



SoloPanel Series 1

Features the solar cell that changes the energy equation

SoloPower's next-generation CIGS technology and innovative thin-film manufacturing techniques enable mass production of high-efficiency photovoltaic cells at a fraction of the cost of fabricating traditional silicon-based devices. The SoloPanel Series 1 (SP1) converts sunlight into solar energy with higher power density than competing thin film technologies.

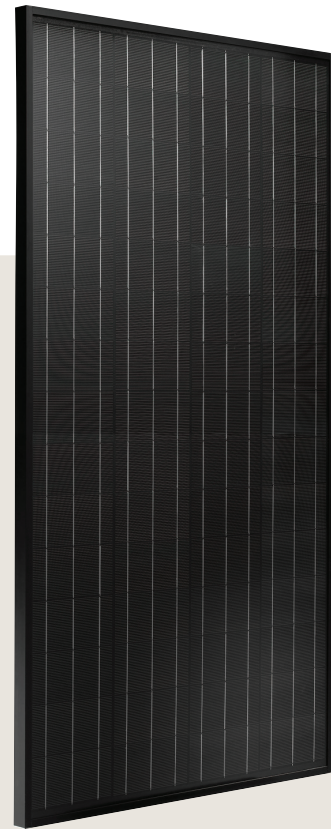
The company's unique manufacturing process combines a capital-efficient and scalable production technique with a commitment to environmental vigilance. SoloPower's breakthrough electrodeposition-based CIGS technology brings the dream of almost endlessly replenishable solar energy a step closer to reality.

The flexible approach to renewable energy

Our proprietary electrodeposition-based manufacturing system utilizes a low cost, roll-to-roll process with very thin films. This enables us to produce flexible thin film solar cells, substantially shrinking our environmental footprint. Because our solar cells and panels are designed and manufactured to generate clean electricity for over 25 years, they will help the world's population avoid decades of continued dependence on fossil fuels, reducing the greenhouse gas emissions that can cause catastrophic climate change.

www.solopower.com

Designed and manufactured in California



SP1
PRODUCT DATA SHEET

Key Features

- Sixty (60) high efficiency CIGS solar cells optimize panel performance
- Black anodized aluminum frame provides robust and reliable operation—even under heavy snow loads of 5400 Pa
- Strengthened glass, sealed junction box and protective backsheet provide a reliable moisture barrier
- Each panel undergoes visual and electrical performance verification and testing at SoloPower prior to shipping
- A frame design compatible with standard mounting hardware and an IP65 J-box with locking quick connects allow ease of installation into most system configurations
- Designed for minimum power loss due to shadowing, ensuring maximum system performance
- Manufactured in a highly automated state-of-the-art plant
- Comes with a 5-year limited warranty for defects in materials and workmanship
- 25-year power output warranty guarantees energy output at 90% of nominal rated power for the first 10 years, and 80% through year 25

SoloPower SP1 SPECIFICATIONS

Application

Utility and Commercial

Electrical Characteristics at STC*	SP1-100	SP1-110	SP1-120	SP1-130	SP1-140
Rated Power - P_{max} [W] $\pm 5\%$ Tol.	100	110	120	130	140
Operating Voltage - V_{mp} [V]	21.4	22.5	23.5	24.5	25.5
Operating Current - I_{mp} [A]	4.7	4.9	5.1	5.3	5.5
Open-circuit Voltage - V_{oc} [V]	32	33	33	33	34
Short-circuit current - I_{sc} [A]	5.8	5.8	5.8	5.8	5.8
Module Efficiency [%]	8.3	9.1	9.9	10.7	11.6

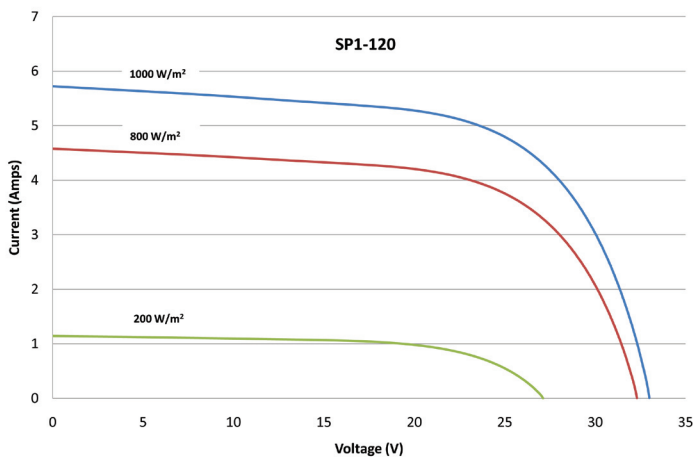
*STC specifications at 1000W/m², 1.5AM and 25°C cell temperature. The electrical characteristics are within $\pm 10\%$ unless otherwise specified.

Temperature Coefficient of I_{sc}	+0.01 %/°C
Temperature Coefficient of V_{oc}	-0.39 %/°C
Maximum serial fuse rating	10 A
Maximum system voltage –	
U.S.	600 VDC
EUROPE	1,000 VDC
NOCT	44 °C

Mechanical Characteristics

Length	1,485 mm	58.46 in
Width	816 mm	32.14 in
Depth	35 mm	1.38 in
Weight	14.1 Kg	31.0 lbs

IV Curve



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

Qualifications

Currently undergoing certification testing at a leading private testing laboratory for conformance with IEC 61646/61730, UL 1703, and Safety Class II electrical and mechanical performance standards for long-term outdoor operation.

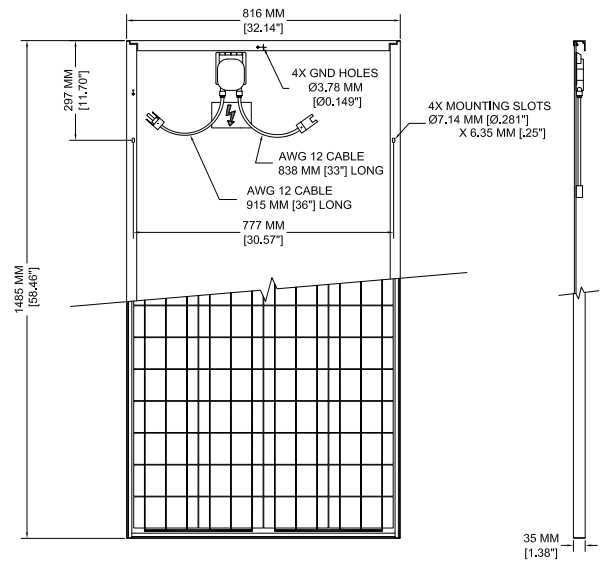
Limited Warranty

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 years 11 to 25).

Mechanical Drawings

Al Frame, Tempered Glass, IP65 Junction box and weather rugged connectors



Specifications are subject to change. Warranty applies only to products installed in USA and Europe. Different warranty terms available in other geographic regions. Contact sales@solopower.com for complete terms of the limited warranty.

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