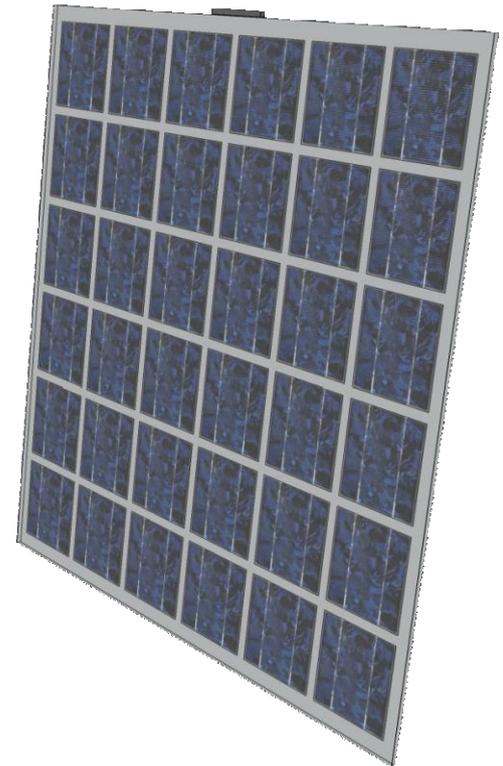


2ES MODULE from 150 to 165 Wp

2ES a French company specialized in Renewable Energy design its own panels to adapt its installations to the needs of the customers.

The realization is made by VIDUR, a Spanish manufacturer of photovoltaic panels.



The main characteristics of the 2ES modules:

- 36 Monocrystalline cells of very high yields, for 145 et 150 Wp, 36 Polycrystalline cells for 135 Wp,
- The translucent space between cells is of 15 mm bringing more than 40 % of luminosity under panels,
- Junction box with a side of 1 cm and of 12 cm long located on the lateral field of the panel for a good aesthetic appearance and for a better protection of the connectors support.
- 2 glasses of solar quality of 4 mm providing a rigidity and a resistance to extreme climatic conditions (8600 Pa),
- Assembly of the 2 glasses and of the 2 PVB films accomplished under vacuum for an excellent encapsulation of cells,
- 3 bus-bars connect cells between them for a better yield.

- ✚ Certisolis Certifications
- ✚ Safe Category II
- ✚ Operation guarantee (output power) 90 % for 12 years/ 80 % fo 25 years
- ✚ Product warranty of 5 years.

Electrical characteristics :

Power	135 Wp	145 Wp	150 Wp
Tolerance	+/- 3 %	+/- 3 %	+/- 3 %
Tension in power max. Vpm (V)	18.2 V	18.2 V	18.2 V
Power intensity max Ipm (A)	7.42 A	7.96 A	8.24 A
Open-circuit voltage Voc (V)	22,5 V	22,68 V	22,97 V
Intensity of the short-circuit Icc	9,01 A	9,10 A	9,17 A
Number of by-pass diodes	2	3	3
Effects of the temperature of cells	- 0,47 %/K	- 0,47 %/K	- 0,47 %/K

General characteristics of the modules:

Application temperatures:	-40 à +50 °C
Cells:	36 cells of 156 x 156 mm
Maximun voltage:	1000 V
Module dimension:	1081 x 1070 mm
Thickness of the module:	9.5 +/- 0.2 mm
Weight :	25 kg
Mechanical strength (snow and wind) :	8 600 Pa (860kg/m ²)
Connector technology :	Multi-contact MC3
Particularities :	Lateral junction box of 10*10*122 mm Transparency between cells of 15 mm

Snow resistance : 560 decanewtons/module



Toughened glass / PVB / Cells / PVB / Toughened glass

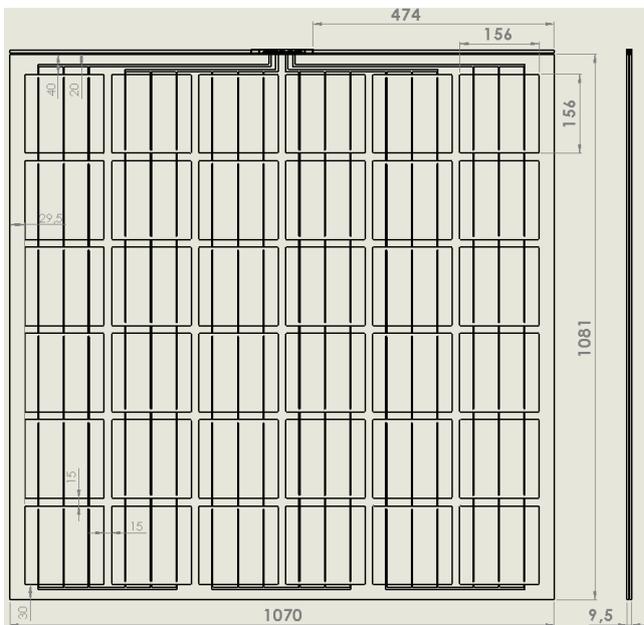


Junction box 2 diodes



Junction box 3 diodes

Dimensional characteristics :



2ES picture
Alpha building
Echirolles