



Polycrystalline photovoltaic module (4BB)

235 - 240 - 245 - 250 Wp



Positive performance tolerance 0+5 Wp



Produced in EU



13 years product warranty



25 years linear performance warranty



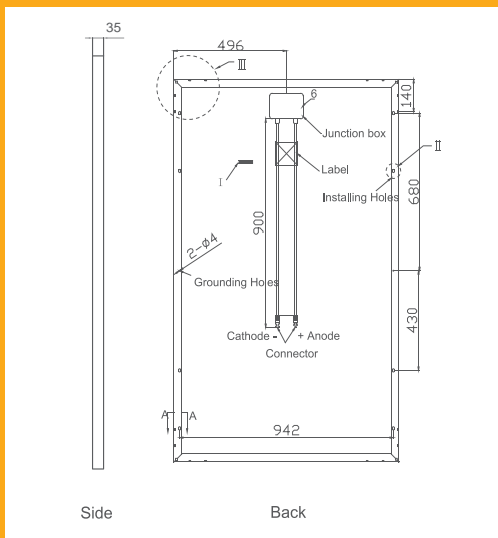
Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



High-performance polycrystalline silicon; 156mm cells; module efficiency up to 15%; 4-busbar technology to increase power output



General informations

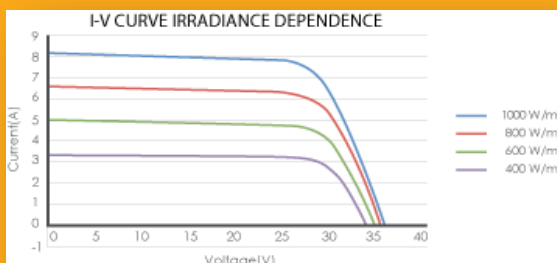


WinSolar is always careful in the choice of materials and the search for new technological solutions more innovative. Each module exceeds, through the entire production cycle, over 30 quality controls, from the selection of raw materials, production processes up to the final test operation and classification of the finished product.

The choice of materials, the high level of automation in production processes ensure excellent performance and extreme reliability over time, which is why we guarantee our modules **13 years and 25 anni of linear performance warranty covering a period of 25 year : 2,5% maximum performance degradation during the first year and 0,7% p.a. for the next 24 years.**

The JB is produced in order to spare hot spot event to maximize the efficiency of the system. Thanks to the special anti-reflective coating, the glass maximizes the capture of sunlight and therefore implements the productivity of PV module also in low radiation conditions. The glass offers better resistance to dust deposits and requires less maintenance. Given its hydrophilic. The thickness of 3.22 mm provides resistance to mechanical stress.

4 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.



Electrical Data		WNS 235 P60	WNS 240 P60	WNS 245 P60	WNS 250 P60
Maximum Power	P_{max}	235 Wp	240 Wp	245 Wp	250 Wp
Nominal Voltage	V_{mpp}	30,2 V	30,4 V	30,5 V	30,70 V
Short circuit current	I_{sc}	8,35 A	8,37 A	8,6 A	8,71 A
Maximum power point current	I_{mpp}	7,8 A	7,9 A	8,05 A	8,18 A
Open circuit voltage	V_{oc}	37,3 V	37,6 V	37,7 V	37,80 V
Module efficiency	%	14,40%	14,70%	15,00%	15,40%
Performance Tolerance	$P_{(Wp)}$		0Wp... + 5Wp		
Nr of cells			60 pcs		
Cells			Polycrystalline		

Limit values

Maximum system voltage SCII	(V_{dc})	1000 V_{dc}
Maximum reverse current	(A)	15 A
NOCT (800 W/m ² , 20°C, AM 1.5, 1 m/s)	(°C)	+45°C +/-2K

Thermal characteristics

Voltage	V_{oc}	-0,34% / °C
Current	I_{sc}	+0,05% / °C
Output	P_{mpp}	-0,44% / °C
Load/dynamic load	Pa	5400 Pa
Number of bypass diodes	N.	3
Operating range	N.	-40°C a +85°C

Physical Characteristics

Dimensions (L x W x H)	(mm)	1640 x 992 x 35 mm
Weight	(Kg)	18 Kg
Junction Box		Protection degree IP67 - 3 bypass diodes - MC4 connector compatible
Cables		Conductor section 4 mm ² , length 2 m (MC4)

Irradiance Dependence

	1000 W/m ²	800 W/m ²	600 W/m ²	400 W/m ²
I_{sc}	0 %	-19,6 %	-39,5 %	-59,2 %
V_{oc}	0 %	-1,38 %	-3,05 %	-5,9 %

General data

Frontside	Low-reflection 3,2 mm tempered glass
Frame	35 mm silver anodized aluminium frame
Cells	60 polycrystalline high efficiency cells 156 mm x 156 mm (6")
Elements	Made in EU elements (glass, frame, cables...)

Certifications

