

Sunmodule® Protect

SW 275-280 MONO BLACK



TUV Power controlled:
Lowest measuring tolerance in industry



Every component is tested to meet
3 times IEC requirements



Designed to withstand heavy
accumulations of snow and ice



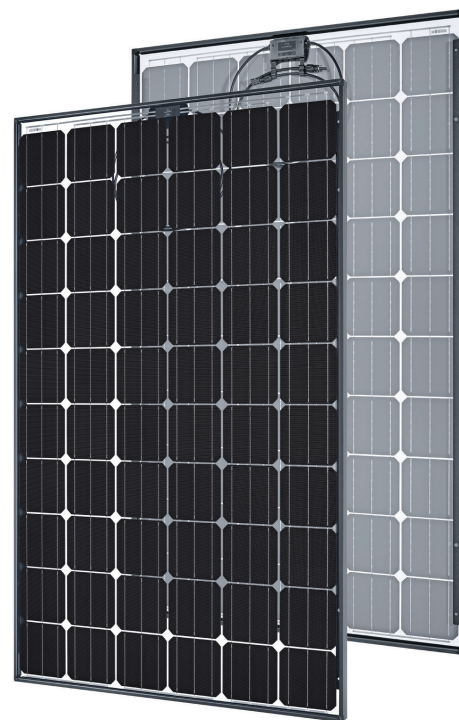
Sunmodule Protect:
Positive performance tolerance



30-year linear performance warranty
and 10-year product warranty



Glass with anti-reflective coating



World-class quality

Fully-automated production lines and seamless monitoring of the process and material ensure the quality that the company sets as its benchmark for its sites worldwide.

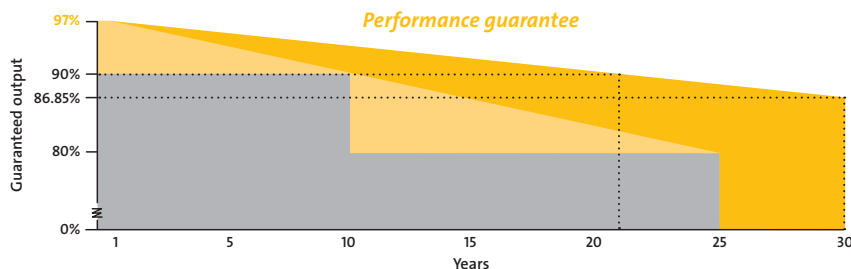
Innovative glass technologies make extremely weather-resistant and robust solar modules possible. The Sunmodule Protect offers higher mechanical resilience and a longer service life, and still weighs the same as the Sunmodule Plus.

The positive power tolerance guarantees utmost system efficiency. Only modules achieving or exceeding the designated nominal power in performance tests are dispatched. The power tolerance ranges between -0 Wp and +5 Wp.

SolarWorld is setting new standards with the ground-breaking 30-year linear performance guarantee: a maximum degradation of just 0.35% p.a. provides guaranteed module performance of 90% after 21 years, and 86.85% after 30 years.**

30-year linear performance guarantee

- Linear performance guarantee for SolarWorld Sunmodule Protect
- Linear performance guarantee for SolarWorld Sunmodule Plus
- Competitor's tiered performance guarantee



* Solar cells manufactured in U.S.A. or Germany. Modules assembled in U.S.A.

**in accordance with the applicable SolarWorld Limited Warranty at purchase.

www.solarworld.com/warranty

solarworld.com



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Blowing sand resistance, IEC 60068-2-68
- Ammonia resistance, IEC 62716
- Salt mist corrosion, IEC 61701
- Periodic inspection



- Periodic inspection
- Power controlled



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PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)*

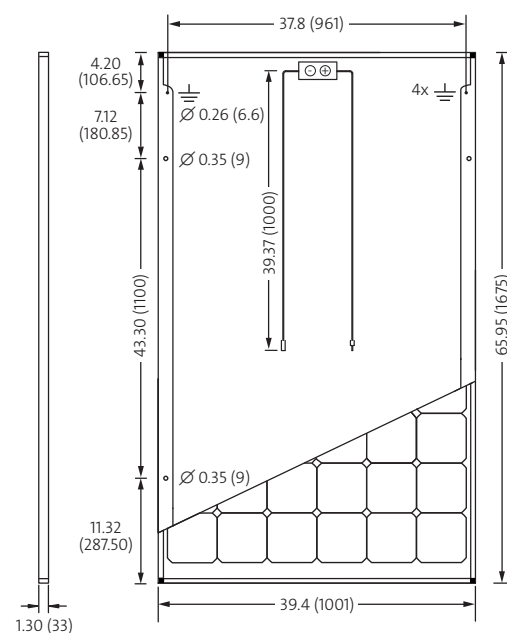
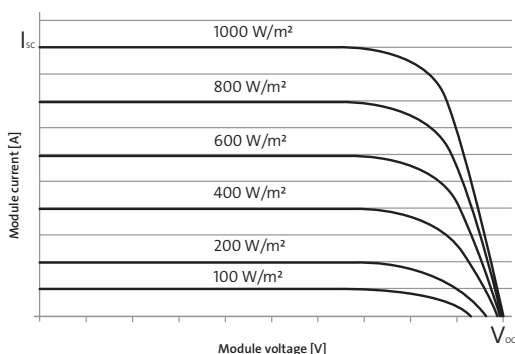
		SW 275	SW 280
Maximum power	P_{max}	275 Wp	280 Wp
Open circuit voltage	V_{oc}	39.4 V	39.5 V
Maximum power point voltage	V_{mpp}	31.0 V	31.2 V
Short circuit current	I_{sc}	9.58 A	9.71 A
Maximum power point current	I_{mpp}	8.94 A	9.07 A
Module efficiency	η_m	16.40 %	16.70 %

*STC: 1000W/m², 25 °C, AM 1.5

PERFORMANCE AT 800 W/M², NOCT, AM 1.5

		SW 275	SW 280
Maximum power	P_{max}	203.1 Wp	207.2 Wp
Open circuit voltage	V_{oc}	35.7 V	35.8 V
Maximum power point voltage	V_{mpp}	28.1 V	28.3 V
Short circuit current	I_{sc}	7.75 A	7.85 A
Maximum power point current	I_{mpp}	7.22 A	7.33 A

Minor reduction in efficiency under partial load conditions at 25 °C: at 200 W/m², 100% of the STC efficiency (1000 W/m²) is achieved.



All units provided are imperial. SI units provided in parentheses.
SolarWorld AG reserves the right to make specification changes without notice.

COMPONENT MATERIALS

Cells per module	60	Front	Heat treated glass (EN 61215)
Cell type	Monocrystalline	Rear	Heat treated glass (EN 61215)
Cell dimensions	6.17 in x 6.17 in (156.75 x 156.75 mm)	Frame	Black anodized aluminum
		Weight	47.4 lbs (21.5 kg)

THERMAL CHARACTERISTICS

NOCT	48 °C
TCI_{sc}	0.044 % / °C
TCV_{oc}	-0.31 % / °C
TCV_{mpp}	-0.43 % / °C
Operating temp	-40 to +85 °C

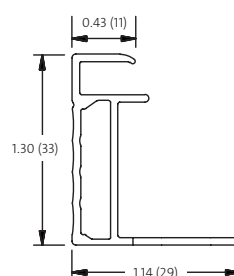
ADDITIONAL DATA

Power sorting	-0 Wp/+5 Wp
J-Box	IP65
Connector	PV wire per UL4703 with H4/UTX connectors
Module fire performance	(UL 1703) Type 3

PARAMETERS FOR OPTIMAL SYSTEM INTEGRATION

<i>Maximum system voltage SC II / NEC</i>		1000 V
<i>Maximum reverse current</i>		25 A
<i>Number of bypass diodes</i>		3
<i>Design loads*</i>	<i>Two rail system</i>	113 psf downward, 64 psf upward
<i>Design loads*</i>	<i>Three rail system</i>	178 psf downward, 64 psf upward
<i>Design loads*</i>	<i>Edge mounting</i>	178 psf downward, 41 psf upward

* Please refer to the Sunmodule installation instructions for the details associated with these load cases.



- Compatible with both "Top-Down" and "Bottom" mounting methods
- Grounding Locations:
 - 4 locations along the length of the module in the extended flange.

SW-01-7550US 160324