

# Monocrystalline Photovoltaic Modules

## 230-250Wp (96 cells)



### Characteristics

#### ■ Modules Quality

BlueSun® Solar Energy modules are mounting in Portugal and ensure the highest system efficiency and the quality of our modules.

#### ■ Highest efficiency and performance

The panel's reduced voltage-temperature coefficient, anti-reflective glass and exceptional low-light performance attributes provide outstanding energy delivery per peak power watt.

#### ■ Guaranteed power output

Positive Tolerance + 3% ensure reliable energy production.

#### ■ Module can bear snow loads up to 5600 Pa and wind loads up to 3800 Pa

#### ■ High performance under low light conditions (Cloudy days, mornings and evenings)

#### ■ High Transmission Glass

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

#### ■ Enhanced cell protection

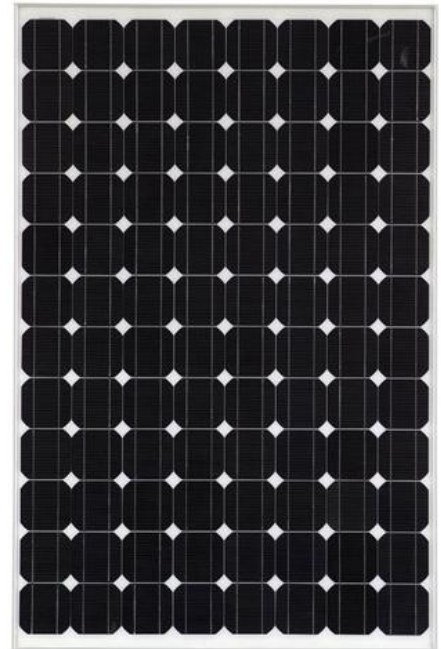
Better cell protection thanks to robust frame and durable materials.

#### ■ Reliable and Robust Design

Proven materials, tempered front glass, and a sturdy anodized frame allow panel to operate reliably in multiple mounting configurations.

#### ■ TUV "Power controlled"

With the new TUV Rheinland test "Power controlled" it is guaranteed that the performance indicated for a BlueSun® solar panel is being met and that it is regularly monitored by the independent test service provider, TUV Rheinland.



### Warranties and Certifications

- Warranties: 25 year limited power warranty  
10 year limited product warranty

- Certifications:  
IEC 61215, IEC 61730-1, IEC 61730-2, IEC 61730-3, EN 61000-6-1:2007, EN 61000-6-3:2007, IEC 5600 Pa.



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### Electrical Data

Designation		BSM230M-96	BSM235M-96	BSM240M-96	BSM245-96	BSM250M-96
Peak Power	P	230 W	235 W	240 W	245 W	250 W
Positive Tolerance		+ 3 %	+ 3 %	+ 3 %	+ 3 %	+ 3 %
Efficiency	$\eta$	13,60 %	13,90 %	14,20 %	14,50 %	14,80 %
Rated Current	Vm (V)	49,20	49,50	50,00	50,50	51,00
Rated Voltage	Im (A)	4,67	4,75	4,80	4,85	4,90
Maximum System Voltage	VDC (V)			1000		
Open Circuit Voltage	VOC (V)	59,00	60,03	60,04	61,10	61,2
Short Circuit Current	ISC (A)	5,03	5,20	5,30	5,35	5,40
Working Temperature		- 40 $\pm$ 85 $^{\circ}$ C				
Temperature Coefficients	Power	$\eta$ (PMAX)	- 0,99 %/ $^{\circ}$ C			
	Voltage	$\beta$ (VOC)	- 0,18 %/ $^{\circ}$ C			
	Current	$\alpha$ (ISC)	0,0023 %/ $^{\circ}$ C			

(STC: irradiance of 1000W/m<sup>2</sup>, AM 1.5, and cell temperature 25 $^{\circ}$ C)

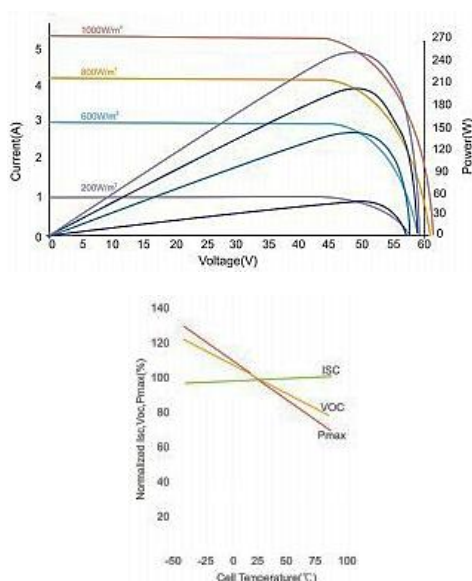
### Mechanical Data

Output Cables	100 cm length cables 4 mm <sup>2</sup> MultiContact MC4 connectors
Front Glass	High transmission tempered glass with anti-reflective (AR) coating
Caixilho	Silver or black anodized aluminum
Junction Box	IP-65 rated with 3 bypass diodes

### Mechanical Data

Dimensions	1580x1069x45 (mm)
Weight	25,8 (Kg)
Cells	125x125 (mm)
Solar Cells	96 (8x12)

### I-V Curve



### Dimensions

