characteristics

Solar cells	72 monocrystalline cells (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 6 Schottky bypass diodes - one for every 12 cells - on a printed circuit board.
Junction box	Dimensions (mm) 39.60 x 100.60 x 13.20. 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 dimensional tolerances 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.

Your BP Solar distributor:



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