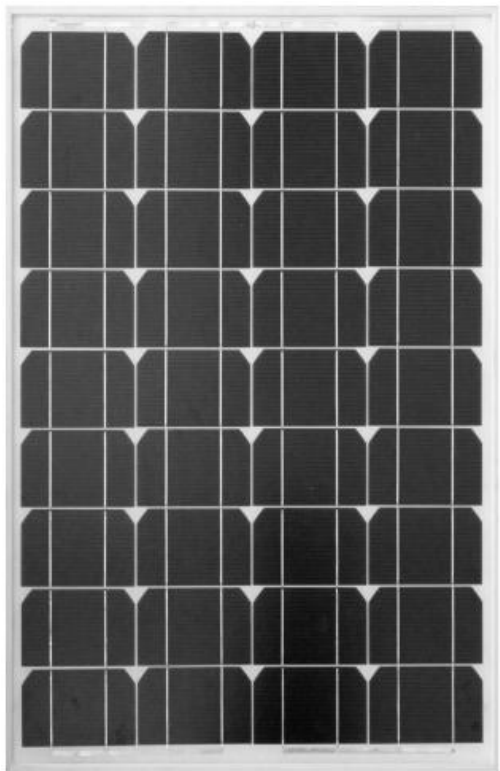


# MONOCRYSTALLINE SOLAR PANEL

## TS-S90M



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

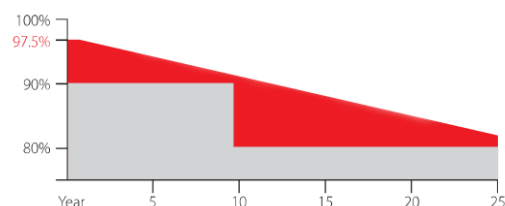


Authorised photovoltaic certificates



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

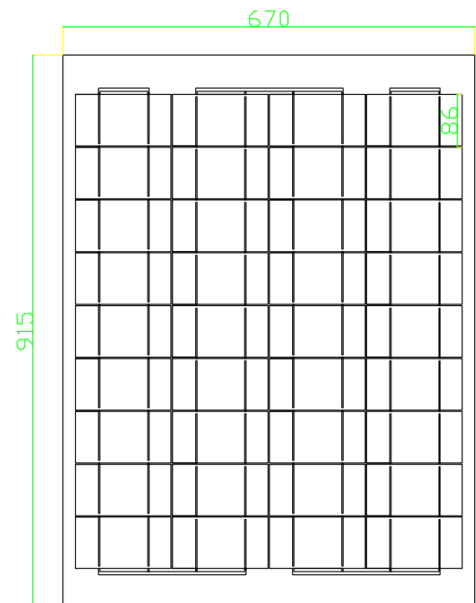
Tel:86 755 85224431 Fax:86 755 28167996 Email:info@topsolar-energy.com

### Electrical Characteristics under STC\*

Model No.:	TS-S90M
Maximum Power-P <sub>max</sub> (Wp)	90W
Voltage at Maximum Power-V <sub>mp</sub> (V)	18.2V
Current at Maximum Power-I <sub>mp</sub> (A)	4.95A
Open Circuit Voltage-V <sub>oc</sub> (V)	22.2V
Short Circuit Current-I <sub>sc</sub> (A)	5.41A
Solar Panel Efficiency(%)	14.7
Power Tolerance(%)	0/+3

### Mechanical Characteristics

Cell Type	Monocrystalline	156*156mm
Number of Cells	36(4*9)	
Dimension	915*670*30mm	
Weight	7.3kg	
Front Glass	Low Iron Tempered Glass	
Encapsulant	EVA	
Frame	Anodized Aluminum Alloy	

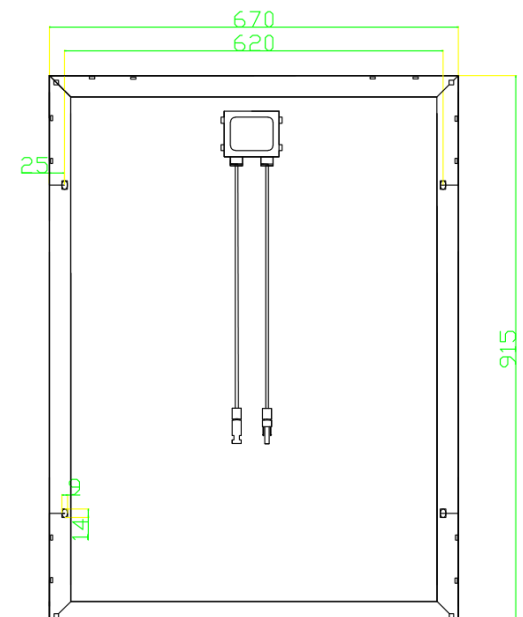


### Temperature Characteristics

NOCT*	45±2°C
Temperature Coefficient of P <sub>max</sub> (%)	-0.40/°C
Temperature Coefficient of V <sub>oc</sub> (%)	-0.31/°C
Temperature Coefficient of I <sub>sc</sub> (%)	0.04/°C

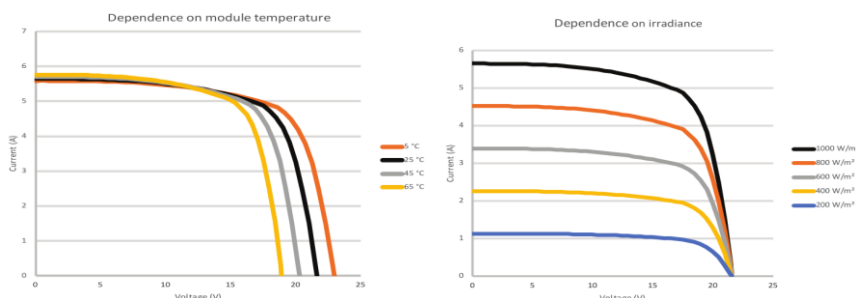
### Maximum System Ratings

Operating Temperature	-40°C to +85°C
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



\*STC(Standard Testing Conditions):Irradiance 1000W/m²,cell temperature 25°C,AM=1.5 \*NOCT(Nominal Operating Cell Temperature):Irradiance 800W/m², ambient temperature 20°C,wind speed 1m/s

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