



FPS-M660

60 MONOCRYSTALLINE CELLS
STANDARD PV MODULE

19.31% MAX. EFFICIENCY
315W MAX. OUTPUT
PLUS TOLERANCE **0~+3%**

APPLICATIONS



Commercial building & factory rooftop



Residential rooftop



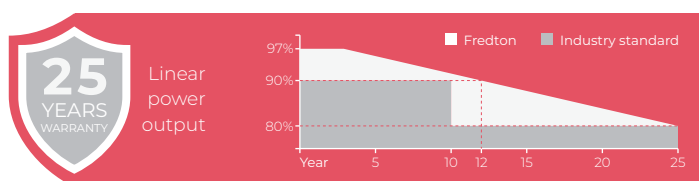
Ground-mounted photovoltaic power station

CHOOSING FREDTON

Specialized vendor with ability to supply all the elements like PV module, inverter, mounting system, and also UPS system.

Reliable partner of distributors, installers and system integrators with local warehousing, delivery service and after sales support.

Manufacturing with international quality management standards and environment management system ISO 9001 and ISO 14001.



10 years manufacturing warranty – **12 years** warranty at 90% power output

KEY FEATURES



Modules certified by TÜV for Snow Zone III, anti-PID, salt mist corrosion and ammonia corrosion.



Special PV module insurances by world leading insurance company.

Free module recycling through membership in the PV Cycle Association.

Excellent performance under low light for better kWh/kW ratio & more electricity in cloudy days.

Proprietary 800°C online coating technology improves light absorption & reduces surface dust.



Junction box and bypass diodes guarantee the module free of overheating.



ELECTRICAL CHARACTERISTICS

Performance at Standard Test Condition (STC: Irradiance = 1000 W/m², Module Temperature = 25°C, Air Mass = 1.5)

Part Number		FPS-M660-XXX		(XXX = Pmax)					
Maximum Power	P _{max} (W)	280	285	290	295	300	305	310	315
Short Circuit Current	I _{sc} (A)	9.35	9.40	9.50	9.60	9.72	9.80	9.90	9.98
Open Circuit Voltage	V _{oc} (V)	39.40	39.50	39.60	39.70	39.80	40.00	40.20	40.50
Maximum Power Current	I _{mpp} (A)	8.90	9.00	9.10	9.22	9.34	9.42	9.53	9.61
Maximum Power Voltage	V _{mpp} (V)	31.50	31.70	31.90	32.00	32.13	32.40	32.53	32.78
Encapsulated Cell Efficiency		19.77%	20.12%	20.48%	20.83%	21.18%	21.53%	21.89%	22.78%
Module Efficiency		17.16%	17.47%	17.77%	18.08%	18.39%	18.69%	19.00%	19.31%
Power Tolerance		0/+3%	0/+3%	0/+3%	0/+3%	0/+3%	0/+3%	0/+3%	0/+3%

Performance at Normal Operating Cell Temperature (NOCT: Irradiance = 800 W/m², Air Temperature = 20°C, Wind Velocity = 1 m/s)

Maximum Power	P _{max} (W)	202.94	206.57	210.19	213.82	217.44	221.06	224.69	228.31
Short Circuit Current	I _{sc} (A)	7.63	7.67	7.75	7.83	7.93	8.00	8.08	8.14
Open Circuit Voltage	V _{oc} (V)	36.41	36.50	36.59	36.68	36.78	36.96	37.14	37.42
Maximum Power Current	I _{mpp} (A)	6.97	7.05	7.13	7.23	7.32		7.48	7.54
Maximum Power Voltage	V _{mpp} (V)	29.11	29.29	29.48	29.57	29.69	29.94	30.06	30.29

The typical relative change in module efficiency at an irradiance of 200 W/m² in relation to 1000 W/m² (both at 25°C and Air Mass 1.5 spectrum) is less than 6%.

MECHANICAL SPECIFICATIONS

Cell Type	Monocrystalline 156.75 x 156.75 mm (6-inch)
Number of Cells	60 (6 x 10 cells)
Dimensions (L x W x H)	1648 x 990 x 35 mm
Weight	17.5 Kg
Front Glass	3.2 mm low iron tempered glass
Frame	Anodized aluminum
Junction Box	IP67 rated, with bypass diodes
Connector	MC4 compatible
Output Cables	TÜV, 4.0 mm ² , 900 mm length

TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature	NOCT	44 ± 2°C
Temperature Coefficient of P _{max}	γ	-0.4 %/K
Temperature Coefficient of V _{oc}	β	-0.37 %/K
Temperature Coefficient of I _{sc}	α	-0.05 %/K

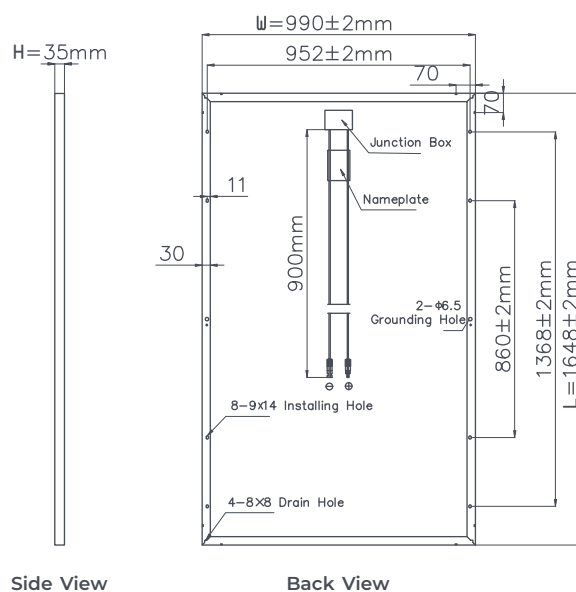
SYSTEM INTEGRATION PARAMETERS

Maximum System Voltage	DC 1000 V/1500 V
Maximum Series Fuse	15 A
Maximum Reverse Current	21.5 A
Increased Snowload acc. to IEC 61215	5400 Pa
Operating Temperature	-40 ~ +85°C
Number of Bypass Diodes	3

PACKAGING CONFIGURATION

Modules per Box	30		
	20' GP	40' GP	40' HQ
Modules per Container	360	840	896

Specifications subject to change without prior notice.



Side View

Back View

