



PHOTOWATT PW1650 - 12/24V

PHOTOVOLTAIC HIGH EFFICIENCY MODULE –JBOX

MULTICRYSTALLINE HIGH EFFICIENCY MODULE



APPLICATIONS
- Telecommunications
- Cathodic protection
- Water pumping
- Signaling
- Rural electrification
- Private residences
- Commercial buildings
- Grid connected

- Large scale power module
- 8 x9 multicristalline 5 inch cells (125,50 x 125,50 mm)
- A 12V and a UL versions are available on request
- **Product warranty : 5 years***
- **Efficiency warranty : 25 years***
- **Quality insurance : ESTI (61215), TÜV (Safety Class II), PVGap, ISO 9001...**

The PW1650 is Photowatt's 5 inch high efficiency module. Thanks to its optimum size it is easy to handle and specifically dedicated to large scale grid connected applications.

The PW1650 module uses Photowatt's multicrystalline technology. The solar cells are individually characterized and electronically matched prior to interconnection. Encapsulation beneath high transmission tempered glass is accomplished using an advanced, UV resistant thermal setting plastic. The encapsulant, ethylene vinyl acetate, cushions the solar cells within the laminate and protect the cells from etching. The rear surface of the module is completely sealed from moisture and mechanical damage by a continuous high strength polymer sheet.

The PW1650 is using a reinforced transparent anodised aluminium frame, designed to meet Photowatt's High Quality Standards for corrosion resistance (lifetime tested 3 times longer than requested by CEI 61215).

With a tolerance improvement to +/- 3%, the PW1650 module ensures more power homogeneity in installations, and a financial investment corresponding to the real power produced.



PACKING INFORMATION		
Module weight	Kg	18
Module size	mm	1237 x 1082 x 45
Packing configuration	modules	2 per cartons
Packing size	mm	1350 x 1130 x 102
Modules packed weight	Kg	39
Maximum pallet size (34 modules)	mm	1360 x 1130 x 1770
Maximum pallet weight	Kg	678

ELECTRICAL CHARACTERISTICS							
PW1650		24 V Configuration			12 V Configuration		
Typical power	W	155	165	175	155	165	175
Minimum power	W	150	160	170	150	160	170
Voltage at typical power	V	34	34,4	35	17	17,2	17,5
Current at typical power	A	4,6	4,8	5,0	9,2	9,6	10
Short circuit current	A	4,8	5,1	5,3	9,6	10,2	10,6
Open circuit voltage	V	43	43,2	43,4	21,5	21,6	21,7
Maximum system voltage	V	770V DC					
Temperature coefficient		$\alpha = +1,46 \text{ mA/}^\circ\text{C}$; $\beta = -158 \text{ mV/}^\circ\text{C}$; $\gamma/P/P = -0,43 \text{ \%}/^\circ\text{C}$			$\alpha = +2,92 \text{ mA/}^\circ\text{C}$; $\beta = -79 \text{ mV/}^\circ\text{C}$; $\gamma/P/P = -0,43 \text{ \%}/^\circ\text{C}$		
Power specifications at 1000 W/m² : 25°C : AM 1,5							

* According to general warranty conditions

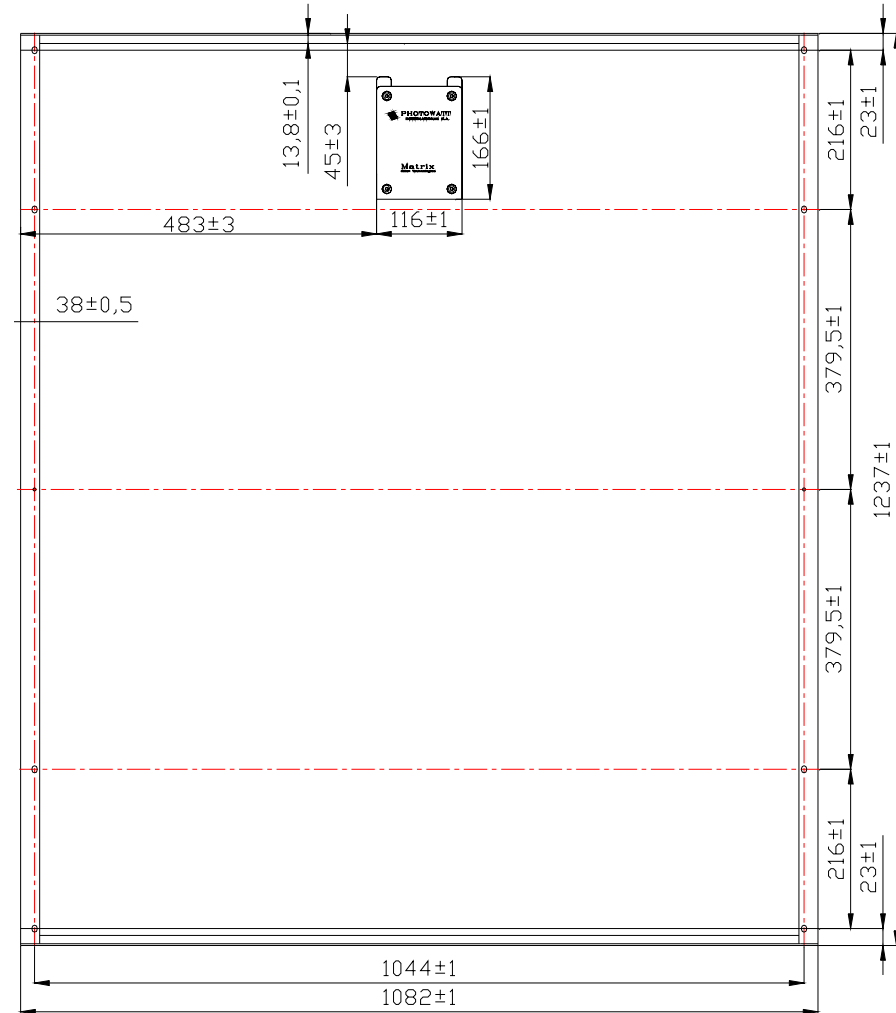
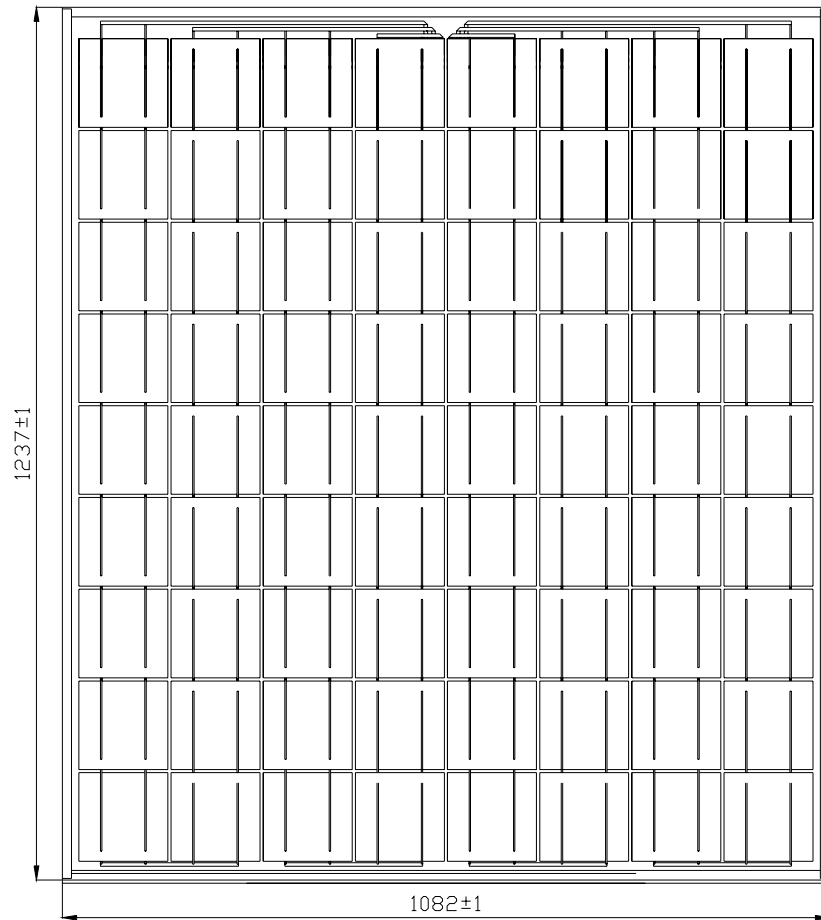


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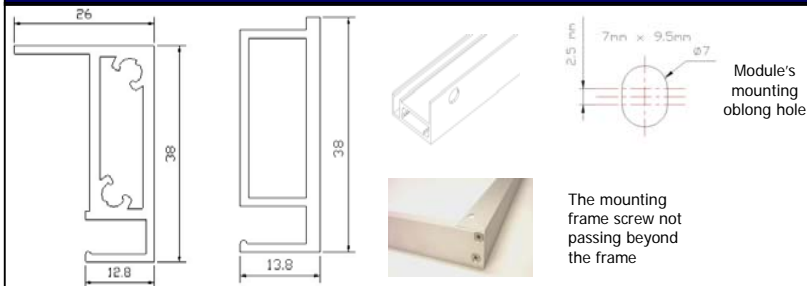
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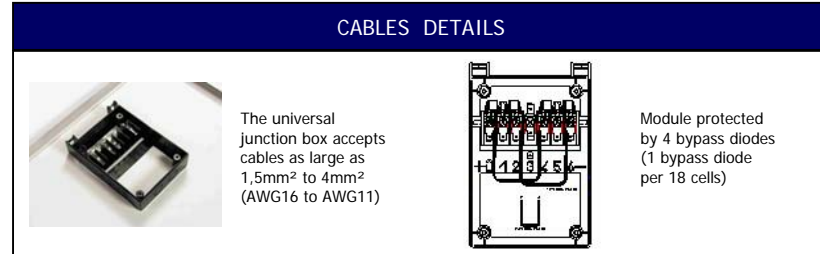
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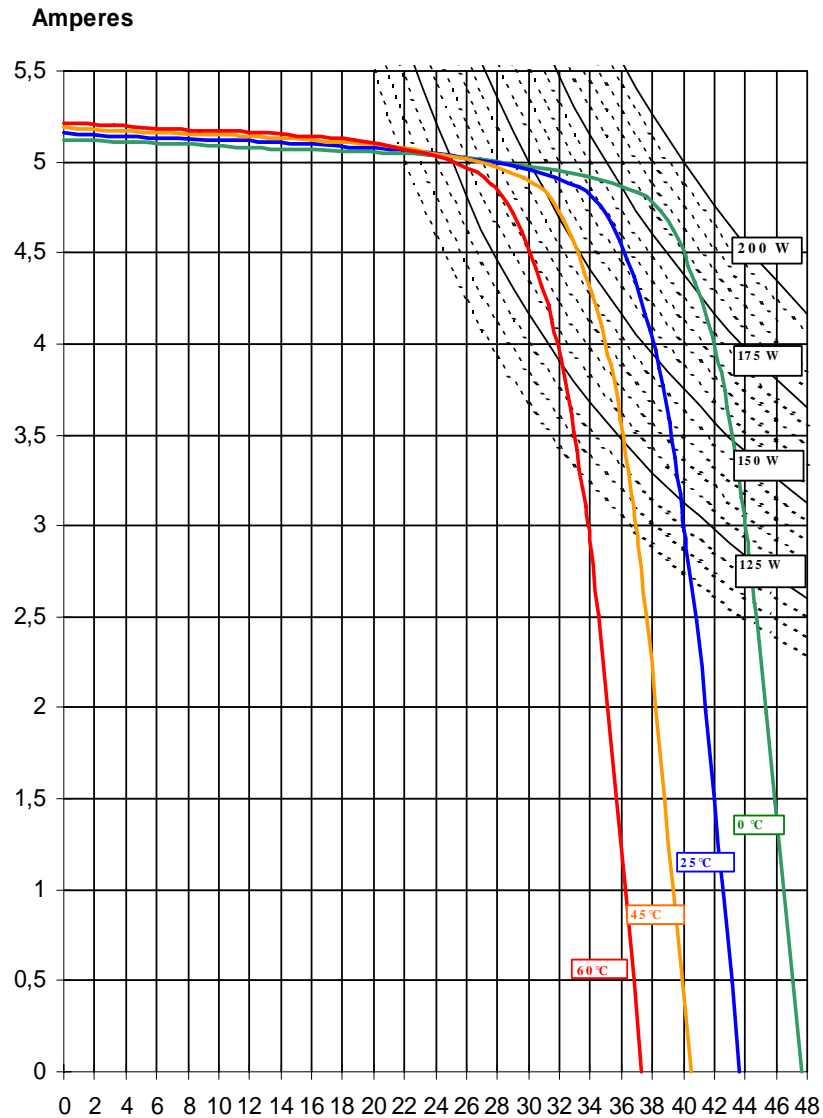
FRAME DETAILS



CABLES DETAILS



$I=F(V)$ à $E=1 \text{ kW/m}^2$, $AM=1,5$ according to junction temperature



$I=F(V)$ à $T = 25^\circ\text{C}$ according to irradiance E (kW / m^2), $AM 1,5$.

