Sunmodule® Plus
SWA 290 - 300 MONO

SOLARWORLD
REAL VALUE

Data sheet

SOLARWORLD ASSURANCE™
WARRANTY PROTECTION PROGRAM

POWERING AMERICAN HOMES FOR MORE THAN 40 YEARS

For over four decades SolarWorld Americas has been creating the highest quality solar cells and panels. Driven by uncompromising standards of quality and reliability, every solar panel we produce demonstrates our commitment to American innovation, manufacturing and sustainability.

- Our **Watts+** guarantees our panels will produce at least the minimum advertised nameplate power
- **PowAR-TECH™** Glass features the industry's best anti-reflective coating, capturing more light and increasing your panels' power
- Our patented **INFINITEE™** Corners and Frame Technology are press-fit for superior strength and aesthetics and enhanced drainage
- By capturing more light, **OPTIGRID™** Cell Layout increases lifetime performance while also greatly increasing durability
- **Perma-Sil™** J-Box sealing encloses critical electrical connections, protecting them against moisture intrusion
- With **CoAST** Salt Resistance, installations on islands or near coastal areas are certified against salt corrosion

MADE IN USA
OF US & IMPORTED PARTS

TOP PERFORMER 2017
DNV·GL
PV MODULE RELIABILITY SCORECARD

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PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)*

		SWA 290	SWA 295	SWA 300
Maximum power	P_{max}	290 Wp	295 Wp	300 Wp
Open circuit voltage	V_{oc}	39.6 V	39.8 V	40.0 V
Maximum power point voltage	V_{mpp}	31.9 V	32.3 V	32.6 V
Short circuit current	I_{sc}	9.75 A	9.78 A	9.83 A
Maximum power point current	I_{mpp}	9.20 A	9.25 A	9.31 A
Module efficiency	η_m	17.3 %	17.59 %	17.89 %

Measuring tolerance (P_{max}) traceable to TUV Rheinland: +/- 2%

*STC: 1000W/m², 25°C, AM 1.5

PERFORMANCE AT 800 W/m², NOCT, AM 1.5

		SWA 290	SWA 295	SWA 300
Maximum power	P_{max}	219.6 Wp	223.6 Wp	226.7 Wp
Open circuit voltage	V_{oc}	36.7 V	36.9 V	37.0 V
Maximum power point voltage	V_{mpp}	29.5 V	29.9 V	30.2 V
Short circuit current	I_{sc}	7.99 A	8.01 A	8.06 A
Maximum power point current	I_{mpp}	7.43 A	7.47 A	7.52 A

Minor reduction in efficiency under partial load conditions at 25 °C: at 200 W/m², 97% (+/-3%) of the STC efficiency (1000 W/m²) 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

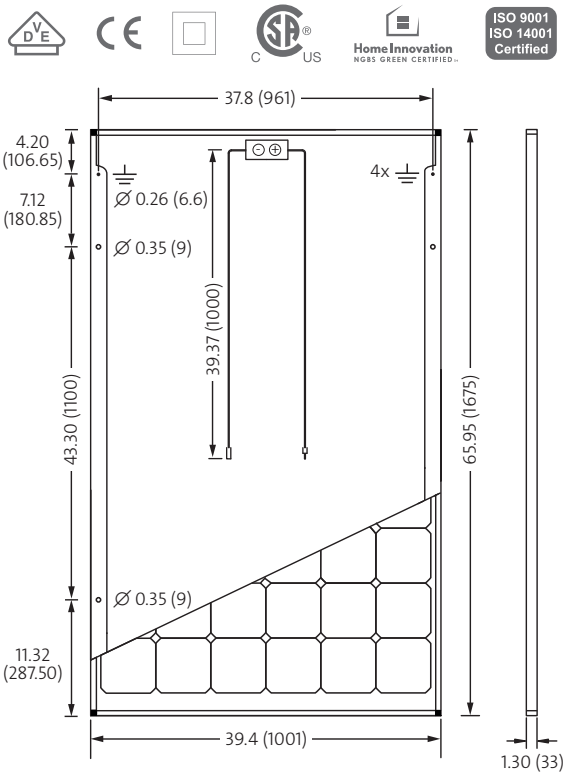
Cells per module	60
Cell type	Monocrystalline PERC
Cell dimensions	6 in x 6 in (156 mm x 156 mm)
Front	Tempered safety glass with ARC (EN 12150)
Back	Multi-layer polymer backsheet, white
Frame	Black anodized aluminum
J-Box	IP65
Connector	PV wire (UL4703) with Amphenol UTX connectors
Module fire performance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



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

ORDERING INFORMATION

Order number	*Description*
82000482	Sunmodule Plus SWA 290 mono (black frame)
82000430	Sunmodule Plus SWA 295 mono (black frame)
82000432	Sunmodule Plus SWA 300 mono (black frame)

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

**Supplemental warranty coverage available through SolarWorld Assurance™ Warranty Protection Program – www.solarworld-usa.com/assurance*

SolarWorld Americas Inc. reserves the right to make specification changes without notice. This data sheet complies with the requirements of EN 50380.

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