

A-127P

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 the installation of solar arrays for rural electrification, telecommunication and telemetric systems power supply, water pumping... 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.

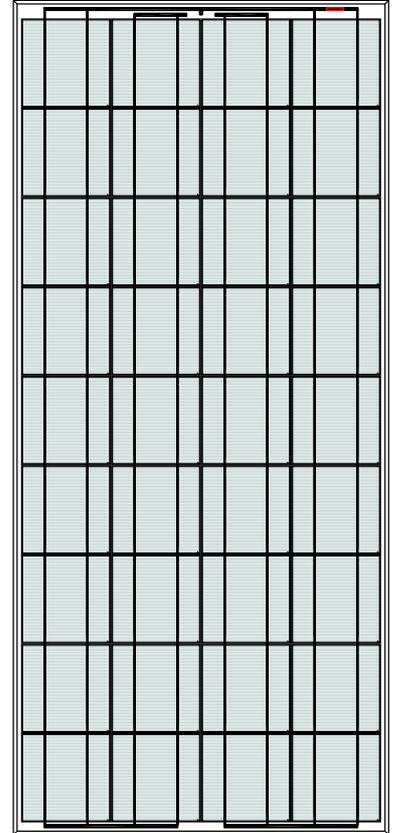
QUALITY

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 also complies with European directives 89/336/EEC, 73/23/EEC. The front glass used in this used in these modules could resist the impact of ice stones eleven times at 82 Km/h.

The junction box QUAD is TÜV Class II 1000V certified and has IP54 protection, which provides the system a good insulation against humidity and bad meteorology. The box could fit wires with an outer diameter in the range from 4,5mm up to 10mm.

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-127P measured at the connector outlet at the end of the manufacturing process.

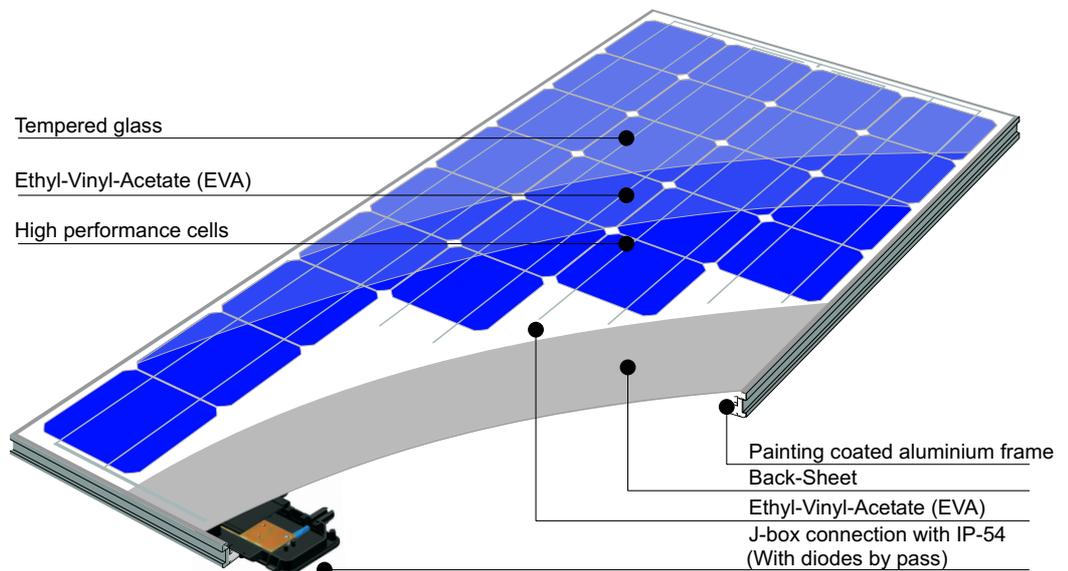
These measurements are made in accordance with ASTM E1036 and corrected to standard test conditions (STC): radiation 1KW/m², spectral distribution AM (air mass) 1,5 ASTM E892 and cell temperature of 25°C.

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%.

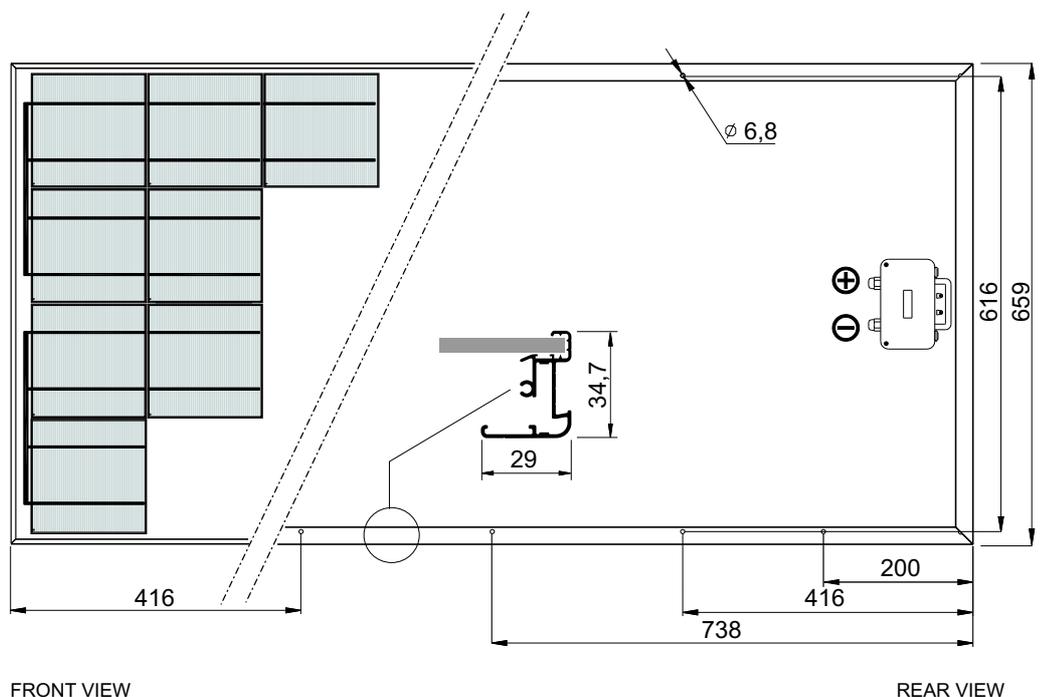
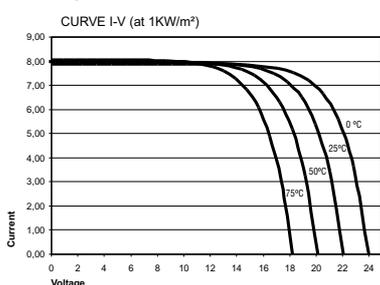
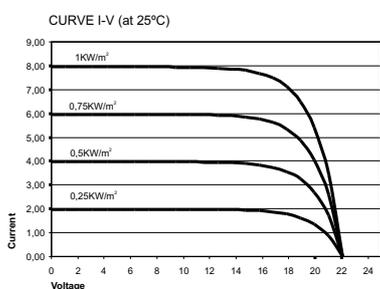
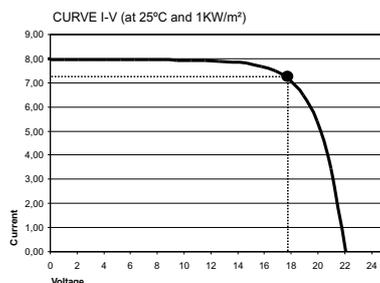
In normal operating conditions, the cells can reach a higher temperature than standard laboratory readings. TONC is a quantitative measurement of this increase. The measure of TONC is made in the following conditions: radiation of 0,8KW/m², room temperature of 20°C and wind speed of 1 m/s.

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-127P
Peak power (W at test -2+5 %)		127 W
Number of cells in serie		36
Max. Power current (Imp)		7,28 A
Max. Power voltage (Vmp)		17,48 V
Short circuit current (Isc)		7,95A
Open circuit voltage (Voc)		22,05 V
Thermal coefficient of Isc (α)		2,30 mA/°C
Thermal coefficient of Voc (β)		-76,32 mV/°C
Max. Voltage system		700 V
PHYSICAL CHARACTERISTICS		
Dimensions (mm.)		1476x659x35
Weight (approx.)		12,80 Kg.
Electrical specifications measured at STC. TONC: 47±2°C		
NOTE: Data contained in this documentation could be changed without previous advice.		

CURVES MODEL A-127M



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