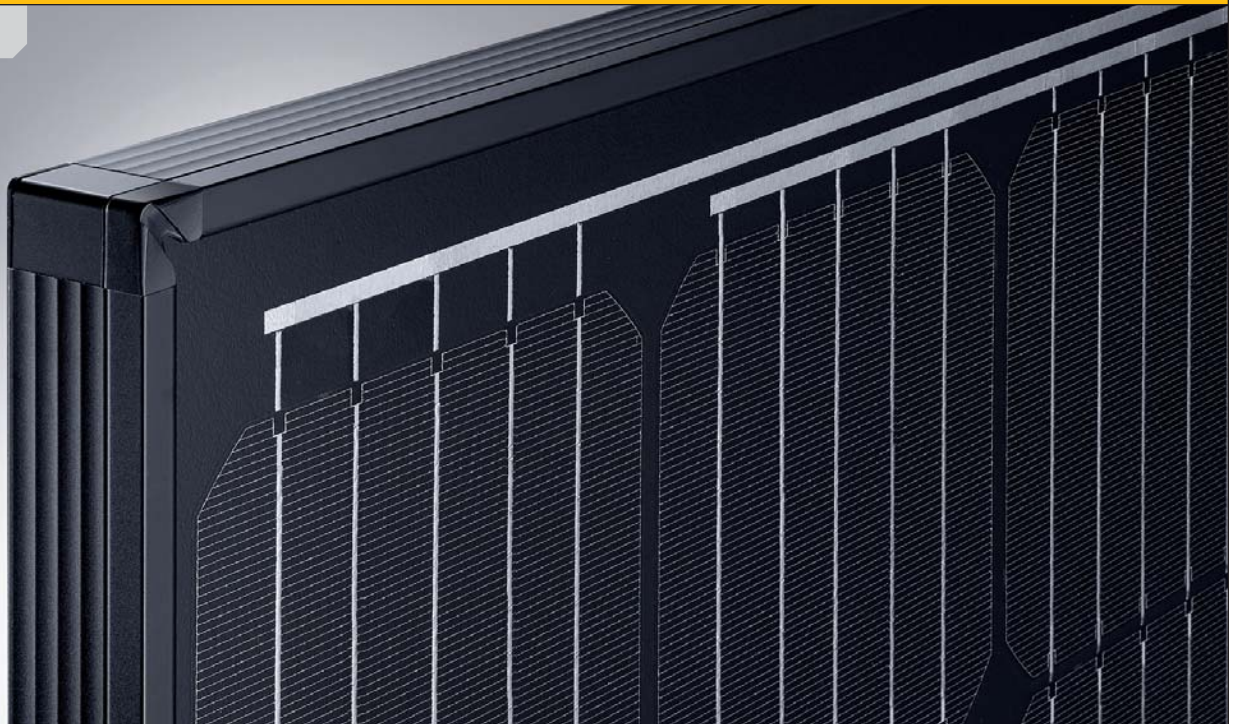


# Sunmodule<sup>®</sup> Plus

## SW 285 - 290 MONO BLACK



Data sheet



## QUALITY BY SOLARWORLD

SolarWorld's foundation is built on more than 40 years of ongoing innovation, continuous optimization and technology expertise. All production steps from silicon to module are established at our production sites ensuring the highest possible quality for our customers. Our modules come in a variety of different sizes and power, making them suitable for all global applications – from residential solar systems to large-scale power plants.

- » Elegant aesthetic design—entirely black solar module, from the cells and frame to the module corners
- » Extremely tough and stable, despite its light weight – able to handle loads up to 178 psf (8.5 kN/m<sup>2</sup>)
- » Tested in extreme weather conditions – hail-impact tested and resistant to salt spray, frost, ammonia, dust and sand
- » Proven guarantee against hotspots and PID-free to IEC 62804-1
- » SolarWorld Efficells™ for the highest possible energy yields
- » Patented corner design with integrated drainage for optimized self-cleaning
- » High-transmissive glass with anti-reflective coating
- » Long-term safety and guaranteed top performance – 25-year linear performance warranty; 20-year product warranty



# Sunmodule<sup>®</sup> Plus

## SW 285 - 290 MONO BLACK



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

		SW 285	SW 290
Maximum power	$P_{max}$	285 Wp	290 Wp
Open circuit voltage	$V_{oc}$	39.2 V	39.5 V
Maximum power point voltage	$V_{mpp}$	32.0 V	32.2 V
Short circuit current	$I_{sc}$	9.52 A	9.60 A
Maximum power point current	$I_{mpp}$	9.00 A	9.12 A
Module efficiency	$\eta_m$	17.0 %	17.3 %

Measuring tolerance ( $P_{max}$ ) traceable to TUV Rheinland: +/- 2% (TUV Power controlled, ID 0000039351)

\*STC: 1000W/m<sup>2</sup>, 25°C, AM 1.5

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

		SW 285	SW 290
Maximum power	$P_{max}$	214.8 Wp	220.0 Wp
Open circuit voltage	$V_{oc}$	36.2 V	36.6 V
Maximum power point voltage	$V_{mpp}$	29.5 V	29.9 V
Short circuit current	$I_{sc}$	7.80 A	7.86 A
Maximum power point current	$I_{mpp}$	7.27 A	7.37 A

Minor reduction in efficiency under partial load conditions at 25 °C: at 200 W/m<sup>2</sup>, 97% (+/-3%) of the STC efficiency (1000 W/m<sup>2</sup>) is achieved.

### PARAMETERS FOR OPTIMAL SYSTEM INTEGRATION

Power sorting	-0 Wp / +5 Wp
Maximum system voltage SC II / NEC	1000 V
Maximum reverse current	25 A
Number of bypass diodes	3
Operating temperature	-40 to +85 °C
Maximum design loads (Two rail system)*	113 psf downward, 64 psf upward
Maximum design loads (Three rail system)*	178 psf downward, 64 psf upward

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

### COMPONENT MATERIALS

Cells per module	60
Cell type	Monocrystalline PERC
Cell dimensions	6 in x 6 in (156 mm x 156 mm)
Front	Tempered safety glass with ARC (EN 12150)
Back	Multi-layer polymer backsheet, black
Frame	Black anodized aluminum
J-Box	IP65
Connector	PV wire (UL4703) with Amphenol UTX connectors
Module fire performance	(UL 1703) Type 1

### DIMENSIONS / WEIGHT

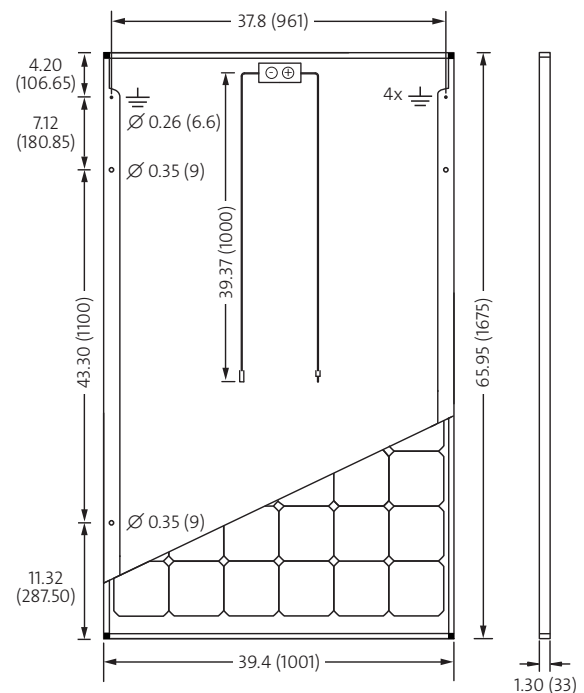
Length	65.95 in (1675 mm)
Width	39.40 in (1001 mm)
Height	1.30 in (33 mm)
Weight	39.7 lb (18.0 kg)

### THERMAL CHARACTERISTICS

NOCT	46 °C
TC $I_{sc}$	0.07 % /C
TC $V_{oc}$	-0.29 % /C
TC $P_{mpp}$	-0.39 % /C

### ORDERING INFORMATION

Order number	Description
82000248	Sunmodule Plus SW 285 mono black
82000260	Sunmodule Plus SW 290 mono black



All units provided are imperial. SI units provided in parentheses.

### CERTIFICATES AND WARRANTIES

Certificates	IEC 61730	IEC 61215	UL 1703
	IEC 62716	IEC 60068-2-68	IEC 61701
Warranties	Product Warranty	20 years	
	Linear Performance Guarantee	25 years	

SolarWorld AG reserves the right to make specification changes without notice.

