

A- 65P, A-70P, A-75P, A-80P, A-85P, A-90P

Professional Photovoltaic Module

ECOLOGICAL FUNCTIONALITY

ATERSA employs last generation materials in the manufacture of their photovoltaic modules. The modules with 36 polycrystalline cells supply the perfect voltage for systems of 12V DC, as autonomous installations with batteries, water pumping, rural electrification... as well as for grid connection systems. These modules are grouped into the mid-high power range, and they are ideal for any application using the photoelectric effect as a source of clean energy, due to its minimal chemical pollution and the non-existence of acoustic contamination. In addition, thanks to its design, they can easily be incorporated into practically any installation.

MATERIALS

ATERSA's vast experience in the manufacture of photovoltaic modules puts the company in an unsurpassable position when choosing the most suitable production materials. This guarantees the quality of their products.

Every module is made of high-level transmissivity crystal. It relies on one of the best encapsulants used in module manufacture, modified ethyl-vinyl-acetate (EVA). The back sheet consists of several layers and each one has a specific function, either for adhesion, electrical insulation, or insulation against adverse weather conditions. In addition, the frame is aluminium and has an external coating of paint that provides the profile with very much greater resistance than the normal anodized layer.

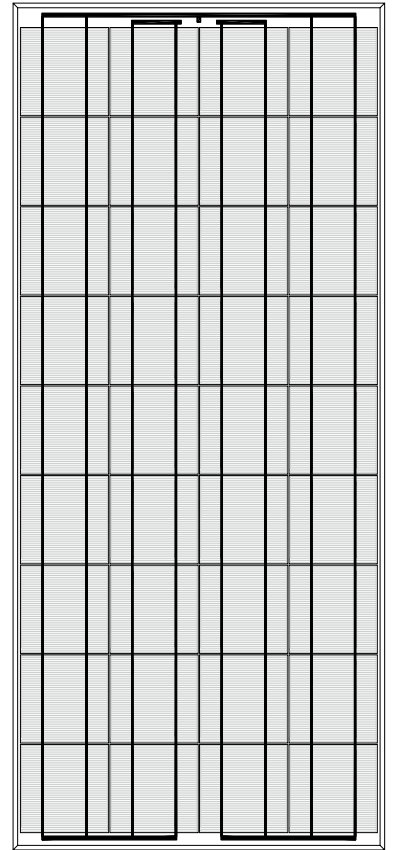
Thanks to the use of this system for their frames, ATERSA has managed to combine not only the aim of providing mechanical rigidity to the laminate complying with the standards required, but also an easy and high-speed assembly system that can reduce to one third the module installation time.

QUALITY

All ATERSA products are manufactured according to strict quality procedures as dictated by the ISO 9001 certification that the company obtained in 1997. This series of modules complies with European directives 2006/95/EC, and disposes of TÜV certification for IEC 61215 accomplishment, that requires -among other trials- thermal cycle testing of 200 cold-hot cycles from -40°C to +85°C, mechanical load tests, as well as hail resistance trials consisting of impacting the module eleven times with a 25.4mm diameter ball at a speed of 82 Km/h.

GUARANTEE

A **GUARANTEE** of up to 25 years on output power and 3 years for manufacturing defects. (For more detailed information of the terms and conditions of the guarantee, consult our web page: www.atersa.com).



CHARACTERISTICS

The electrical data reflect the typical values of the modules and laminates A-65P, A-70P, A-75P, A-80P, A-85P and A-90P measured at the connector outlet at the end of the manufacturing process.

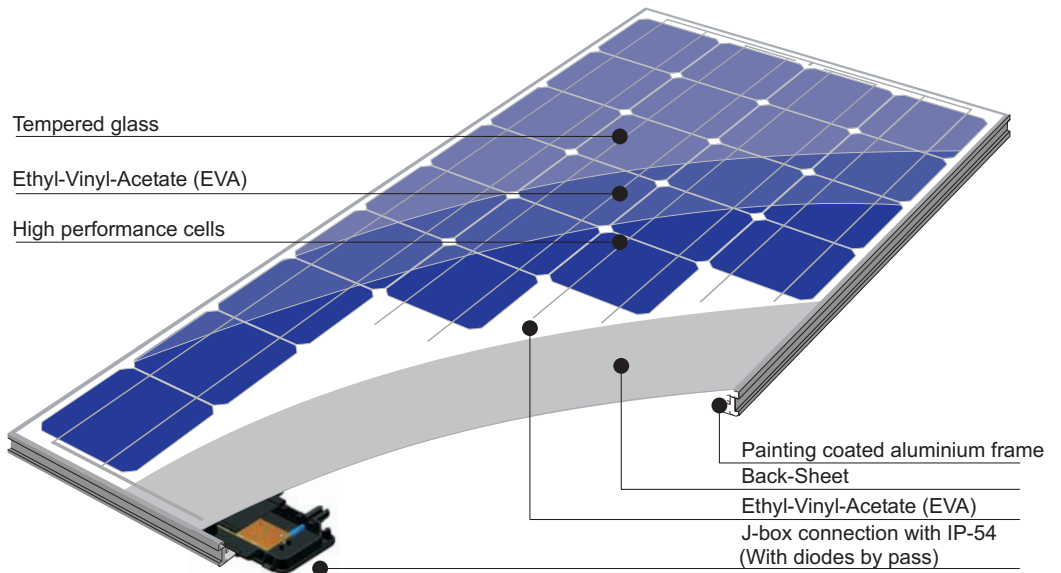
These measurements are made in accordance with ASTM E1036 and corrected to standard test conditions (STC): radiation 1KW/m², spectral distribution AM (air mass) 1,5 ASTM E892 and cell temperature of 25°C.

The power of the solar cells is variable at the end of the production process. The different power specifications of these modules reflect this dispersion.

Crystalline cells can suffer photon degradation during the first months when exposed to light, which could decrease the maximum power value of the module by up to 3%.

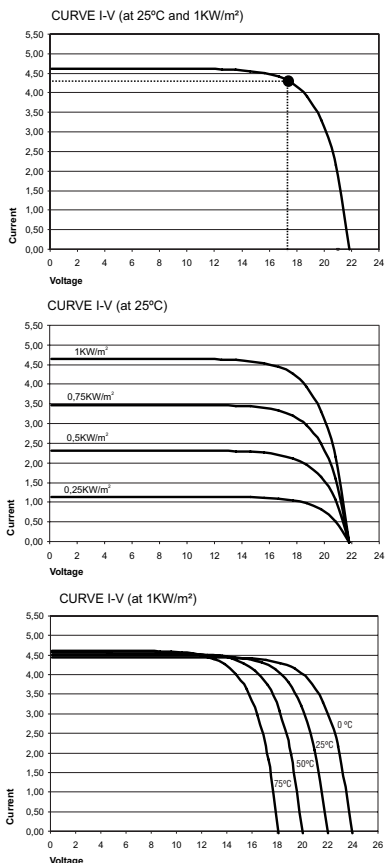
In normal operating conditions, the cells can reach a higher temperature than standard laboratory readings. NOCT is a quantitative measurement of this increase. The measure of NOCT is made in the following conditions: radiation of 0,8KW/m², room temperature of 20°C and wind speed of 1 m/s.

As the paint on the frame is an electrical insulator, it is necessary to erode the contact point with the earth wire to ensure the continuity to earth.



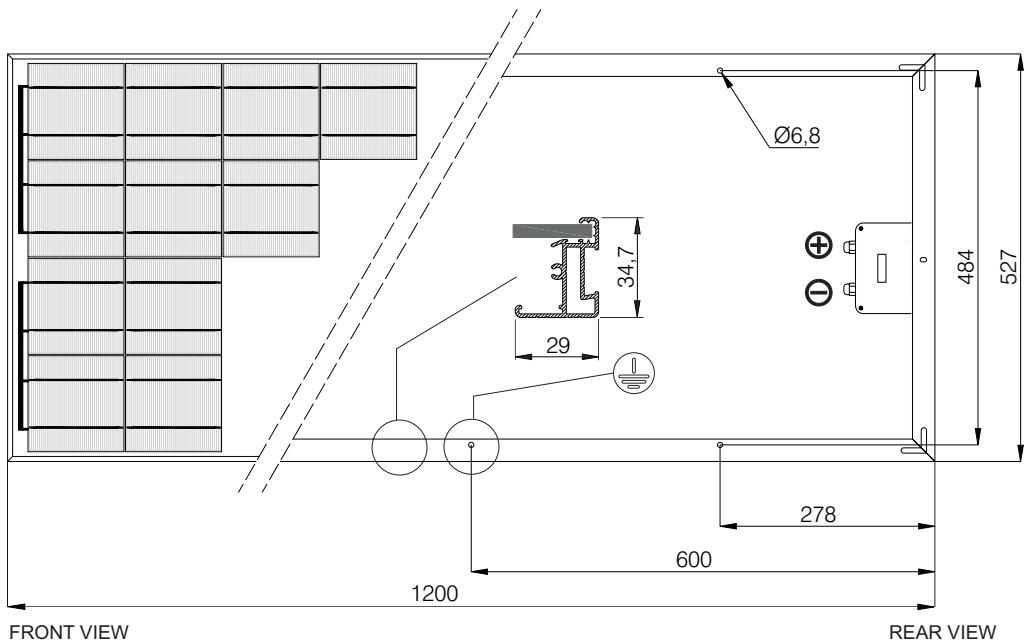
ELECTRICAL CHARACTERISTICS	A-65P	A-70P	A-75P	A-80P	A-85P	A-90P
Peak power (W at test ± 8 %)	65W	70W	75W	80W	85W	90W
Number of cells in serie	36					
Efficiency (module)	10,28%	11,07%	11,86%	12,65%	13,44%	14,23%
Max. Power current (Imp)	3,80A	4,00A	4,20A	4,45A	4,62A	4,75A
Max. Power voltage (Vmp)	17,20V	17,5V	17,85V	18,00V	18,39V	18,94V
Short circuit current (Isc)	4,40A	4,5A	4,6A	4,75A	4,9A	5,00A
Open circuit voltage (Voc)	21,40V	21,6V	21,9V	22,1V	22,3V	22,55V
Thermal coefficient of Isc (α)	0,08%/°C					
Thermal coefficient of Voc (β)	-0,32%/°C					
Thermal coefficient of Power (γ)	-0,38%/°C					
Max. Voltage system	700 V					
PHYSICAL CHARACTERISTICS						
Dimensions (mm.)	1200x527x35					
Weight (aprox.)						

CURVES MODEL A-75P



Electrical specifications measured at STC. NOCT: 47±2°C

NOTE: Data contained in this documentation could be changed without previous advice.



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