

A-30M, A-35M

Professional Photovoltaic Module

ECOLOGICAL FUNCTIONALITY

ATERSA employs last generation materials in the manufacture of their photovoltaic modules. The modules with 36 half monocrystalline cells supply the perfect voltage for small photovoltaic systems of 12V DC, as the supply of electrovalves, measuring systems... These modules are grouped into the mid-low 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.

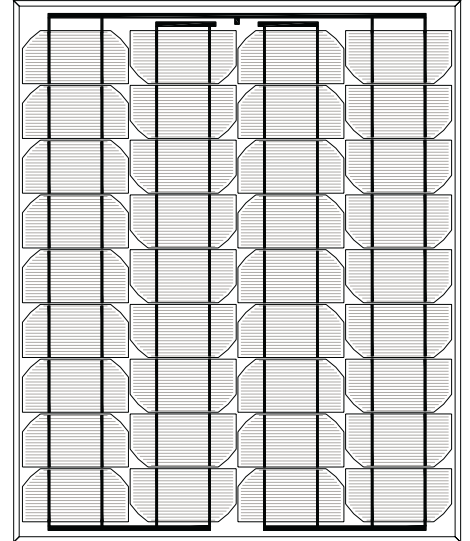
QUALITY

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 89/336/EEC and 73/23/EEC, 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.

The DELTA junction box used by ATERSA 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

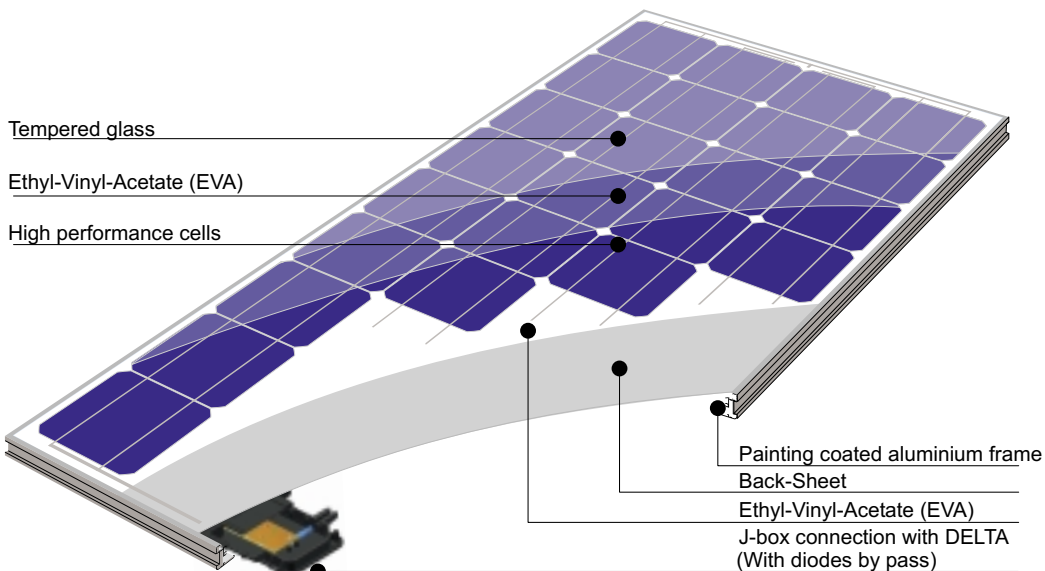
The electrical data reflect the typical values of the modules and laminates A-35M measured at the connector outlet at the end of the manufacturing process.

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.

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.

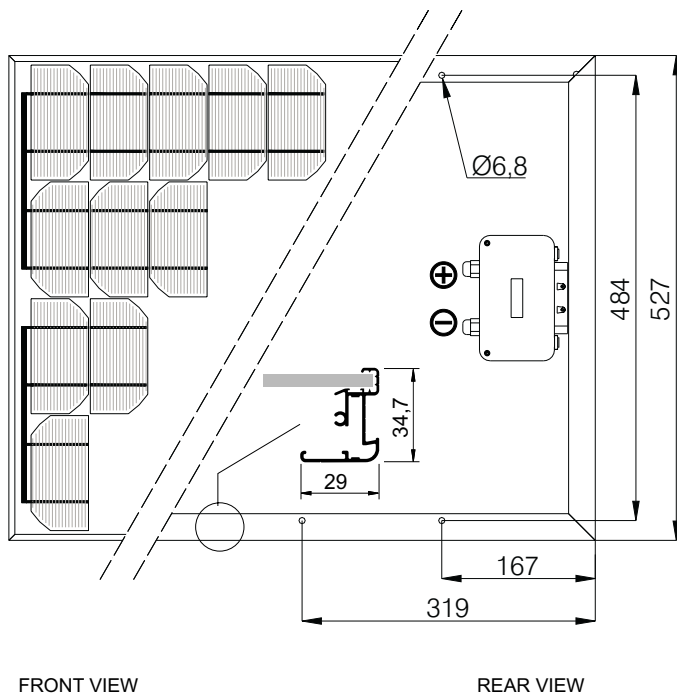
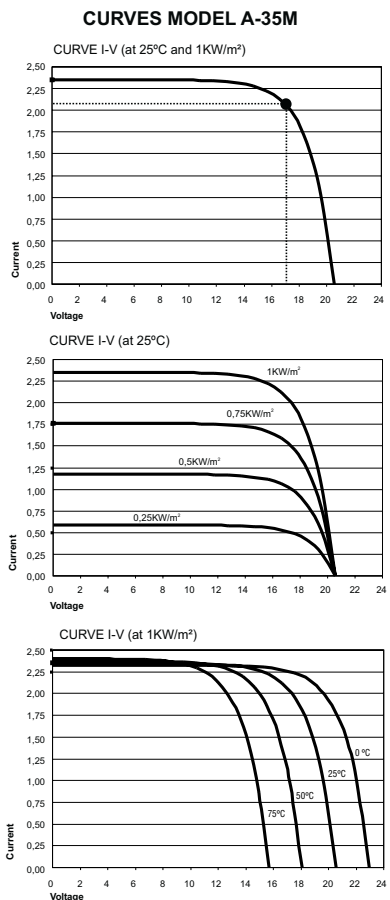
As the paint on the frame is an electrical insulator, it is necessary to erode the contact point with the earth wire to ensure the continuity to earth.



ELECTRICAL CHARACTERISTICS	A-30M	A-35M
Peak power (W at test +8 %)	30 W	35 W
Number of cells in serie	36	36
Max. Power current (Imp)	1.81 A	2.10 A
Max. Power voltage (Vmp)	16.56 V	16.80 V
Short circuit current (Isc)	2.06 A	2.35 A
Open circuit voltage (Voc)	20.40 V	20.55 V
Thermal coefficient of Isc (α)	1 mA/°C	1 mA/°C
Thermal coefficient of Voc (β)	-97.20 mV/°C	-97.20 mV/°C
Max. Voltage system	700 V	700 V

PHYSICAL CHARACTERISTICS	A-30M	A-35M
Dimensions (mm.)	637x527x35	637x527x35
Weight (approx.)	4.50 Kg.	4.50 Kg.

Electrical specifications measured at STC. TONC: 47±2°C
NOTE: Data contained in this documentation could be changed without previous advice.



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