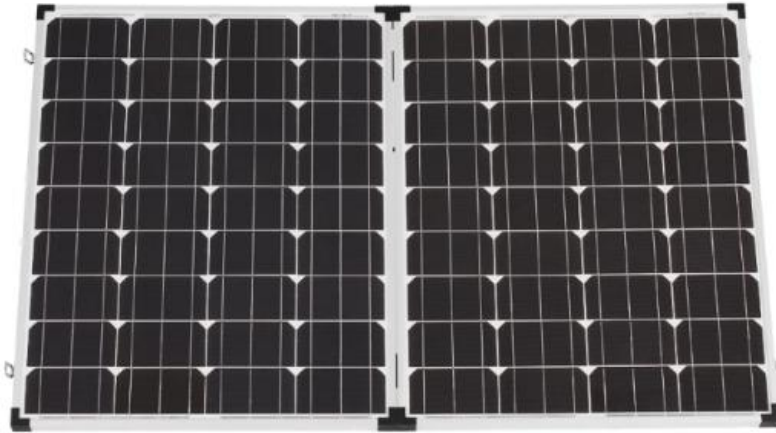


# FOLDING SOLAR PANEL

## TS-FR120M

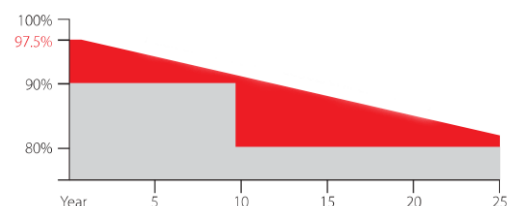


- High conversion efficiency
- Extremely environmental testing
- Salt mist corrosion resistant
- IP67 Junction box
- Strong compressive strength
- Fire test approved
- PID Resistant

## GIVING YOU MORE

- 3% positive tolerance
- Series of internal harsh tests
- Authorised photovoltaic certificates
- Linear performance warranty

Top Solar was established in 2008 and is a hi-tech corporation with its core business in R&D, manufacturing and sale of high efficiency solar panel.



[www.topsolar-energy.com](http://www.topsolar-energy.com)

Shenzhen Top Solar Energy Co.,Ltd.  
F4,Building C,Zhonghengxinda Industrial Park,  
Shajing Town,Baoan District,Shenzhen City,Guangdong Province,China  
Tel:86 755 85224431 Fax:86 755 28167996 Email:info@topsolar-energy.com

### Electrical Characteristics under STC\*

Model No.:	TS-FR120M
Maximum Power-Pmax(Wp)	2*60W
Voltage at Maximum Power-Vmp(V)	36V
Current at Maximum Power-Imp(A)	3.34A
Open Circuit Voltage-Voc(V)	43.2V
Short Circuit Current-Isc(A)	3.67A
Solar Panel Efficiency(%)	13.71
Power Tolerance(%)	0/+3

### Mechanical Characteristics

Cell Type	Monocrystalline	156*156mm
Number of Cells	72(4*9*2pcs)	
Folded Dimension	655*668*60mm	
Weight	12.0kg	
Front Glass	Low Iron Tempered Glass	
Encapsulant	EVA	
Frame	Anodized Aluminum Alloy	

### Temperature Characteristics

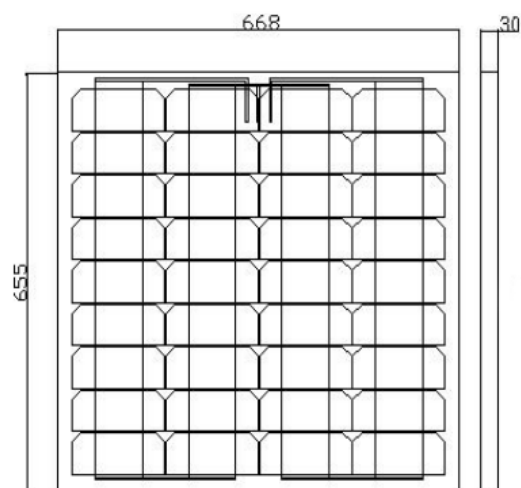
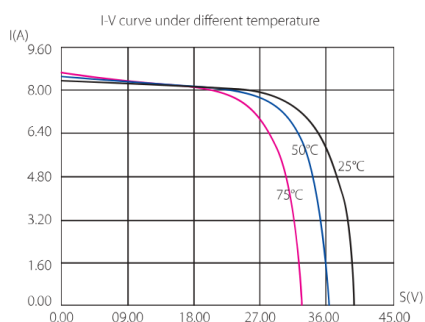
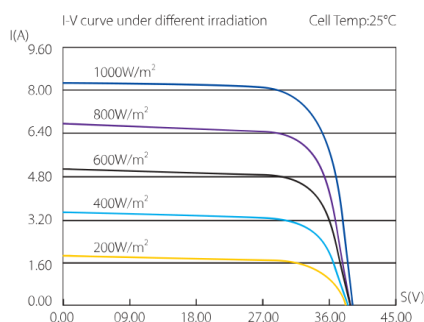
NOCT*	45±2℃
Temperature Coefficient of Pmax(%)	-0.40/℃
Temperature Coefficient of Voc(%)	-0.31/℃
Temperature Coefficient of Isc(%)	0.04/℃

### Maximum System Ratings

Operating Temperature	-40℃ to +85℃
Maximum System Voltage	1000V DC
Maximum Series Fuse Rating	15A

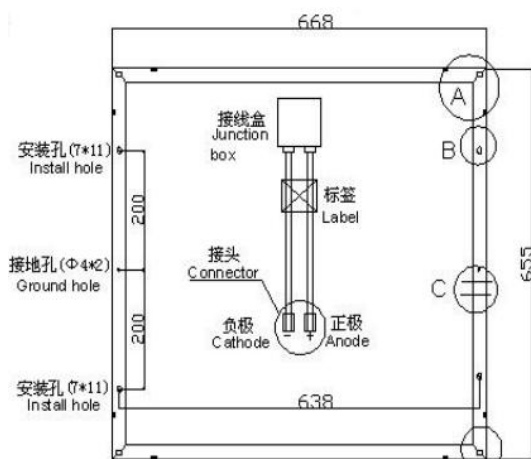
### Warranty

12 years product warranty
12 years warranty on 90% power output
25 years warranty on 80% power output



正面  
Front

侧面  
Side



背面  
Back

\*STC(Standard Testing Conditions):Irradiance 1000W/m<sup>2</sup>,cell temperature 25℃,AM=1.5 \*NOCT(Nominal Operating Cell Temperature):Irradiance 800W/m<sup>2</sup>, ambient temperature 20℃,wind speed 1m/s

The specifications in this datasheet are subjected to change without prior notice