

Mono Crystalline PV module

Model no. SF125×125-72-M & SF125×125-72-M(L)

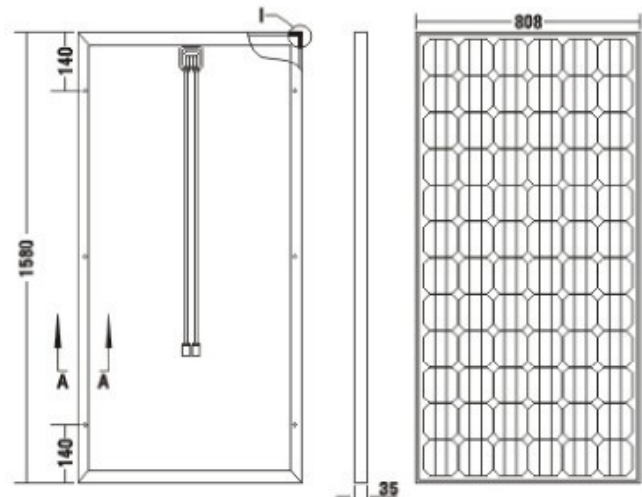
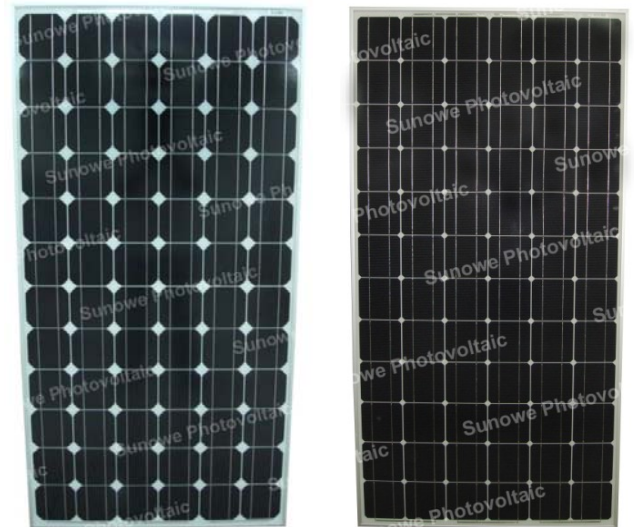


FEATURES

- High efficiency mono-crystalline silicon solar cell
- High transmission low-iron oxide tempered glass
- Encapsulant:EVA material; sealed with high quality rear cover
- Firm aluminum frame

Specifications

Cell	Mono-crystalline silicon solar cells,125mm sqaer
No.of cells and connections	72 in series
Application	DC 24V system
Maximum system voltage	1000V
Series fuse rating	10A
Dimension	1580mm×808mm×35mm
Net Weight	16.0kg

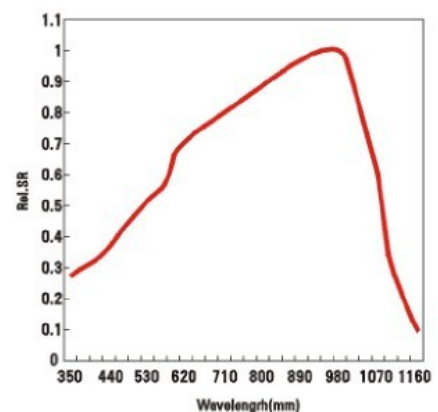


Absolute Maximum Ratings

Parameters	Rating	Unit
Operating temperature	-40to +90	°C
Storage temperature	-40to +90	°C
Dielectric voltage withstood	2200max	DC

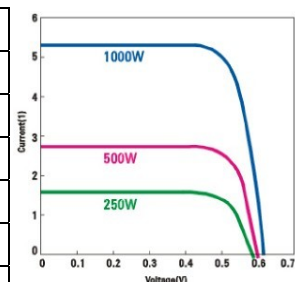
Electro-Optical Characteristics

Model	SF125×125-72-M				
Parameters	Symbol	Min.	Typical	Unit	Condition
Open circuit voltage	Voc		44.6	V	Irradiance: 1000W/m ²
Maximum power voltage	Vpm		35.7	V	
Short circuit current	Isc		5.20	A	Module temperature: 25 °C
Maximum power current	Ipm		4.90	A	
Maximum power	Pm	150	175	W	Spectral Distribution AM 1.5
Cell efficiency	ηm		16.3	%	
Module efficiency	ηm		14.0	%	



Technical Parameter (with tolerance +/-3%)

SF125×125-72	150W	155W	160W	165W	170W	175W	180W	185W
Imp	4.35A	4.45A	4.60A	4.70A	4.80A	4.90A	5.00A	5.15A
Vmp	34.6V	34.9V	35.1V	35.2V	35.4V	35.7V	36.0V	36.2V
Isc	4.80A	4.90A	5.00A	5.05A	5.15A	5.20A	5.35A	5.50A
Voc	43.6V	43.8V	44.0V	44.2V	44.4V	44.6V	44.8V	45.0V
FF	72.2	72.5	73.1	74.1	74.6	75.0	75.5	76.0
TNOCT	50°C							



Limited Warranty for PV Modules

1. Limited Product Warranty - Five Year Repair, Replacement

Subject to Clause 1 below, Zhejiang Sunflower Light Energy Science & Technology Limited Liability Company. ("SUNFLOWER") warrants its Photovoltaic Solar Modules, including factory-assembled MC connectors and cables, if any (together, the "MODULES"), to be free from defect in materials and workmanship under normal application, installation, use and service conditions, for a period ending 5 years from the date of sale as shown on the invoice to the original end customer (the "CUSTOMER"). If MODULES fail to conform to this warranty during such five years period, SUNFLOWER will, at its option, either repair or replace the product. Such repair, replacement shall be the sole and exclusive remedy provided under this Clause 1 and shall not extend beyond the five years period set forth herein. It will be performed directly to the CUSTOMER only. This Clause 1 does not warrant a specific power output, which shall be exclusively covered under Clause 2 below ("Limited Peak Power Warranty").

2. Limited Peak Power Warranty - Limited Remedy

10 years

Subject to Clause 3 below, if, within a period of ten (10) years from the date of sale as shown in the invoice to the CUSTOMER, any MODULE(s) exhibits a power output less than 90 % of the "Peak Power at STC" as specified at the date of invoice in SUNFLOWER'S applicable product information sheet (the "PRODUCT INFORMATION SHEET"), SUNFLOWER will, at its option, either provide additional MODULES to the CUSTOMER to make up for such loss in power, or replace the defective MODULE(s).

25 years

Subject to Clause 3 below, if, within a period of twenty-five (25) years from the date of sale as shown in the invoice to the CUSTOMER, any MODULE(s) exhibits a power output of less than 80 % of the "Peak Power at STC" as specified at the date of invoice in SUNFLOWER'S PRODUCT INFORMATION SHEET, SUNFLOWER will, at its option, either provide additional MODULES to the CUSTOMER to make up for such loss in power, or replace the defective MODULE(s).

The remedies set forth in this Clause 2 shall be the sole and exclusive remedies with respect to any deficiency in the power output of MODULES.

Peak Power at STC

Peak Power at STC is the power in Watt peak that a PV-module generates in its Maximum Power Point. STC (Standards-Test-Conditions) are as follows: (a) light spectrum of AM 1.5, (b) an irradiation of 1.000 W per m² and (c) a cell temperature of 25 degree centigrade at right angle irradiation. The measurements are carried out in accordance with IEC 61215:2005 as tested at the connectors per calibration and testing standards according to IEC 60904-1..... IEC 60904-10

3. Exclusions and Limitations

- (1) All warranty claims must be filed within the applicable warranty period.
- (2) The "Limited Product Warranties" and the "Limited Peak Power Warranties" described in Clauses 1 and 2 above shall not apply to, and SUNFLOWER shall have no obligation of any kind whatsoever with respect to, any MODULES which have been subjected to:
 - ~ Misuse, abuse, neglect or accident;
 - ~ Alteration, improper installation or application;
 - ~ Non-observance of SUNFLOWER'S installation and maintenance instructions;
 - ~ Repair or modifications by someone other than an approved or appointed service technician of SUNFLOWER, or
 - ~ Power failure surges, lightning, flood, fire, accidental breakage or other events outside the control of Sunflower
- (3) After the period of five years from the date of sale as shown on the invoice to the original end customer neither the "Limited Product Warranties" nor the "Limited Peak Power Warranties" set forth in Clauses 1 and 2 above, respectively, shall cover or include any transportation charges, customs clearance or any other costs for return of the MODULES, or for reshipment of any repaired or replaced MODULES, or costs associated with the installation, removal or reinstallation thereof, all such costs being the sole obligation of the CUSTOMER.
- (4) Warranty claims will not be honoured if the type or serial number of the MODULES have been altered, removed or made illegible
- (5) Damages during transportation from the port of departure to the port of destination have to be claimed by the customer within one month after the effected MODULES arrive at the customer's warehouse. Claims which are issued after this time range will not be handled by SUNFLOWER.

4. Limitation of Warranty Scope

The warranties described in these "Limited Warranties for PV Modules" are exclusive and are expressly in lieu of and exclude all other warranties, whether written, oral, express or implied, including but not limited to, warranties of merchantability and of fitness for a particular purpose, use, or application, and all other obligations or liabilities on the part of SUNFLOWER, unless such other obligations or liabilities are expressly agreed to in writing signed and approved by SUNFLOWER. SUNFLOWER shall have no responsibility or liability whatsoever for damage or injury to persons or property, or for other loss or injury resulting from any cause whatsoever arising out of or related to the modules, including, without limitation, any defects in the modules or from use or installation. Under no circumstances shall SUNFLOWER be liable for incidental, consequential or special damages howsoever cause. Loss of use, loss of profits, losses of production, loss of revenues are therefore specifically and without limitation excluded to the extent legally permissible. SUNFLOWER'S aggregate liability, if any, in damages or otherwise, shall not exceed the invoice as paid by the CUSTOMER. Exception from this limitation is only the liability described in clause 1 within the first five years from the date of sale as shown on the invoice to the original end consumer

5. Obtaining Warranty Performance

If the CUSTOMER believes that it has a justified claim covered by this "Limited Warranties for PV Modules", the CUSTOMER shall send an immediate notification in writing directly to Zhejiang Sunflower Light Energy Science & Technology Limited Liability Company. San Jiang Road, Paojiang



Industrial Zone, Shaoxing, Zipcode 312071, China or the Austrian subsidiary Prinz-Eugen-Str 70/2/1.4a, 1040 Vienna, Austria. Together with the notification, the CUSTOMER must enclose the evidence of the claim, such as the description of the defect, documents showing results of the defect with the corresponding serial number of the MODULE(s) and a copy of the invoice for such MODULES.

The return of any MODULES will not be accepted unless prior written authorization has been given by SUNFLOWER.

6. Various

The repair or replacement of the MODULES or the supply of additional MODULES does not constitute the beginning of a new warranty period, nor shall the original term of this "limited Warranty for PV-Modules" be extended. Any replaced MODULES shall become the sole property of SUNFLOWER and shall be put at SUNFLOWER'S disposal immediately after a warranty claim has been recognized by SUNFLOWER. SUNFLOWER has the right to deliver another type of MODULE (different in size, color, shape *and/or* power) in case SUNFLOWER has discontinued producing the replaced MODULES at the time of the claim. SUNFLOWER'S calibration standards shall be in compliance with the standards of IEC 60904-1.... 60904-10.

7. Validity

This "limited Power Warranty for PV Modules" is valid for all MODULES delivered from SUNFLOWER.