

SoloPanel® SF1 is an innovative photovoltaic module based upon Copper, Indium, Gallium, Selenium ("CIGS") semiconductor material electro-deposited on a flexible stainless steel substrate and encapsulated in a state-of-the-art moisture barrier laminate. It is designed for a wide range of applications.



### SoloPanel® Model



### LOW INSTALLED SYSTEM COST

The flexible, lightweight form factor of the SF1 enables rapid and easy installation as well as low cost system integration with a wide variety of mounting solutions. The SF1 module is optimized for residential and standing seam metal roof integration.

### HIGH ENERGY PERFORMANCE

SoloPower® is the market leader in high efficiency flexible modules. Modules are designed for superior performance under all light conditions, including low sun angle, providing excellent energy yield throughout the year.

### PROVEN DURABILITY

SoloPower® modules are built to meet or exceed UL 1703, IEC 61646 & IEC 61730 standards. Cells and modules are continually subjected to rigorous environmental and accelerated life cycle testing beyond industry standards.

# Imagine Integration

SoloPower, Inc. is a US based manufacturer of high-efficiency thin-film photo-voltaic modules based on Copper Indium Gallium di Selenide (CIGS). The unique manufacturing process utilizes a low cost, proprietary electro-deposition tool set. The company is headquartered in San Jose, California.

## KEY FEATURES

- + Eighty one (81) series connected, high efficiency, CIGS solar cells optimize panel performance
- + Low weight, non-penetrating mounting solutions take advantage of the lightweight module characteristics
- + Superior low-sun angle and low light performance provide excellent energy yield
- Low profile bypass diodes allow for maximum performance under shade conditions
- Weather resistant front sheet, sealed junction box and protective back sheet provide a long life, reliable and durable package
- + Modules are built to meet and/ or exceed UL standard 1703, IEC 61646 & IEC 61730 standards
- + Manufactured in a highly automated state-of-the-art facility
- + 5-year limited warranty against defective materials and workmanship
- + 25-year warranty on power output
- + Designed and manufactured in USA
- + For a complete listing of SoloPower products visit: www.solopower.com





### SOLOPOWER® SFI SPECIFICATIONS

Dimensions 0.292m x 2.923m Power Ranges 70-90 Wp

### **APPLICATIONS**

Segments: Commercial, Industrial Rooftop & Utility

### ELECTRICAL CHARACTERISTICS (STC)<sup>1</sup>

Solopower SF1		70	75	80	85	90
Rated Power (Pmax) <sup>2</sup>	W	70	75	80	85	90
Voltage at Pmax (Vmp)	V	29.2	30.1	31.3	32.8	35.0
Current at Pmax (Imp)	Α	2.4	2.5	2.6	2.6	2.6
Short-circuit current (Isc)	Α	3.1	3.1	3.1	3.1	3.0
Open-circuit Voltage (Voc)	V	41.3	42.1	42.9	45.4	47.0
Efficiency <sup>3</sup>	%	9.6	10.3	11.0	11.7	12.4

- 1. STC standard test conditions: 1000W/m² intensity, Air Mass 1.5, 25°C cell temperature. The power tolerance is -3% / +5% Wp, at STC. The electrical characteristics are within  $\pm$  10% unless otherwise specified.
- 2. Stabilized Power.
- 3. Aperture Efficiency.

Solopower SF1					
Temp. Co-efficient of Isc	%/°C	- 0.03	Pmp	- 0.48	%/°C
Temp. Co-efficient of Voc	%/°C	- 0.36			
Max. Series Fuse Rating	А	5			
Maximum DC Voltage					
US	VDC	600			
EU	VDC	1,000			
NOCT	°C	48			

### PHYSICAL CHARACTERISTICS

### Solopower SF1

Length	115.1 in / 2.923 m
Width	11.5 in / 0.292 m
Thickness	0.1 in / 2.0 mm
Weight	4.5 lbs / 2.0 kg
Roof Load From Module	0.49 lbs/ft² / 2.4 kg/m²

### **QUALIFICATIONS**

Certified to Standards: UL 1703, IEC 61646, & IEC 61730.









#### WARRANTY

### Limited Warranty

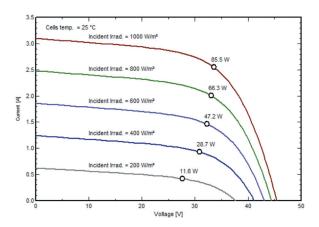
Materials and workmanship: 5 years

Power output: 25 years (90% of nominal rated power for years 1 to 10, 80% of nominal rated power for the second s years 11 to 25). Designed and manufactured in the US.

Contact sales@solopower.com for complete terms of the limited warranty.

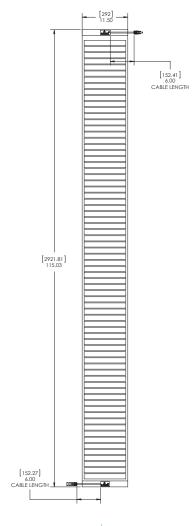
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### **IV CURVES**



Current (A) vs. Voltage (V) at various Irradiance levels

### **MECHANICAL DRAWING**





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