Sunmodule™

SW 235 poly

Version 2.0 and 2.5 Frame

WORLD CLASS QUALITY

Fully-automated production lines and seamless monitoring of the process and material supply ensure high standards worldwide.

SOLARWORLD PLUS SORTING

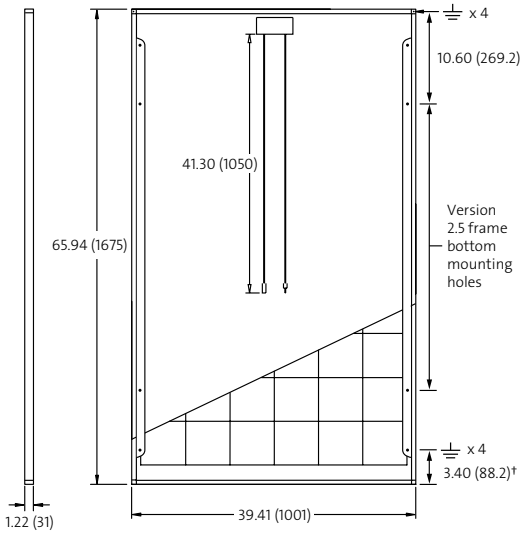
Plus-sorting guarantees the highest system efficiency. Only modules that achieve the designated nominal performance or greater in performance tests are dispatched.

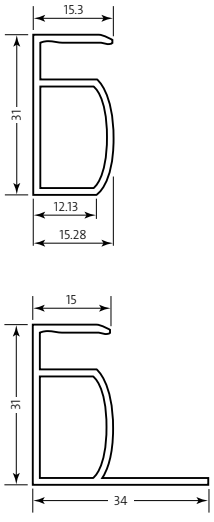
25-YEAR LINEAR PERFORMANCE GUARANTEE*

SolarWorld guarantees a maximum degeneration in performance of 0.7% per year for more than 25 years – a clear additional benefit compared with the conventional two-step industry guarantees. In addition there is a product workmanship warranty that covers 5 years.

PHYSICAL CHARACTERISTICS

Cells per module	60	**Frame**	Clear anodized aluminum
Cell type	Poly crystalline	**Weight**	46.7 lbs (21.2 kg)
Cell dimensions	6.14 in x 6.14 in (156 mm x 156 mm)	**UL Maximum Test Load****	50 psf (2.4kN/m²)
Front	Tempered glass (EN 12150)	**IEC Maximum Snow Test Load****	113 psf (5.4kN/m²)





VERSION 2.0 FRAME

- Compatible with “Top-Down” mounting methods
- ⏚ Grounding Locations: 4 corners of the frame

VERSION 2.5 FRAME

- Compatible with both “Top-Down” and “Bottom” mounting methods
- ⏚ Grounding Locations:
  - 4 corners of the frame
  - 4 locations along the length of the module in the extended flange†

* In accordance with the applicable SolarWorld Limited Warranty at purchase. www.solarworld.com

** Please apply the appropriate factors of safety according to the test standard and local building code requirements when designing a PV system.

www.solarworld.com

SOLARWORLD

We turn sunlight into power.

Sunmodule™

SW 235 poly

Version 2.0 and 2.5 Frame

PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)*

		SW 235
Maximum power	P_{max}	235 Wp
Open circuit voltage	V_{OC}	37.0 V
Maximum power point voltage	V_{MPP}	30.0 V
Short circuit current	I_{SC}	8.35 A
Maximum power point current	I_{MPP}	7.85 A

*STC: 1000W/m², 25°C, AM 1.5

PERFORMANCE AT 800 W/m², NOCT, AM 1.5

		SW 235
Maximum power	P_{max}	170.4 Wp
Open circuit voltage	V_{OC}	33.5 V
Maximum power point voltage	V_{MPP}	27.1 V
Short circuit current	I_{SC}	6.73 A
Maximum power point current	I_{MPP}	6.28 A

Minor reduction in efficiency under partial load conditions at 25° C: at 200 W/m², 95% (+/-3%) of the STC efficiency (1000 W/m²) is achieved.

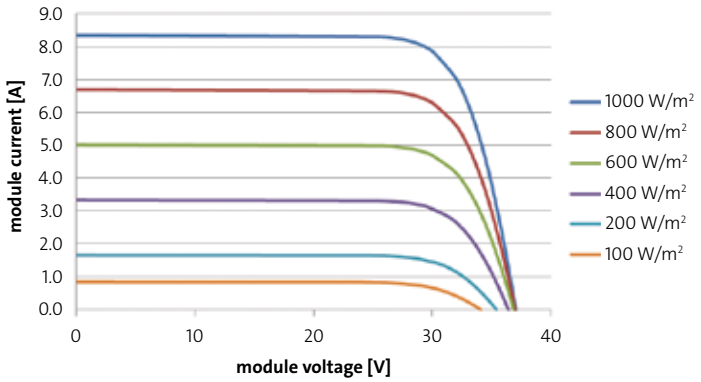
THERMAL CHARACTERISTICS

NOCT	46° C
TC I_{sc}	0.034 %K
TC V_{oc}	-0.34 %
TC P_{mpp}	-0.48%
Operating range	-40°C to 90°C

SYSTEM INTEGRATION PARAMETERS

Maximum system voltage SC II	1000 V
Maximum system voltage USA NEC	600 V
Maximum series fuse rating	16 A
Number of bypass diodes	3

I-V CURVE AT 25°C CELL TEMPERATURE



ADDITIONAL DATA

Measuring tolerance [3]	+/- 3%
SolarWorld Plus-Sorting [1]	$P_{Flash} \geq P_{max}$
Junction box	IP65
Connector	MC4
Module efficiency	14.02%
Fire rating	Class C

GROUNDING

We recommend using the following components:

FRAME 2.0/2.5 (CORNERS)

Item	Manufacturer/Description	Tightening torque
Grounding lug	ILsco GBL-4DBT	35 lbf-in, 4-6 AWG str 25 lbf-in, 8 AWG str 20 lbf-in, 10-14 AWG sol/str
Socket head cap screw	#10-24, 5/8", SS 18-8	62 lbf-in (7.0 Nm)

FRAME 2.5 (FLANGE)

Item	Manufacturer/Description
Grounding lug	ILsco GBL-4DBT
Bolt	#10-32, SS
Serrated Washer	#10, SS
Washer	ID 13/64", OD 7/16"
Nut	#10-32, SS

Any PV grounding method and components listed to meet NEC grounding requirements are also acceptable.

c UL us LISTED 10SE
Photovoltaic Module / Panel

2)

c ETL us LISTED
Intertek

FOKUS TEST 06/10 Ammoniak-beständigkeit

DVE

ISO 9001
ISO 14001
Certified

CE

www.tuv.com ID: 0000022848
TÜVRheinland
· Qualified, IEC 61215
· Safety tested, IEC 61730
· Periodic Inspection

Made in USA

1) The output identified by SolarWorld (P_{flash}) is always higher than the nominal output (P_{max}) of the module. P_{flash} is the power rating flashed at a SolarWorld manufacturing facility.

2) Depending on the market.

3) Measuring tolerance is used in conjunction with the SolarWorld Limited Warranty.

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