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Solar Panel Guide

Specification Data Sheet

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Alps TECHNOLOGY INC
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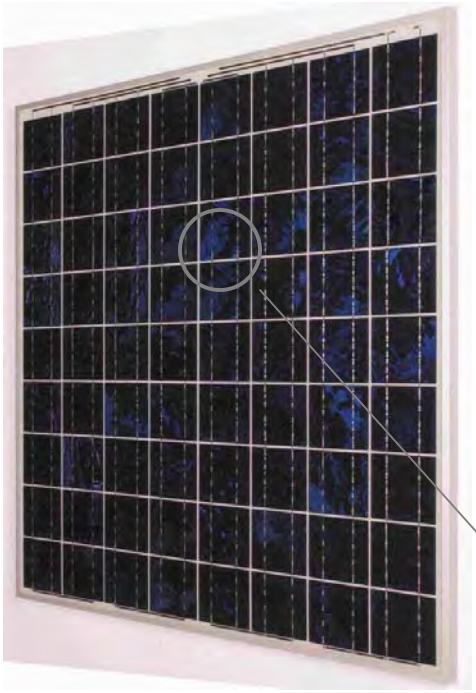
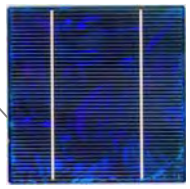
ATI1650- 12/24 V HIGH EFFICIENCY PHOTOVOLTAIC MODULE - JBox



- Grid connected system
- Water pumping
- Telecommunications
- Battery charging system
- Cathodic protection system
- Building integrated power system



The PW1650 is made of 8 x 9 high efficiency (up to 15%) 5 inch polycrystalline silicon solar cells (125,50 mm X 125,50 mm), with a silicon nitride anti-reflective coating.

The PW1650 is Matrix'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 strengh polymer sheet.

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

With a tolerance improvement to+/- 5%, the PW1650 module ensures more power homogeneity in installations, and a financial investment corresponding to the real power produced.

A 12V version and a UL version are available on request.

POWER TOLERANCE : +/ -5% **EFFICIENCY WARRANTY : 25 YEARS***

PW1650		24 V Configuration			12 V Configuration		
Typical power	**W**	155	165	175	155	165	175
Minimum power	**W**	147.3	158.8	166.3	147.3	158.8	166.3
Voltage at typical power	**V**	34	34,4	35	17	17,2	17,5
Current at typical power	**A**	4,6	4,8	5	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		=+1,46 mA/℃ ; =-158 mV/℃ ; P/P=-0,43 %/℃			= +2,92 m A/℃ ; = -79 m V/℃ ; P/P = - 0,43 %/℃		
Power specifications at 1000 W/m² : 25°C : AM 1,5							

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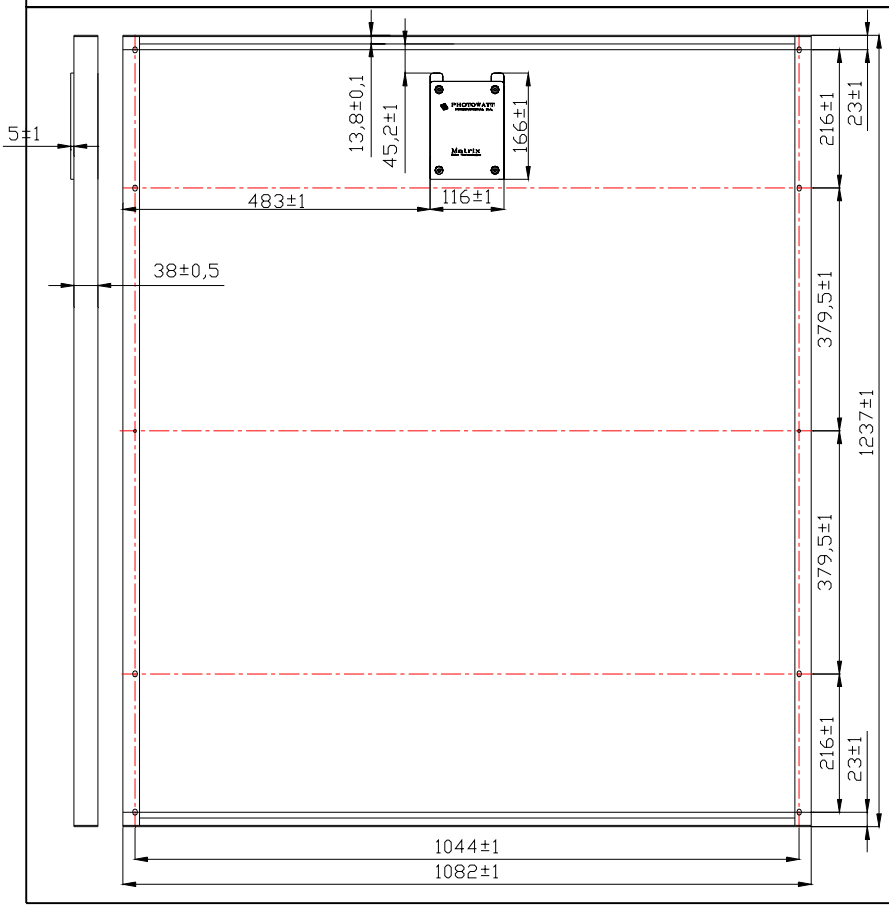
Module dimensions



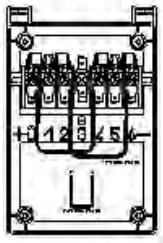
← Module weight : 18 kg

← Module size:
1237 x 1082 x 45 mm

← Packaging per 2 units :
1350 mm x 1130 mm x 102 mm, 39 Kg

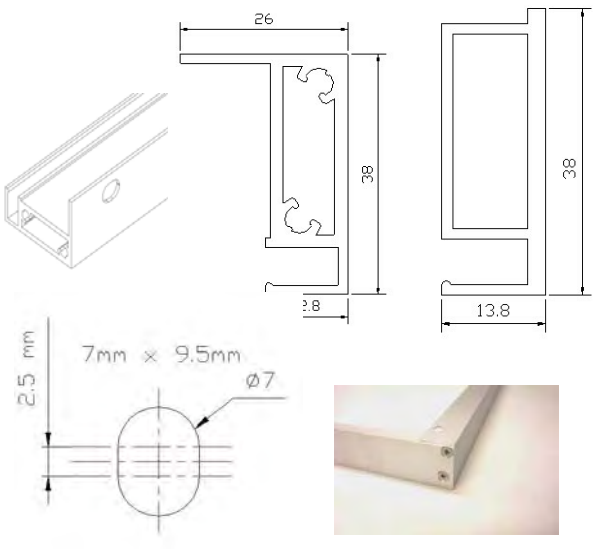
← Maximum pallet size (34 modules) :
1360 mm x 1130 mm x 1770 mm, 678 Kg

The universal JBox accepts cables from 1,5 mm² to 4 mm² (AWG16 to AWG11)



Module protected by 4 bypass diodes (1 bypass for 18 cells)

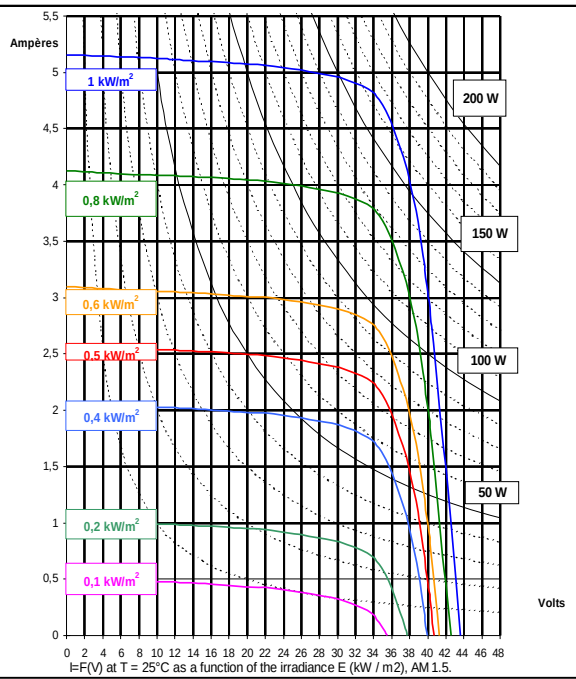
Frame



Module's mounting oblong hole

The mounting frame screw not passing beyond the frame

PW1650 Characteristics Ptyp : 165 Watts (24V)



I=F(V) at T = 25°C as a function of the irradiance E (kW / m2), AM 1.5.

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