

Photovoltaic Modules AP 72 72 cells – multicrystalline silicon

Wp: 260 – 265 – 270 – 275 – 280 – 285 – 290



Made in EU

Product Warranty

- 10 years warranty on manufacturing defects*

Performance Warranty

- 12 years warranty on 90% of the nominal power *
- 25 years warranty on 80% of the nominal power *

* If properly installed and used according to the available instructions for storing, mounting, usage and maintenance

Disposal Warranty and Recycling

- COBAT (for Italy)
- PV CYCLE ASSOCIATION AISBL (for Europe)



System Certifications

Integrated Management System

- Quality - UNI EN ISO 9001:2008
- Environment - UNI EN ISO 14001:2004
- Health & Safety - OHSAS 18001:2007
- Certiquality Certificate of Excellence



Characteristics & Performance

- **Product and Service** *Made in Italy* 
- **Quality and Robustness**
 - High Quality raw materials
 - Quality control on 100% of modules
 - High transparency, 4 mm glass
 - Anodized aluminum 45 mm profile
- **Resistance to critical environment**
 - Static load test at 540 kg/m²
 - Hail with diameter of 25mm and speed of 83 km/h
 - Ideal for seaside and marine areas, rural environment, farms
- **High productivity**
 - Output Power always exceeds nominal value
 - Special anti-reflective glass for higher energy yields: up to 4% more
 - Current/power range strictly classified to reduce mismatching losses

Product Tests and Certifications



Safety Class II

- **Conformity and Factory Inspection**
- **"MADE IN EU" Attestation for Italy**
- **"MADE IN EU" Attestation for France**
- **Type Approval**
 - IEC 61215:2005 - Quality and Robustness
 - IEC 61730 - 1 / 2 - Safety
- **MCS Certification for UK**
- **Salt Mist Fog Resistance Test**
 - Resistance in seaside areas - IEC 61701:2000
- **Ammonia Resistance Test**
 - Resistance in farms
- **Special Component mechanical test**
 - Mechanical load test
- **Ageing Resistance Test**
 - 2000h Heat-Dump Test (85°C/85%R.H.)
 - 40 years aging in average environmental conditions
- **Fire Reaction Class (Class II)**



Photovoltaic Modules AP 72

Electrical Features

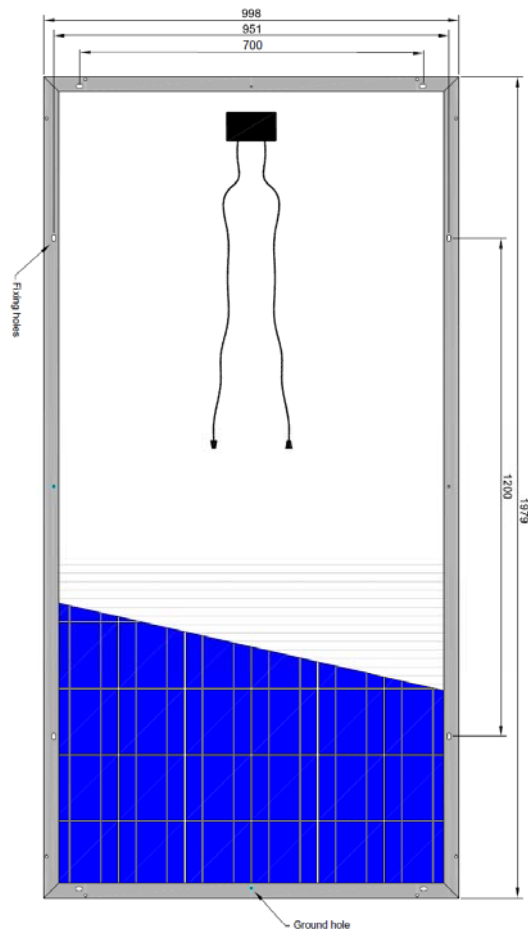
Type		AP 72-260	AP 72-265	AP 72-270	AP 72-275	AP 72-280	AP 72-285	AP 72-290
Performance at Standard Conditions (STC): Irradiance 1000 W/m ² ; Module Temperature 25°C; AM 1.5								
Nominal Power	P _{mpp} (W)	260	265	270	275	280	285	290
Maximum Power Voltage	V _{mpp} (V)	34,41	34,55	34,76	34,89	35,00	35,15	35,26
Maximum Power Current	I _{mpp} (A)	7,63	7,74	7,84	7,95	8,07	8,14	8,22
Open Circuit Voltage	V _{oc} (V)	44,27	44,46	44,73	44,89	45,04	45,22	45,36
Short Circuit Current	I _{sc} (A)	8,22	8,34	8,45	8,57	8,70	8,77	8,86
Fill Factor	%	72,15	72,12	72,10	72,10	72,08	72,15	72,12
Module efficiency	%	13,30	13,50	13,80	14,10	14,30	14,50	14,70
Power tolerance	%	-0, +3 *	-0, +3 *	-0, +3 *	-0, +3 *	-0, +3 *	-0, +3 *	-0, +3 *
Working Temperature	(°C)	-40 / +85	-40 / +85	-40 / +85	-40 / +85	-40 / +85	-40 / +85	-40 / +85
Maximum Voltage	(V _{DC})	1000	1000	1000	1000	1000	1000	1000
NOCT	(°C)	45 ± 2	45 ± 2	45 ± 2	45 ± 2	45 ± 2	45 ± 2	45 ± 2
Coefficient of temperature I _{sc} (τ _I)	% / °C	0,07						
Coefficient of temperature V _{oc} (τ _V)	% / °C	-0,31						
Coefficient of temperature P _{max} (τ _P)	% / °C	-0,4						

All electrical measures ±10% tolerance (but P_{mpp} and NOCT)

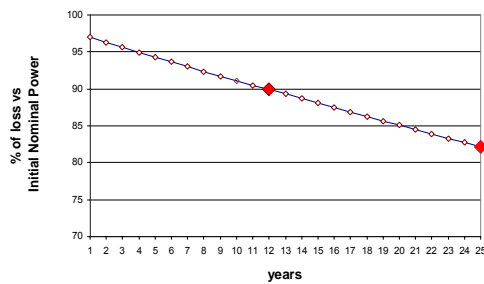
*Except differently agreed

Temperature Coefficients

of I_{sc} (α) = 0.06 % / °C // 5.429 mA / °C
 of V_{oc} (β) = -0.31 % / °C // -0.139 V / °C
 of P_{max} (γ) = -0.43% / °C // -1.20 W / °C



Linear Power Decay in Time



Design

Front	High transparency anti-reflective 4 mm tempered glass
Cells	72 cells – Multicrystalline Silicon - 156 x 156 mm – 3bb
Encapsulant	EVA (Etylene - Vinyle Acetate co/polymer)
Backsheet	Polymeric laminate
Profile	Anodized Aluminium - 6060 – Anticorodal
Junction Box	IP 65 (IEC 60529) - Class II (DIN VDE0106) 3 by-pass diodes
Cables	2 unipolar, 4 mm ² wires - rapid clutch - 1 m lenght

Dimensions

Lenght	(mm)	1979
Width	(mm)	998
Profile Thickness	(mm)	45
Weight	(kg)	26
Front glass thickness	(mm)	4

Holes

Mounting slots	8 slots (9 mm x 16 mm) at a distance of: 1200 mm - centered on the long side 700 mm - centered on the short side
Ground Hole	1 hole (5 mm) with identification label
Drain Holes	2 drain holes (7 mm) on each side 100 mm from corner

Made in Italy

Ferrania Solis S.r.l. - Viale della Libertà, 57 - 17014 Cairo Montenotte (Savona)
 Tel. : +39 019522 4609/4695/4094 - Fax.: +39 0195224227 – info@ferraniasolis.com
www.ferraniasolis.com



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