

# Sunmodule<sup>®</sup> Protect SW 270 mono



TUV Power controlled:  
Lowest measuring tolerance in industry



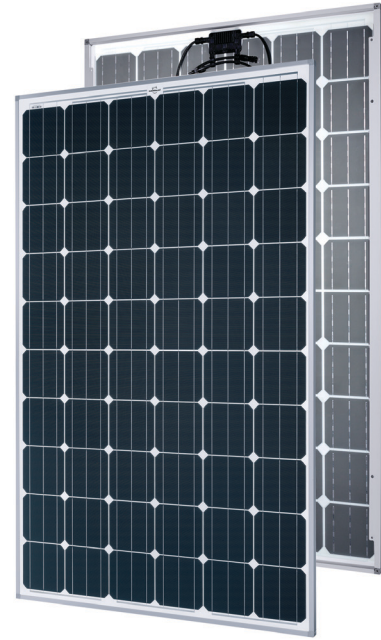
Exceptional weather resistance  
and robustness



Designed to withstand heavy  
accumulations of snow and ice



Sunmodule Protect:  
Positive performance tolerance



## 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.

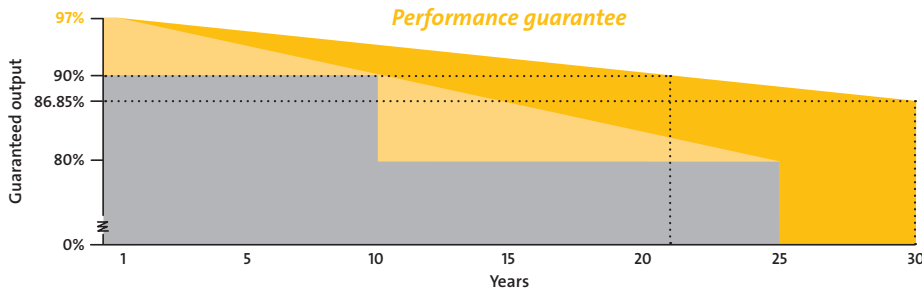
SolarWorld is setting new standards with the ground-breaking 30-year linear performance guarantee: a maximum degradation of just 0.35% p.a. provides guaranteed module performance of 90% after 21 years, and 86.85% after 30 years.



MADE IN USA

## Linear performance guarantee

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



\*in accordance with the applicable SolarWorld Limited Warranty at purchase.  
[www.solarworld.com/warranty](http://www.solarworld.com/warranty)

[solarworld.com](http://solarworld.com)



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic Inspection
- Blowing sand resistant



- Ammonia resistance tested
- Periodic Inspection
- Power Controlled



We turn sunlight into power.

# Sunmodule® Protect SW 270 mono

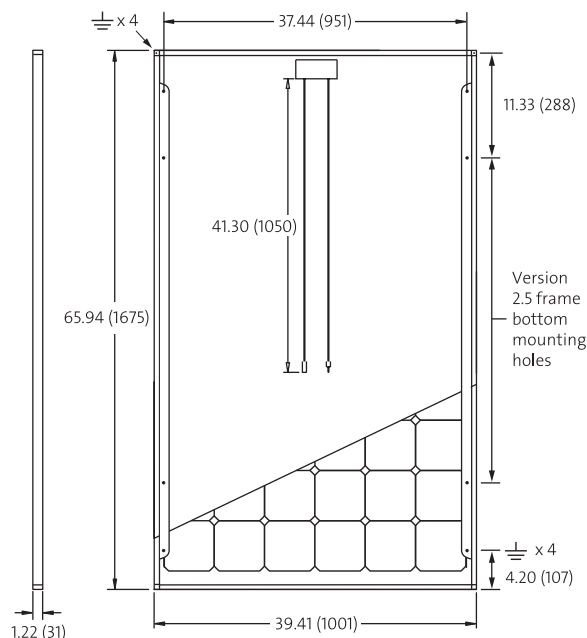
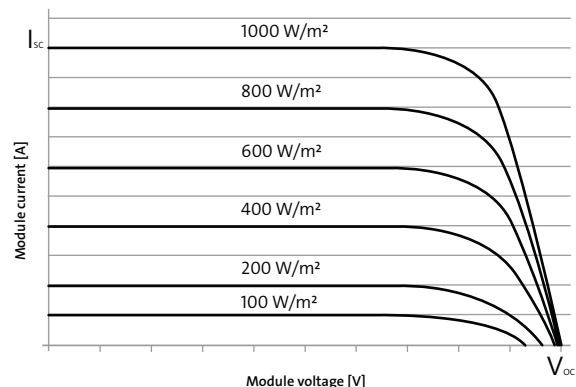
## PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)\*

Maximum power	$P_{max}$	270 Wp
Open circuit voltage	$V_{oc}$	39.2 V
Maximum power point voltage	$V_{mpp}$	30.9 V
Short circuit current	$I_{sc}$	9.44 A
Maximum power point current	$I_{mpp}$	8.81 A

\*STC: 1000 W/m<sup>2</sup>, 25°C, AM 1.5.  
Measuring tolerance ( $P_{max}$ ) traceable to TUV Rheinland: +/-2% (TUV Power controlled)

## THERMAL CHARACTERISTICS

NOCT	46 °C
TC $I_{sc}$	0.04 %/K
TC $V_{oc}$	-0.30 %/K
TC $P_{mpp}$	-0.45 %/K
Operating temperature	-40°C to 85°C



## PERFORMANCE AT 800 W/m<sup>2</sup>, NOCT, AM 1.5

Maximum power	$P_{max}$	201.3 Wp
Open circuit voltage	$V_{oc}$	35.9 V
Maximum power point voltage	$V_{mpp}$	28.3 V
Short circuit current	$I_{sc}$	7.63 A
Maximum power point current	$I_{mpp}$	7.12 A

Minor reduction in efficiency under partial load conditions at 25°C: at 200 W/m<sup>2</sup>, 100% (+/-2%) of the STC efficiency (1000 W/m<sup>2</sup>) is achieved.

## COMPONENT MATERIALS

Cells per module	60
Cell type	Mono crystalline
Cell dimensions	6.14 in x 6.14 in (156 mm x 156 mm)
Front	Tempered glass (EN 12150)
Frame	Clear anodized aluminum
Weight	46.7 lbs (21.2 kg)

## SYSTEM INTEGRATION PARAMETERS

Maximum system voltage IEC	1000 V	
Maximum system voltage UL	600 V	
Maximum reverse current	16 A	
Number of bypass diodes	3	
UL Design Loads*	Two rail system	113 psf downward 64 psf upward
UL Design Loads*	Three rail system	170 psf downward 64 psf upward
IEC Design Loads*	Two rail system	113 psf downward 50 psf upward

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

## ADDITIONAL DATA

Power sorting <sup>1</sup>	-0 Wp / +5 Wp
J-Box	IP65
Connector	MC4
Module efficiency	16.10 %
Fire rating (UL 790)	Class C

**NEW!**

Black & Veatch validated PAN files now available.  
Ask your account manager for more information.