



455Watt PERC Mono Module FSMXXXM-72H Series

Introduction

Powered by high-efficiency PERCIUM cells, this series of high-performance modules provides the most cost-effective solution for lowering the LCOE of any PV systems large or small.

144 LAYOUT MONORSTALLINE MODULE

425-455W POWER OUTPUT RANGE

20.9% MAXIMUM EFFICIENCY

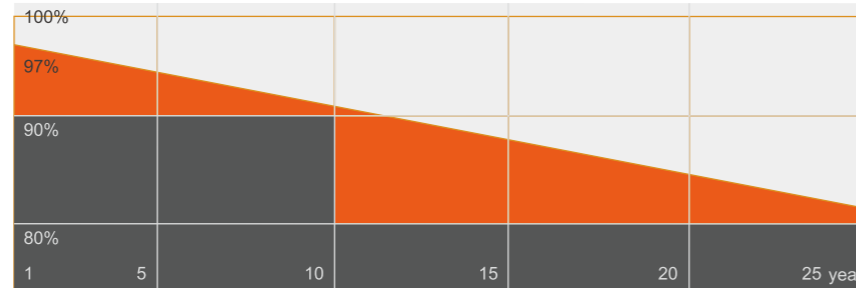
0~+5W POSITIVE POWER TOLERANCE

KEY FEATURES

- 6/9 Busbar Solar Cell**
 6/9 busbar solar cell adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance, making it perfect for rooftop installation.
- High Efficiency**
 Higher module conversion efficiency (up to 20.9%) benefit from Passivated Emmitter Rear Contact (PERC) technology.
- PID Resistance**
 Excellent Anti-PID performance guarantee limited power degradation for mass production.
- Low-light Performance**
 Advanced glass and cell surface textured design ensure excellent performance in low-light environment.
- Severe Weather Resilience**
 Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).
- Durability Against Extreme Environmental Conditions**
 High salt mist and ammonia resistance.

Superior Warranty

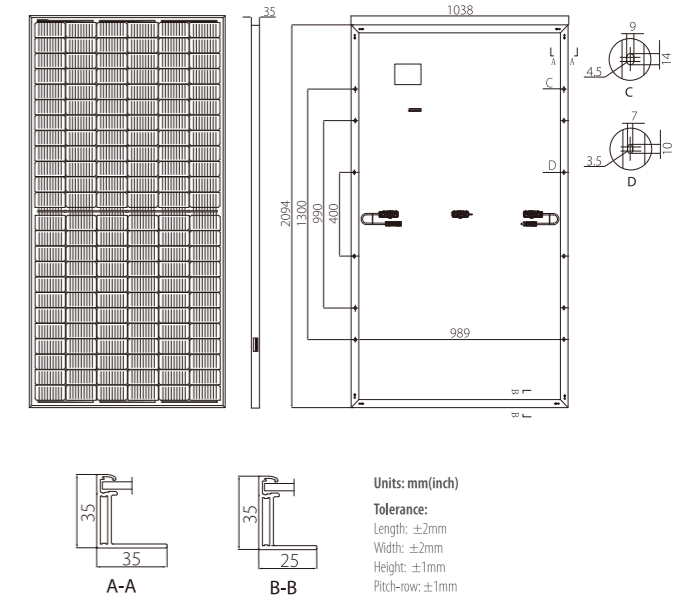
- 12-year product warranty
- 25-year linear power output warranty



■ Futuresolar Linear Power Warranty ■ Industry Warranty



Engineering Drawing

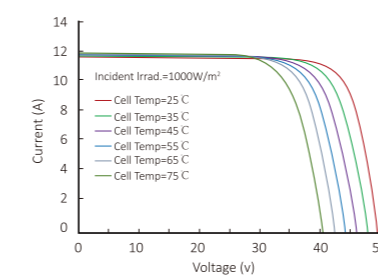


Mechanical Parameters	Working Conditions	Packaging		
No. of cells	144 (6x24)	Maximum System Voltage	1000V/1500V DC (IEC)	30pcs/pallet
Dimensions	2094x1038x35mm	Operating Temperature	-40°C~+85°C	150pcs/20'GP
Weight	23.5 kg	Maximum Series Fuse	20A	660pcs/40'HQ
Front Glass	3.2mm, High Transmission, Low Iron, Tempered Glass	Maximum Static Load, Front (e.g., snow and wind)	5400Pa (112 lb/ft ²)	
Back Glass	Anodized Aluminium Alloy	Maximum Static Load, Back (e.g., wind)	2400Pa (50 lb/ft ²)	
Junction Box	IP67 Rated	NMOT	-45±2°C	
Cables	TÜV 1x4.0mm ² , Length:300mm or Customized Length	Application Class	Class A	

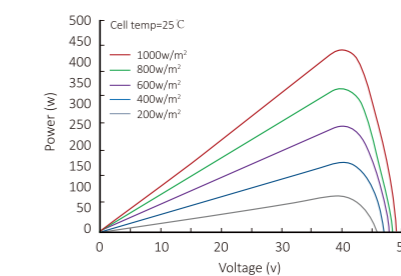
Module	FSM425M-72H		FSM430M-72H		FSM435M-72H		FSM440M-72H		FSM445M-72H		FSM450M-72H		FSM455M-72H	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Rated Maximum Power at STC (W)	425	317	430	321	435	324	440	328	445	332	450	336	455	339
Maximum Power Voltage (Vmp/V)	40.5	37.7	40.7	37.9	40.9	38.1	41.1	38.3	41.3	38.5	41.5	38.6	41.7	38.8
Maximum Power Current (Imp/A)	10.50	8.42	10.57	8.47	10.64	8.53	10.71	8.59	10.78	8.64	10.85	8.70	10.92	8.75
Open Circuit Voltage (Voc/V)	48.3	45.3	48.5	45.5	48.7	45.7	48.9	45.8	49.1	46.0	49.3	46.2	49.5	46.4
Short Circuit Current (Isc/A)	11.23	9.08	11.31	9.15	11.39	9.21	11.46	9.27	11.53	9.33	11.60	9.38	11.66	9.43
Module Efficiency [%]	19.6%		19.8%		20.0%		20.2%		20.5%		20.7%		20.9%	
Power Tolerance (W)	0~+5W													
Temperature Coefficient of Isc (αIsc)	0.048%/°C													
Temperature Coefficient of Voc (βVoc)	-0.25%/°C													
Temperature Coefficient of Pmax (γPmp)	-0.35%/°C													
STC	Irradiance 1000W/m ² , Cell Temperature 25°C, AM=1.5													

Electrical Performance & Temperature Dependence

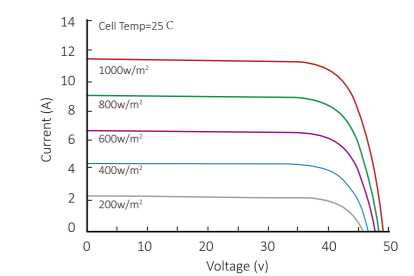
Current-Voltage Curve (FSM440M-72)



Power-Voltage Curve (FSM440M-72)



Current-Voltage Curve (FSM440M-72)



Note: Due to continuous technical innovation, R&D improvement, technical data mentioned maybe of modification accordingly. Futuresolar has the sole right to make such modification at anytime without further notification.