

BIOENERGY Solar Photovoltaic Panels stand for quality, durability and most importantly, high-performance. Our experience, capacity of research, continuing development and improvement have turned us into a company recognized in the sector by the high value offered to our clients.

Due to their engineered hollow-section frame and its 4mm special solar glass (standard solar module has 3.2mm), BIOENERGY PLUS modules meet the maximum demands with regard to stability and corrosion resistance.

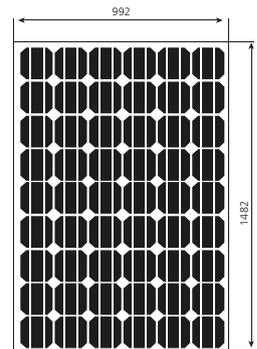
Thanks to their high performance BIOENERGY PLUS modules are prepared for changes in legislation. These panels will produce 5% more than any other of the same features.



Electrical Characteristics

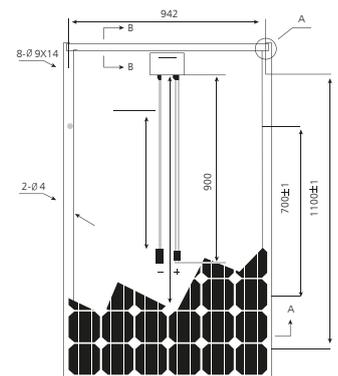
	210	215	220	225	230
Reference	P111210	P111215	P111220	P111225	P111230
Maximum power (Wp)	210 Wp	215 Wp	220 Wp	225 Wp	230 Wp
Max. power voltage (Vmax)	27.60	27.90	28.20	28.60	29.10
Max. power current (Imax)	7.60	7.70	7.80	7.85	7.90
Open circuit voltage (Voc)	33.00	33.30	33.70	33.90	34.40
Short circuit voltage (Isc)	8.48	8.60	8.70	8.85	8.90
Module Eff. (%)	14.3	14.6	15.0	15.3	15.6
Operating temperature	-40°C + 85°C				
Maximum system voltage	1000 V(IEC)				
Power tolerance (%)	0-3%				

Dimensions



Mechanical Characteristics

Solar Cells	Mono-crystalline
Dimensions	1482 x 992 x 40 mm
Weight	15.5 kg
Junction Box	IP65
No. Cells	54 pcs (156 x 156 mm) Poly-Crystalline (6x9mm)
Output cables length	900 mm
Cable cross section size	4 mm ²
Construction	High Transmission, Low Iron, Tempered Glass 4 mm
Bypass-Diodes	3 bypass
Connectors	MC4 compatible



Temperature Coefficients

Nominal operating cell temperature (NOCT)	47 °C ± 2°C
Temperature coefficient of power (P _{MAX})	-0.43 %/°C
Temperature coefficient (VOC)	-0.31 %/°C
Temperature coefficient (ISC)	0.03 %/°C
Continuous wind pressure	<5400 Pa

The 10 years product warranty surpasses the warranty required by law.

The performance warranty is for 30 years: after 12 years, modules still produce a minimum 90% of their nominal performance, after 30 years modules still produce a minimum 80% of their nominal performance.