

## Photovoltaic modules

### TE 1300, TE 1700

115 à 180 Watts Peak - 12/24 Volts  
Multicrystalline, Glass/Tedlar




**Tenesol manufactures its own photovoltaic modules.**

Tenesol's modules use the **high-output technology of the multicrystalline cell**. Each cell is individually measured and sorted before the encapsulation stage.

The combination of **Tempered Glass / EVA / Tedlar** ensures weight minimisation, guarantees a perfect watertightness as well as durable protection of the cells.

**The aluminium frame** allows an effortless handling and an easy and fast assembly.

Each module is submitted to an **individual quality control** and is referenced by an assessment sheet of its performance tests.

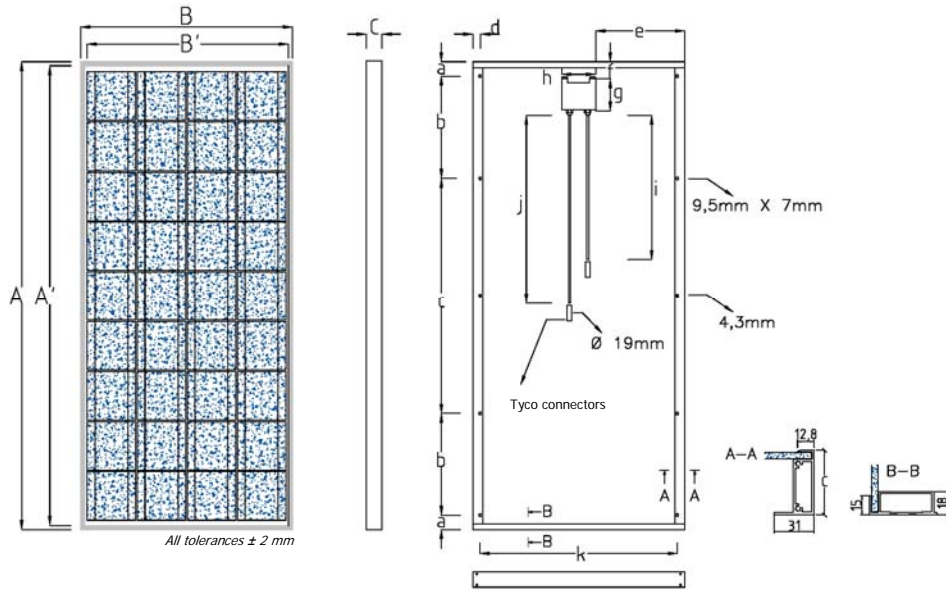
The Tenesol modules' quality is certified :   
Manufactured in ISO 9001:2000 certified facilities

#### APPLICATIONS :

- Telecommunication
- Professional Applications
- Pumping
- Beaconing
- Rural Electrification
- Grid connected systems



#### Dimensions



TE1300 TE1700

	TE1300	TE1700
A	1510	1240
A'	1480	1212
B	676	1086
B'	650	1062
C	50	38
a	48	25
b	327,5	215,5
c	759	759
d	23	19
e	284,5	489,5
f	51,5	50
g	99	99
h	107	107
i	840	840
j	1030	1030
k	630	1048

#### Characteristics

Electrical characteristics	TE1300						TE1700					
Nominal voltage	12 V						24 V					
Typical power	115	120	125	130	135	140	140	150	160	170	180	
Minimum power	112,5	117,5	122,5	127,5	132,5	137,5	135	145	155	165	175	
Maximum power	117,5	122,5	127,5	132,5	137,5	142,5	145	155	165	175	185	
Sorting limits	Wp ± 2,5 Wp						± 5 Wp					
Sorting limits	%	±2,17%	±2,08%	±2,00%	±1,92%	±1,85%	±1,79%	±3,57%	±3,33%	±3,13%	±2,94%	±2,78%
Voltage at max. power	Vpm (V)	17,5	17,6	17,7	17,8	17,9	18	33,2	33,9	34,7	35,5	36,2
Current at max. power	Ipm (A)	6,7	6,9	7,2	7,4	7,6	7,8	4,2	4,4	4,6	4,8	5
Open circuit voltage	Voc (V)	21,7	21,8	21,9	22	22,1	22,2	42	42,6	43,2	43,8	44,4
Short circuit current	Isc (A)	7,7	7,8	7,9	8	8,1	8,2	4,5	4,7	5	5,2	5,4
Temperature coefficients												
Coefficient Temperature of Voltage	- 77,4 mV/°C						- 152,64 mV/°C					
Coefficient Temperature of Current	+ 4,4 mA/°C						+ 1,53 mA/°C					
Coefficient Temperature of Power	- 0,46 %/°C						- 0,43 %/°C					
NOCT (°C)	45						45					
Cells												
Layout	156 x 156 mm						125 x 125 mm					
Layout	36 cells / 4 x 9						72 cells / 8 x 9					
Type	Multicrystalline						Multicrystalline					
General informations												
Maximum system voltage (V)	715 V						715 V					
Diodes	2 by-pass						4 by-pass					
Type of connection	Tyco (Grid J/box)						Tyco (Grid J/box)					
Weight (kg)	12						16					
Certifications	IEC61215 + TUV class II											
Warranty												
Product warranty	2 years											
Warranty on power output	25 years - 80 % of minimal power / 10 years in marine environment											

(According to specifications @ STC: Irradiation 1000 W/m<sup>2</sup>; AM 1.5; Cell at ambient Temperature T: 25°C)

