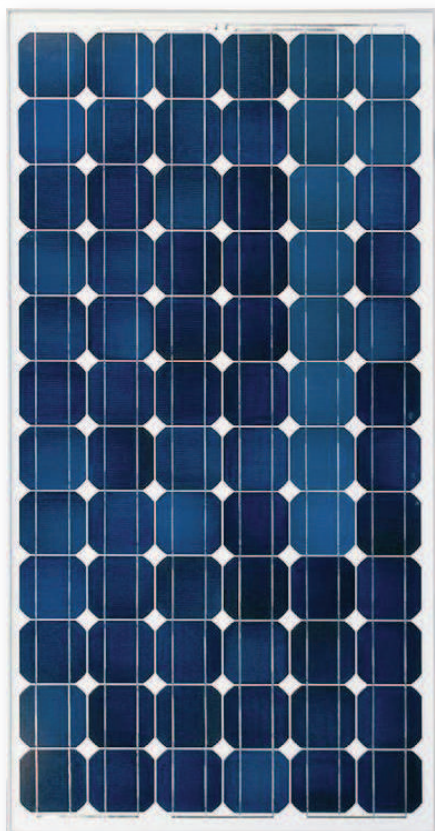


# **+ Ultra** *new range*

➔ Photovoltaic module  
**A-305M / A-310M / A-315M (TYCO 3.2)**



**+ UltraPositive tolerance**  
Positive 0 / +5 Wp

**+ UltraQuality Criteria**  
Anti Hot-Spot

**+ UltraWarranty**  
10-year product warranty

**+ UltraReliability**  
In the market since 1979

**+ UltraResistance**  
3,2 mm tempered glass

**+ UltraTES**  
Cell-to-cell electrical verification



A unique system  
in the market,  
patented by  
Atersa.

Electrical characteristics (STC: 1kW/m<sup>2</sup>, 25°C±2°C and AM 1,5)\*

	A-305M	A-310M	A-315M
Rated Power (0/+5 W)	305 W	310 W	315 W
Module efficiency	15,68%	15,94%	16,19%
Peak-Point Current of Maximum Power (Imp)	8,31 A	8,40 A	8,45 A
Peak-Point Voltage of Maximum Power (Vmp)	36,71 V	36,91 V	37,30 V
Short-circuit Current (Isc)	8,84 A	8,92 A	8,94 A
Open Current Voltage (Voc)	44,89 V	45,15 V	45,72 V

**Thermal parameters**

Isc (α) Temperature Coefficient	0,03% /°C
Voc (β) Temperature Coefficient	-0,34% /°C
P (γ) Temperature Coefficient	-0,43% /°C

**Physical characteristics**

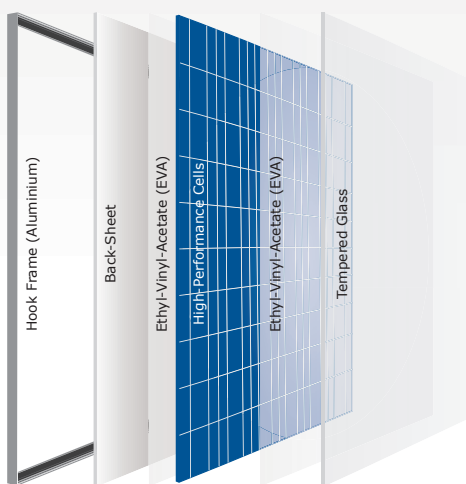
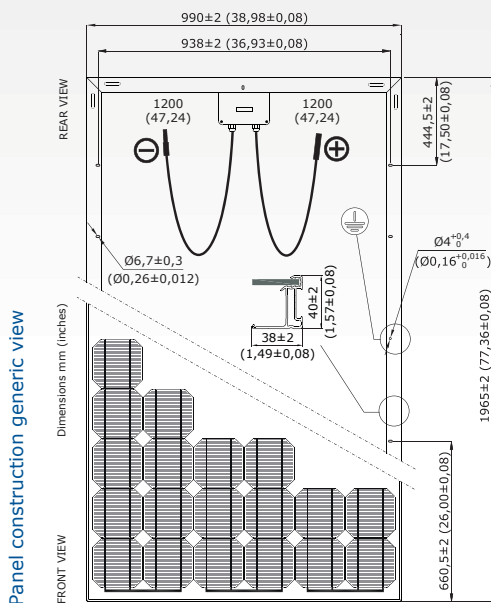
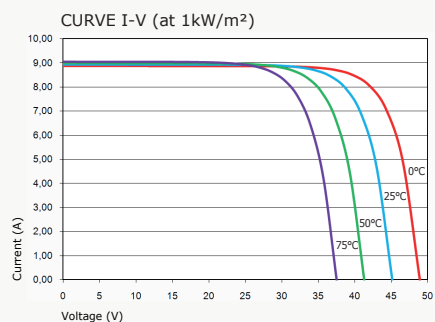
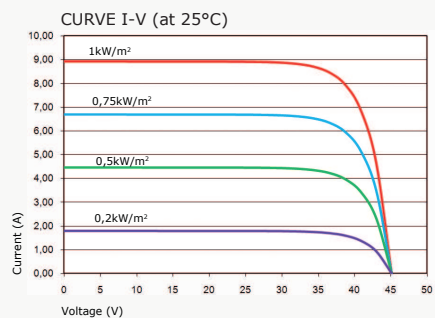
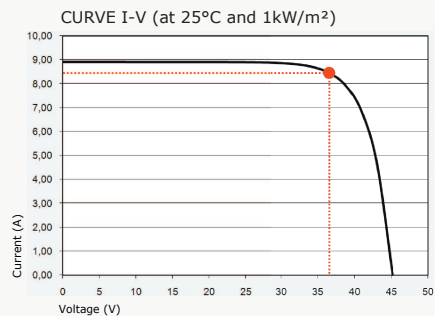
Dimensions (± 2 mm)	1965x990x40
Weight (± 0,5 kg)	22,5
Surface area (m <sup>2</sup> )	1,95
Cell type (± 1 mm)	Monocrystalline 156x156 mm (6 inches)
Cells in series	72 (6x12)
Front glass	Ultra-clear 3,2 mm tempered glass
Frame	anodized aluminium alloy or Polyester-coated
Connection box	TYCO IP67
Cables	Solar Cable 4 mm <sup>2</sup> 1200 mm
Connectors	TYCO PV4

**Operating range**

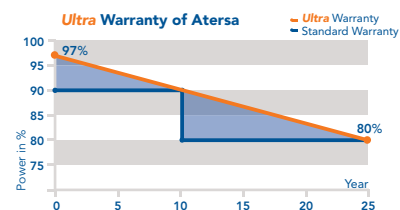
Temperature	-40°C to +85°C
Maximum System Voltage / Protection	1000 V / CLASS II
Maximum Wind Load / Snow Load	2400 Pa (130 km/h)
Max. Reverse Current (IR)	15,1 A

\*Electrical specifications measured in STC. NOCT: 47±2°C.  
Tolerance measures STC: ±3% (Pmp); ±10% (Isc, Voc, Imp, Vmp).

**A-310M curves model**



- Modules per box: **25 units**
- Weight per pallet: **595 kg**
- A 40-foot container can hold 21 boxes: **525 panels**
- A 40-foot HC container can hold 22 boxes: **550 panels**
- A 20-foot container can hold 9 boxes: **225 panels**
- A TAUTLINER truck can hold 26 boxes: **650 panels**



**NB:** The data contained in this documentation are subject to modification without prior notification.

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Latest revision: **27/04/17**  
Ref.: **E-MU-6M (1) 6x12-G (TY 3.2)**  
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