

SPR-200-BLK RESIDENTIAL PV MODULE

The SunPower SPR-200-BLK is designed specifically for on-grid residential systems where a combination of high module efficiency and outstanding appearance is desirable. Utilizing 72 series-connected A-300 solar cells, the SPR-200-BLK delivers industry-leading power density in a unique all-black module package with exceptionally uniform appearance.

SunPower modules—innovative design, proven materials, outstanding performance.

FEATURES & BENEFITS

- All-black module package eliminates harsh reflections and other noticeable cosmetic module features to provide optimum array appearance
- Unique all-back-contact solar cells with conversion efficiency up to 21.5%
- Low voltage-temperature coefficient, exceptional low-light performance, and high sensitivity to light across the entire solar spectrum maximize yearly energy delivery
- Highest quality 4mm-thick high-transmission tempered glass provides enhanced stiffness and impact resistance
- Aerospace style cell interconnects with in-plane strain relief provide extremely high reliability
- Advanced EVA encapsulation system with multi-layer backsheet meets the most stringent safety requirements for high-voltage operation
- A sturdy, black anodized aluminium frame allows modules to be easily roof-mounted with a wide variety of standard mounting systems



SPR-200-BLK RESIDENTIAL PV MODULE
An unequalled combination of power and grace.

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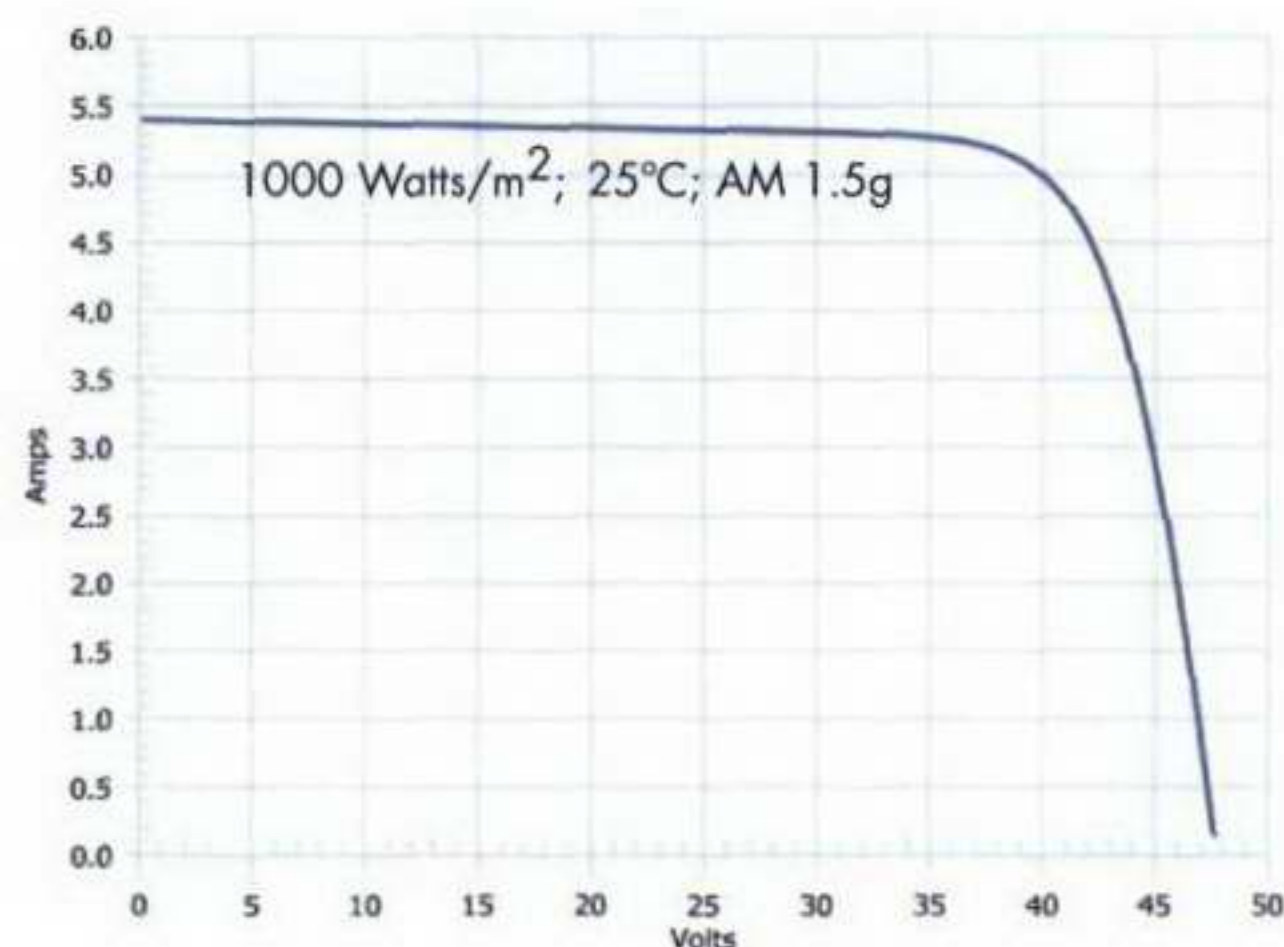
SUNPOWER

ELECTRICAL CHARACTERISTICS AT STANDARD TEST CONDITIONS (STC)

STC is defined as: irradiance of 1000W/m², spectrum AM 1.5g and cell temperature of 25°C

Peak Power ^{1,2}	P _{max}	200W
Rated Voltage	V _{mp}	40.0V
Rated Current	I _{mp}	5.0A
Open Circuit Voltage	V _{oc}	47.8V
Short Circuit Current	I _{sc}	5.4A
Series Fuse Rating		15A
Maximum System Voltage		600V (UL)
		1000V (IEC)
Temperature Co-efficients	Power	-0.38%/°C
	Voltage	-136.8mV/°C
	Current	2.2mA/°C
Module Efficiency		16.1%
PTC Rating		180W

IV CURVE



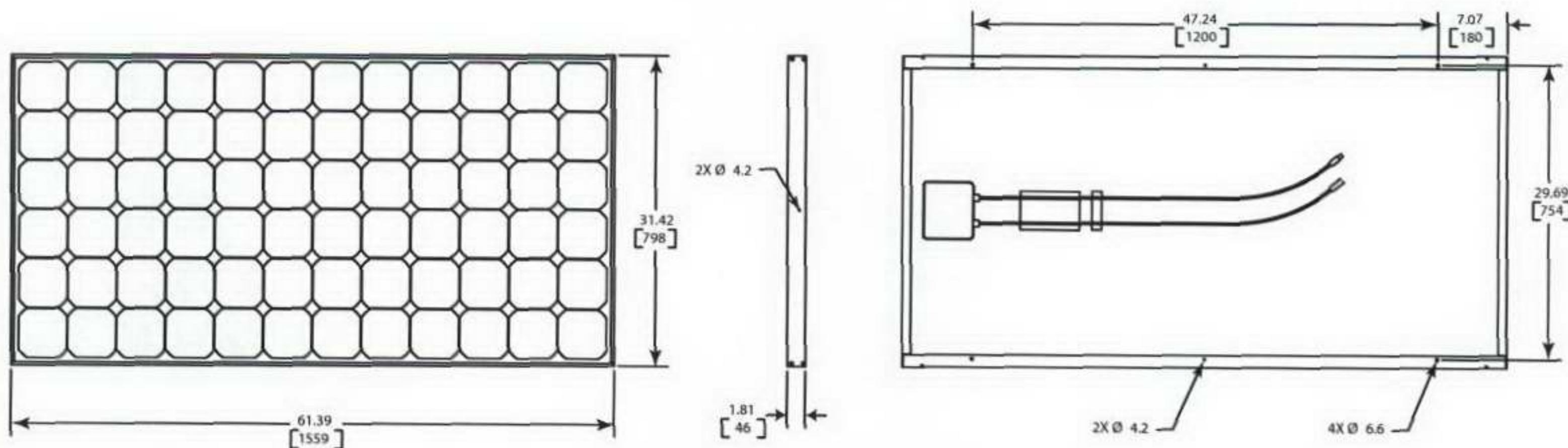
¹ Peak Power Tolerance: +/- 5%

² Power guaranteed for 25 years. See SunPower Limited Warranty for details.

MECHANICAL SPECIFICATIONS

Length (mm) x Width (mm)	1559 x 798
Thickness, including junction box (mm)	46
Weight (kg)	16

DIMENSIONS



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Green Roofs and Solar Energy from ZinCo



Hot Water Generation using Solar Thermal Collectors



The thermal use of solar energy combined with a green roof is the ideal solution for flat roofs, for ecological as well as for economic reasons.

Generating Electricity using Photovoltaic Modules



The effectiveness of the photovoltaic plant is improved by the combination with a green roof. The cooling caused by the evaporation of the plant level ensures a favourably lower ambient air temperature.

Traditional Fixing Methods



Solid concrete foundations, close-butted or linear



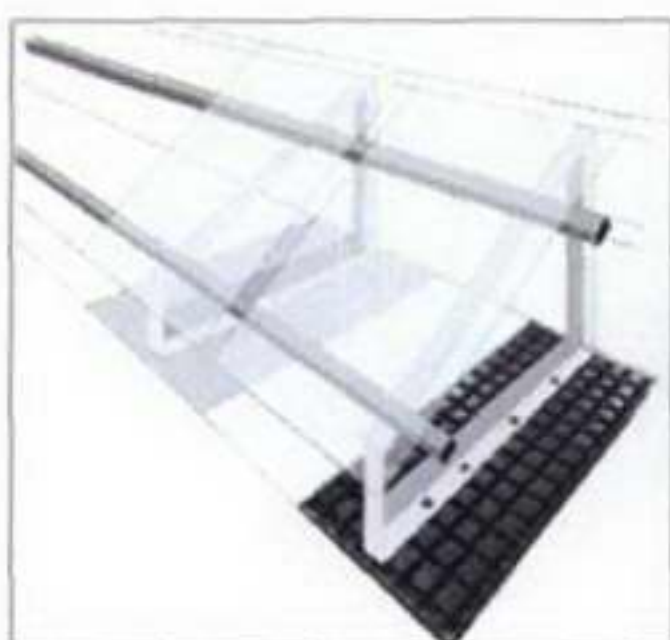
Screwing to steel supports



Loading of the supports by concrete slabs or gravel

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The Award-Winning Alternative Fixing On To The ZinCo Solar Basis SB 200 And Covering With Zincolit Or System Substrate As Ballast.



- No penetration of the roof membrane
- Easy handling because of lightweight construction
- Low single loads



On the roof of this school building, 200 panels of the Solarfabrik Freiburg, installed on the ZinCo Solar Basis, have been providing additional electricity since September 2002.



The Solar Basis boards including the Solar Base Frames are either placed on drainage elements covered with filter sheet, or directly on the waterproofing which is covered by a high quality protection layer, then aligned, and covered with system substrate according to the necessary amount of ballast. Due to the set height of the Solar Base Frames there is a certain distance between the solar panels and the substrate layer, which ensures that the plants will get enough sunlight and rain water, and also appropriate care and maintenance is possible.



The new development "Solar Basis" was awarded in the first Innovation Competition of the Administrative District of Esslingen, Germany.

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