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Your BP Solar partner

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270 and 280W photovoltaic modules

BP Utility Series

11 4109E-1 02/11

Designed to capture more of the sun

Our products incorporate a number of unique features to ensure highest production yields and make solar your brightest investment ever.

High Transmission Glass
Anti-reflective coated glass delivers up to 4% more energy than standard glass.

Reliable electrical connections
IntegraBus™ technology for cooler diode operation and optimal performance.

Enhanced cell protection
Better cell protection thanks to robust frame and durable materials.

Verified power output
Our energy ratings factor the initial degradation (LID effect) to maximize your investment.

ISO 9001
ISO 14001

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

270 and 280W photovoltaic modules

BP Utility Series

Electrical characteristics

	270W		280W	
	[1] STC 1000W/m²	[2] NOCT 800W/m²	[1] STC 1000W/m²	[2] NOCT 800W/m²
Maximum power (P_{max})	270W	194.4W	280W	201.6W
Voltage at P_{max} (V_{mpp})	35.5V	31.6V	36.3V	32.3V
Current at P_{max} (I_{mpp})	7.61A	6.08A	7.71A	6.17A
Short circuit current (I_{sc})	8.33A	6.74A	8.46A	6.85A
Open circuit voltage (V_{oc})	44.2V	44.22V	44.3V	40.3V
Module efficiency	13.6%		14.1%	
Tolerance P_{max}	±5%		±5%	
Nominal voltage	24V		24V	
Efficiency reduction at 200W/m²	<5% reduction (efficiency 12.9%)		<5% reduction (efficiency 13.4%)	
Limiting reverse current	8.33A		8.46A	
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 (according to IEC 61730:2007)	Class A			
Maximum system voltage	600V (U.S. NEC) 1000V (IEC 61730:2007)			

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	72 polycrystalline 6" silicon cells (156x156mm) in series or 144 polycrystalline silicon cells (78x156mm/3x6in)
Front cover	High transmission 3.2mm (1/8th in) glass
Encapsulant	EVA
Back cover	White polyester
Frame	Silver anodized aluminum (Universal II)
Diodes	72 cell: IntegraBus™ with 12 Schottky diodes / 144 half-cell: IntegraBus™ with 6 Schottky diodes
Junction box	Potted (IP 67); certified to meet UL 1703 flammability test
Output cables	4mm² cable with latching MC4 connectors. Symetrical cable lengths: (-)1200mm (47.24in) / (+)1200mm (47.24in) Certified as PV Wire according to UL4703 and PV1-F according to VDE EPV 01:2008-02 standards
Dimensions	1986x1000x50mm / 78.2x39.4x2.0in
Weight	22.1kg / 48.72lbs

All dimensional tolerances within ±1% unless otherwise stated.

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 and ULC ORD-C1703 Standard for Safety by Intertek ETL (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

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

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

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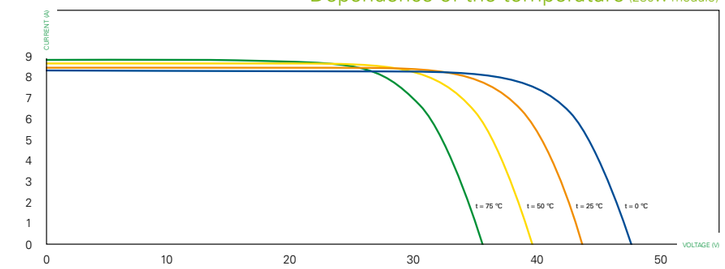
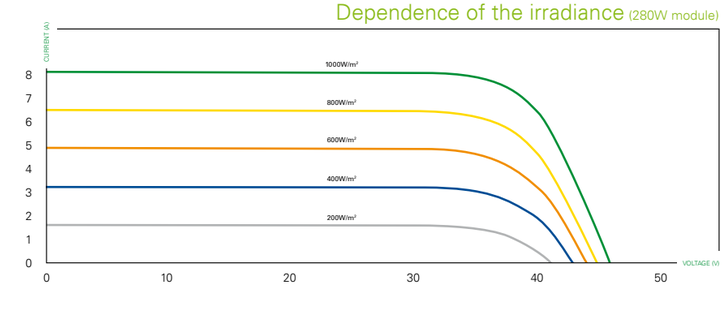
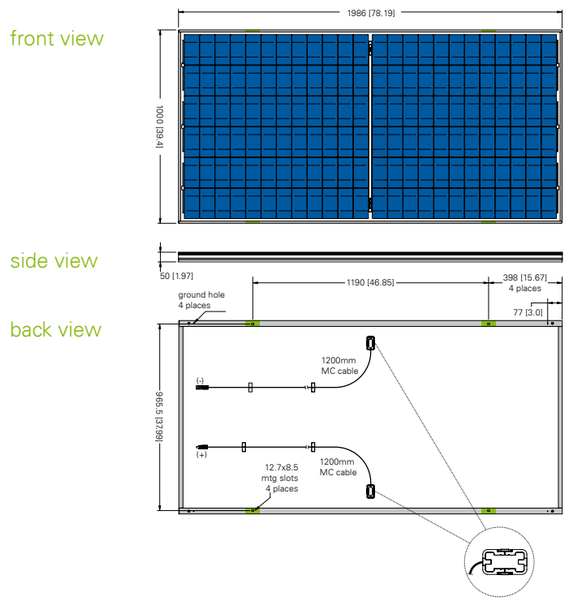
Dependence of the temperature (280W module)



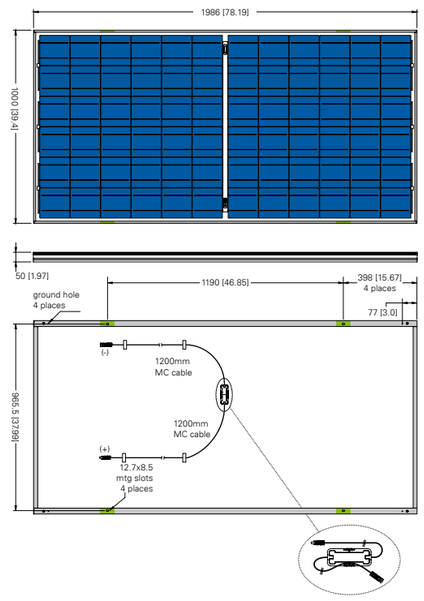
Dependence of the irradiance (280W module)



144 half-cell version



72 cell version



Permitted mounting area for 2400Pa [50psf] load

Dimensions in mm [in]