

FVG 60-156

POLYCRYSTALLINE 6"



Silicon-wafer Polycrystalline photovoltaic module with power peak from 225 W to 240 W

APPLICATIONS



Residential, commercial and agricultural



PV parks



Architectural integration (French market)

FEATURES



Excellent performances even during low solar radiation (cloudiness, morning or evening)



4 mm solar-grade tempered prismatic glass



Heavy load mechanical resistance: TÜV certified (5.400 Pa tested against snow and 2.400 Pa test against wind)



Strict and continuous quality controls during all the production phases up to shipment



High efficiency level up to 14.70%



Custom-made modules even in "All Black" version



Positive tolerance on power peak of individual module



ITALIAN WARRANTY

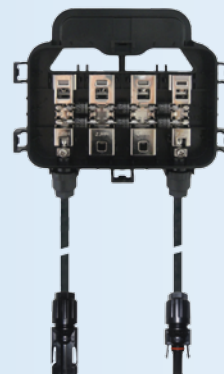
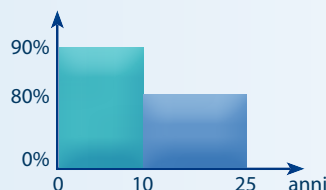
5 years commercial warranty – 25 years performance warranty

Commercial

- Standard 5 years on materials and manufacturing defects
- Can be extended to 10 years on request

Performance

- Power not less than 90% of power peak during the first 10 years
- Power not less than 80% of power peak during the subsequent 15 years



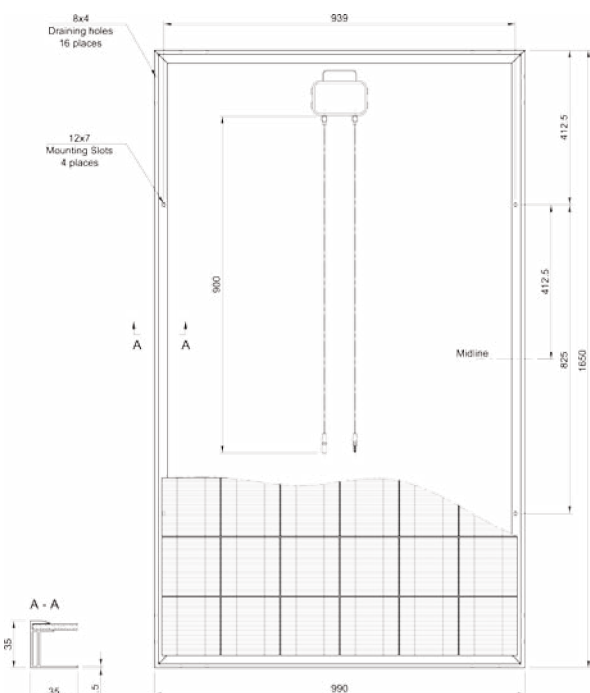
JUNCTION BOX

Strong and reliable with 6 by-pass diodes. High performance IP67 connectors guarantee maximum safety and duration over time to maximise the power generated by the modules.



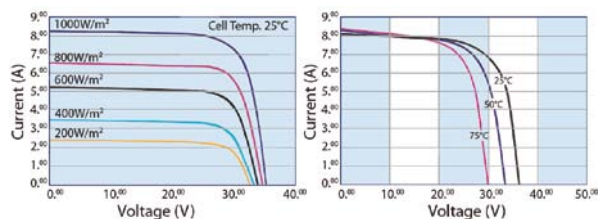
ELECTRICAL FEATURES

		STC			
Type	Model	xxx Rated Power [W]			
FVG 60-156	FVG xxxP-MC*	225	230	235	240
Module Efficiency	η_m (%)	13.77	14.08	14.38	14.70
Cell Efficiency	η_c (%)	15.45	15.80	16.15	16.50
Power Peak	P_m (W)	225	230	235	240
Maximum Power Voltage	V_m (V)	30.00	30.30	30.40	30.50
Maximum Power Current	I_m (A)	7.50	7.60	7.75	7.88
Open Circuit Voltage	V_{oc} (V)	37.00	37.20	37.40	37.60
Short Circuit Current	I_{sc} (A)	8.07	8.14	8.21	8.28
Maximum System Voltage	(VDC)	1,000			
Power Output Tolerance	(W)	0 / + 5			
Max-Series Fuse	(A)	20			
Operating/Storage Temp.	(°C)	- 40 ~ + 85			
Dielectric Insulation Voltage	(VDC)	3,000 max			
Code	MFP	50235	50236	50237	50238
STC: Irradiance 1,000 W/m ² , module temperature 25 °C, AM=1.5					
Power measurement tolerance: ± 3%					



		NOCT			
Typical Power at NOCT	P_m (W)	165	169	173	176
Maximum Power Voltage	V_m (V)	26.90	27.20	27.30	27.40
Maximum Power Current	I_m (A)	6.12	6.22	6.35	6.45
Open Circuit Voltage	V_{oc} (V)	33.80	34.00	34.20	34.40
Short Circuit Current	I_{sc} (A)	6.65	6.71	6.77	6.84
NOCT: Irradiance 800 W/m ² , ambient temperature 20 °C, wind speed 1 m/s					
Power measurement tolerance: ± 3%					

CURVE CURRENT - VOLTAGE



TEMPERATURE CHARACTERISTICS - STC

NOCT - Nominal Operating Cell Temperature	(°C)	45 ± 2
P_m Temperature Coefficient	(%/°C)	- 0.44
V_{oc} Temperature Coefficient	(%/°C)	- 0.33
I_{sc} Temperature Coefficient	(%/°C)	0.055

MECHANICAL FEATURES

Cell Size	(mm)	156 x 156
Number of cells		60 cells - polycrystalline silicon
Module Dimensions	(mm)	1,650 x 990 x 35
Module Weight	(kg)	21.50
Front Glass		4 mm tempered glass
Frame		anodized aluminum alloy
Junction box		6 by-pass diodes
Connectors		IP67 type MC3 or MC4
Output Cables	(mm)	900

PACKING FEATURES

Carton Dimensions	(mm)	1,700 x 1,050 x h85
Pallet Dimensions	(mm)	1,700 x 1,100 x h2,000
Pallet Weight	(kg)	1,090
1 Carton		2 modules
1 Pallet		22 cartons (44 modules)
Container Loading Capacity	20(ft)	264 modules (6 pallets)
	40(ft)	572 modules (13 pallets)

* xxx suffix indicates Rated Power [W]