



Solar Frontier K.K.

Product Data Sheet **SF170-S**

SF170-S 170 W Module Data Sheet

1. Electrical Characteristics

1.1 Electrical Performance at Standard Test Conditions (STC)*¹

SF170-S

Maximum Power	P _{max}	170 W
Tolerance of P _{max}		+10 % / -5 %
Open Circuit Voltage	V _{oc}	112 V
Short Circuit Current	I _{sc}	2.20 A
Maximum Power Voltage	V _{mpp}	87.5 v
Maximum Power Current	I _{mp}	1.95 A

Note *¹

Standard Test Conditions (STC): 1000 W/m² irradiance, cell temperature 25°C and a spectral distribution of irradiance according to air mass 1.5. I_{sc} and V_{oc} are within ±10% tolerance of the rated values at STC.

1.2 Electrical Performance at Nominal Operating Cell Temperature (NOCT) Conditions*²

SF170-S

Maximum Power	P _{max}	126 W
Open Circuit Voltage	V _{oc}	102 V
Short Circuit Current	I _{sc}	1.76 A
Maximum Power Voltage	V _{mpp}	82.1 V
Maximum Power Current	I _{mp}	1.55 A

Note *²

Nominal Operating Cell Temperature Conditions: Module operating temperature at 800 W/m² irradiance, ambient temperature 20°C, wind speed 1 m/s and open circuit condition.

1.3 Performance at Low Irradiance

Efficiency reduction of maximum power from an irradiance of 1000 W/m² to 200W/m² at 25°C is typically 2.0%.

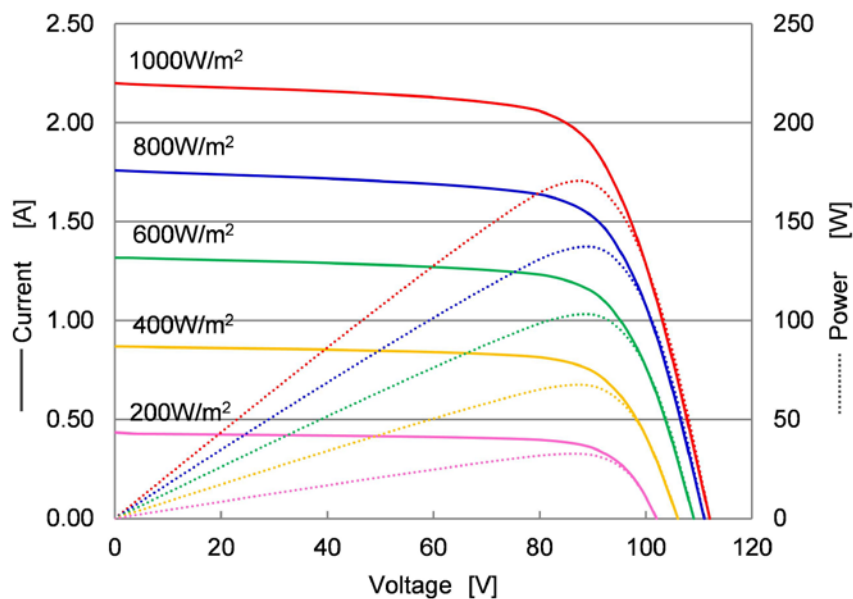
The standard deviation for the reduction of efficiency is 1.9%.

1.4 Dependence of Irradiance

I-V P-V Typical Characteristics by Irradiance

Model:SF170-S

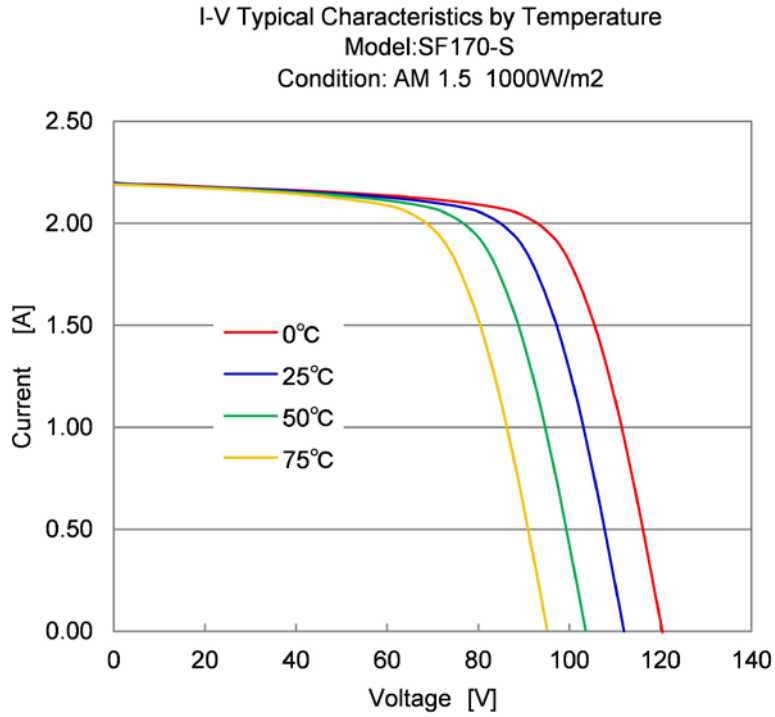
Condition: AM1.5 25°C



1.5 Thermal Characteristics

NOCT		47°C
Temperature Coefficient of Isc	α	+0.01 % / K
Temperature Coefficient of Voc	β	-0.30 % / K
Temperature Coefficient of Pmax	δ	-0.31 % / K

These thermal characteristics are for reference only.



1.6 Characteristics for System Design

Maximum System Voltage	Vsys	1,000V DC
Limiting Reverse Current	Ir	7 A
Maximum Series Fuse Rating	Isf	4 A



2. Mechanical Characteristics

Dimensions (L x W x H) ^{*3}	1257 x 977 x 35 mm (49.5 x 38.5x 1.4 inch)
Weight	20 kg (44.1 lbs)
Module Operating Temperature	-40°C to 85°C
Application Class on IEC61730	Class A
Fire Safety Class on IEC61730	Class C
Safety Class on IEC61140	II
Snow Load (to the front of the module) ^{*4}	2400 Pa (IEC61646) / 1600Pa design load (UL1703)
Wind Load (to the back of the module)	2400 Pa (IEC61646) / 1600Pa design load (UL1703)
Cell Type	CIS substrate glass (Cadmium free)
Front Cover	3.2 mm clear tempered glass
Encapsulant	EVA
Back Sheet	Weatherproof plastic film
Frame	Anodized aluminum alloy (Color: black)
Edge Sealant	Butyl rubber
Junction Box	Protection rating: IP67 (with bypass diode)
Adhesive	Silicone
Output Cables (Conductor)	2.5 mm ² /14AWG (Halogen free)
Cable Lengths (Symmetrical)	1200 mm (47.2 inch)
Connectors	MC4 compatible

Note ^{*3}

Dimensional tolerances are stated in the drawing section of this product data sheet.

Note ^{*4}

UL: 1.5 times design load is applied to the module. Accordingly, 2400 Pa (50.1lbs /ft²) is loaded to test the 1600 Pa (33.4 lbs /ft²) UL design load

3. Qualifications and Compliance

IEC 61646 / IEC 61730 / UL1703 certified

CE-Mark Declaration

No conflict with ROHS

4. Disclaimers

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The data contained in this Product Data Sheet indicates nominal data of our products.

Any warranty with respect to the quality or performance of our products will be provided only based on a limited warranty certificate separately issued by Solar Frontier. See the Installation and Maintenance Guide or contact the Technical Service for further information on approved installation and use of this product.

5. Contact

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6. Module Drawing

