PHOTOWATT PWM1650 - 12/24V
PHOTOVOLTAIC MODULE – Cables

MONOCRYSTALLINE MODULES

APPLICATIONS

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

- High efficiency modules
- 8x9 5' inch monocrystalline cells (Ø 150mm)
- Reinforced anodised aluminium frame
- Product warranty : 5 years*
- Efficiency warranty : 25 years*
- Power tolerance : +/- 3%
- Quality insurance : ESTI (61215), ISO 9001...

IEC61215

PACKING INFORMATION		
Module weight	Kg	18
Module size with cables	mm	1237 x 1082 x 38
Module size with Jbox	mm	1237 x 1082 x 45
Packing configuration	modules	2 per carton
Packing size	mm	1360 x 1110 x 100
Modules packed weight	Kg	39
Maximum pallet size (36 modules)	mm	1360 x 1110 x 1950
Maximum pallet weight	Kg	717

The PWM1650 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 PWM1650 module uses Photowatt's monocrystalline technology. The solar cells are individually characterized and electronically matched prior to interconnection. Encapsulation is realised between the high transmission tempered glass and the resistant thermal setting Tedlar®. 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.

With a tolerance improvement to+/- 3%, the PWM1650 modules ensure more power homogeneity in installations, and a financial investment corresponding to the real power produced.

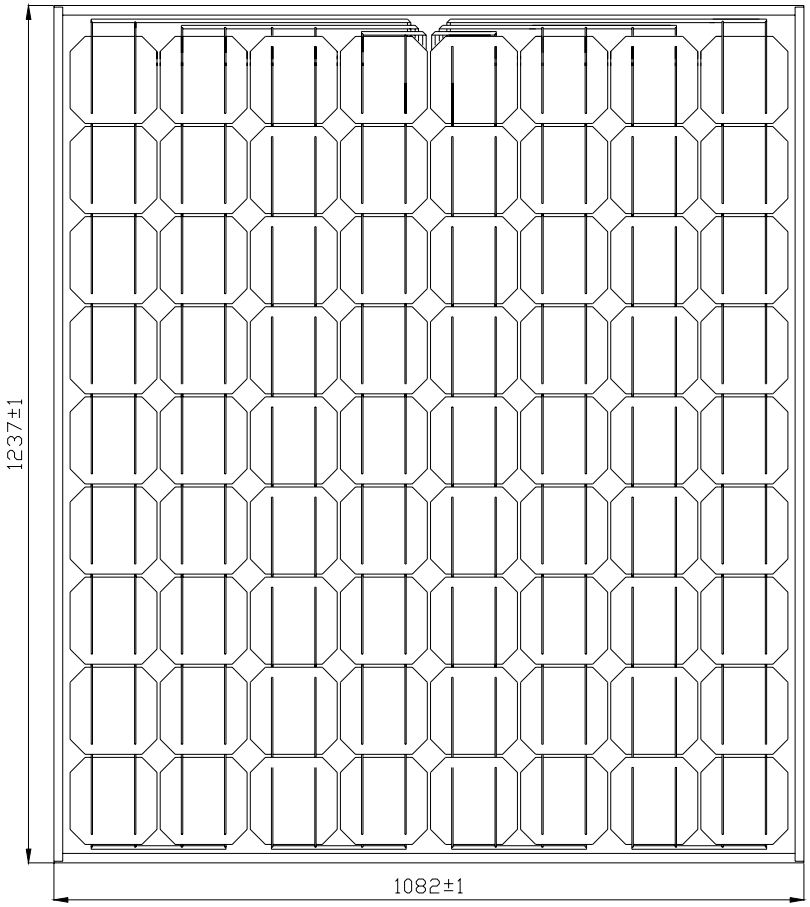
ELECTRICAL CHARACTERISTICS							
PWM1650		24 V Configuration			12 V Configuration		
Typical power	W	155	165	175	155	165	175
Minimum power	W	150	160	170	150	160	170
Voltage at typical power	V	35	35,2	35,4	17,5	17,6	17,7
Current at typical power	A	4,45	4,7	4,95	8,9	9,4	9,9
Short circuit current	A	4,9	5,1	5,3	9,8	10,2	10,6
Open circuit voltage	V	44	44,4	44,6	22	22,2	22,3
Maximum system voltage	V	1000V DC					
Temperature coefficient		α=+1,46 mA/°C ; β= -158 mV/°C ; γ P/ P= -0,43 %/°C			α = +2,92 mA/°C ; β = -79 mV/°C ; γ P/P = - 0,43 %/°C		
Power specifications at 1000 W/m² : 25°C : AM 1,5							

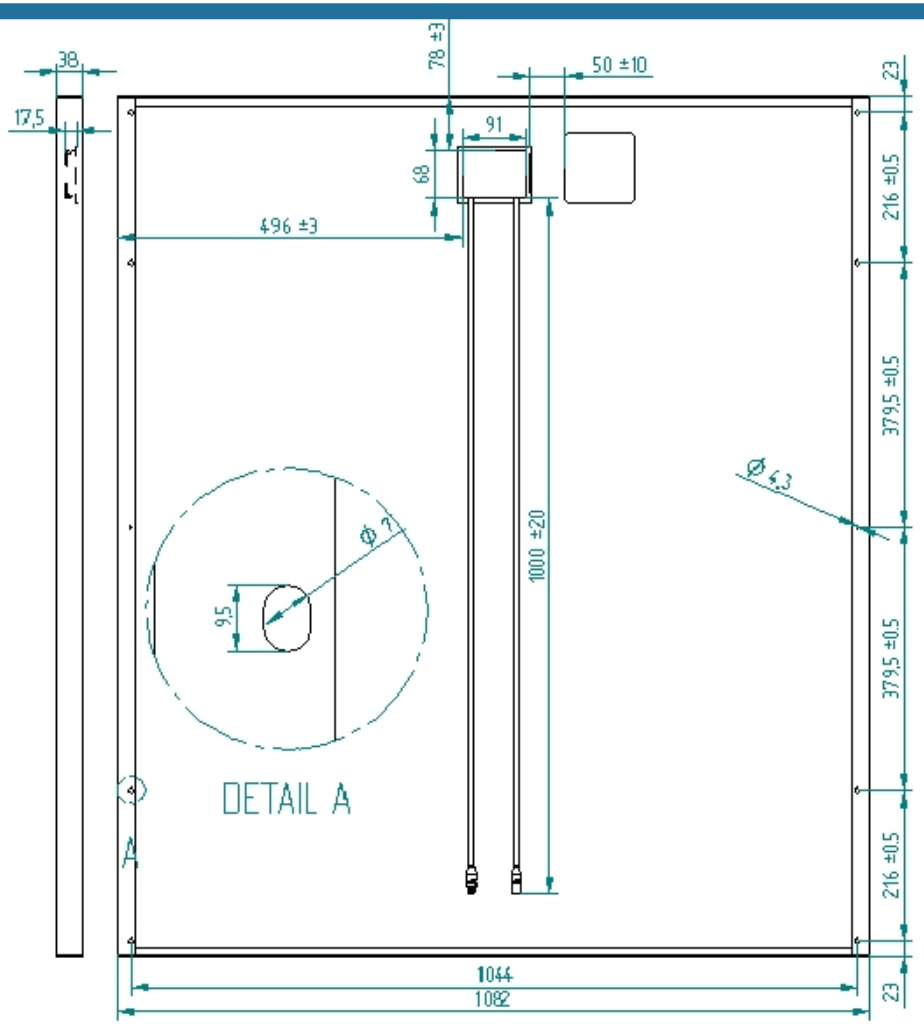
*According to general warranty conditions

33 Rue Saint Honoré – Z.I. Champfleuri
38300 Bourgoin-Jallieu - FRANCE
Phone +33 (0)4 74 93 80 20 - Fax +33 (0)4 74 93 80 40
www.photowatt.com - info.fr@photowatt.com

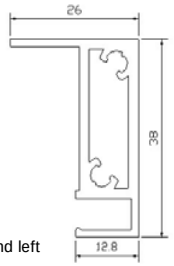
D18-P03-01 GB indice 0

PWM1650 - MODULES DIMENSIONS



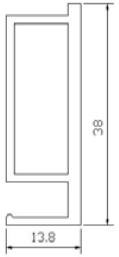


FRAME DETAILS



Right and left

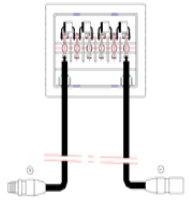
The mounting frame screw not passing beyond the frame



Top and low

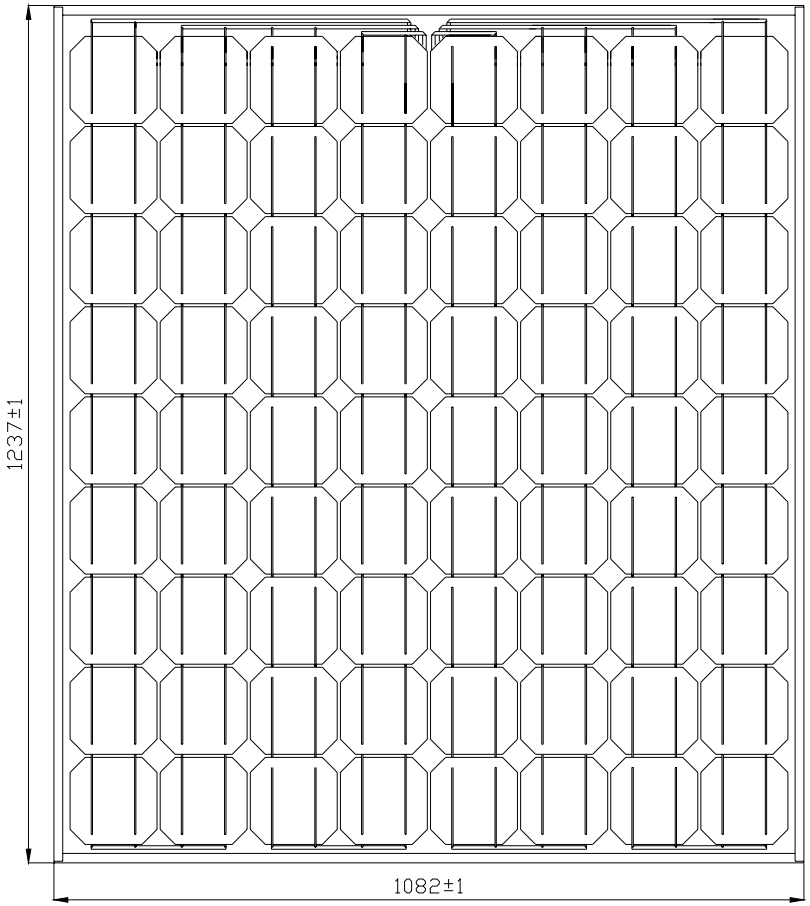
CABLES DETAILS

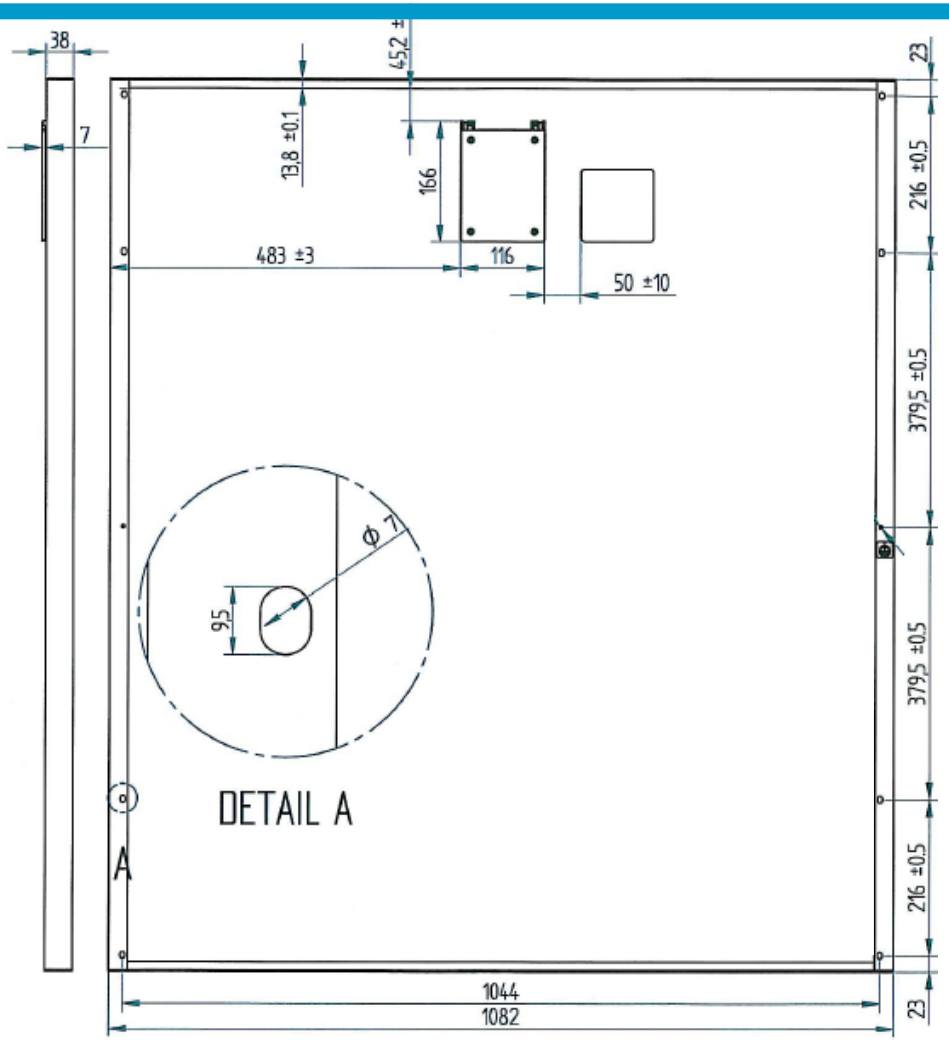
∅ 2,5 mm² cables



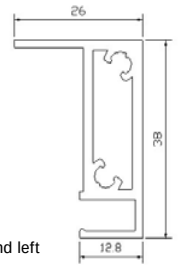
The module is protected by 4 bypass diodes (1 bypass diode per 18 cells)

PW1650 CABLES- DIMENSIONS



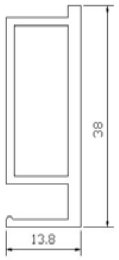


FRAME DETAILS



Right and left

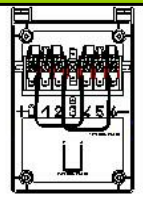
The mounting frame screw not passing beyond the frame



Top and low

JBOX DETAILS

The universal JBox accepts cables as large as 1,5 mm² à 4mm² (AWG16 à AWG11)

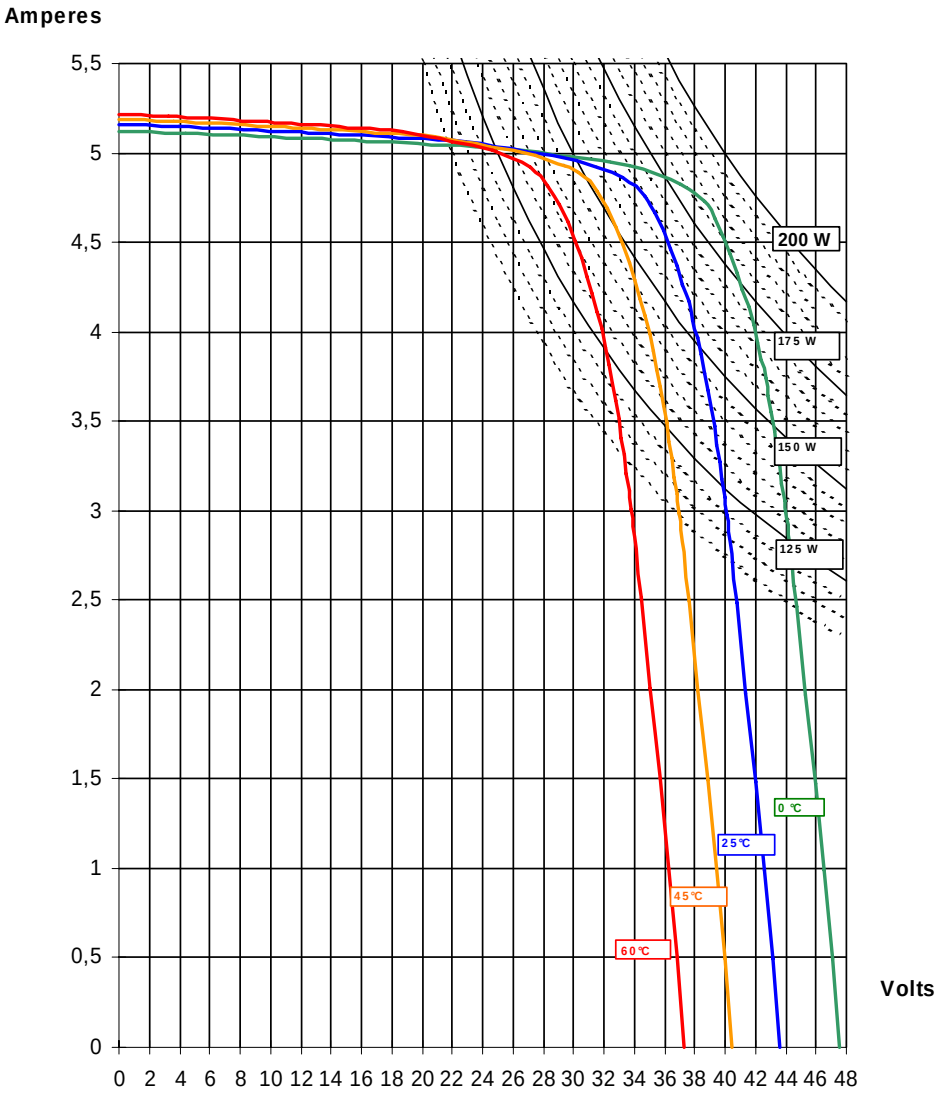


Module protected by 4 by pass diodes (1bypass diode per 18 cells)

D18-P03-01 GB indice 0

PWM1650 - MODULES CHARACTERISTICS Ptyp : 165 Watts (24V)

I=F(V) à E=1 kW/m², AM=1,5 as a function of the junction temperature



I=F(V) à T = 25°C as a function of this irradiance E (kW / m2), AM 1,5.