# Sunmodule® Plus
## SW 280 MONO BLACK

SOLARWORLD
REAL VALUE

TUV Power controlled:
Lowest measuring tolerance in industry

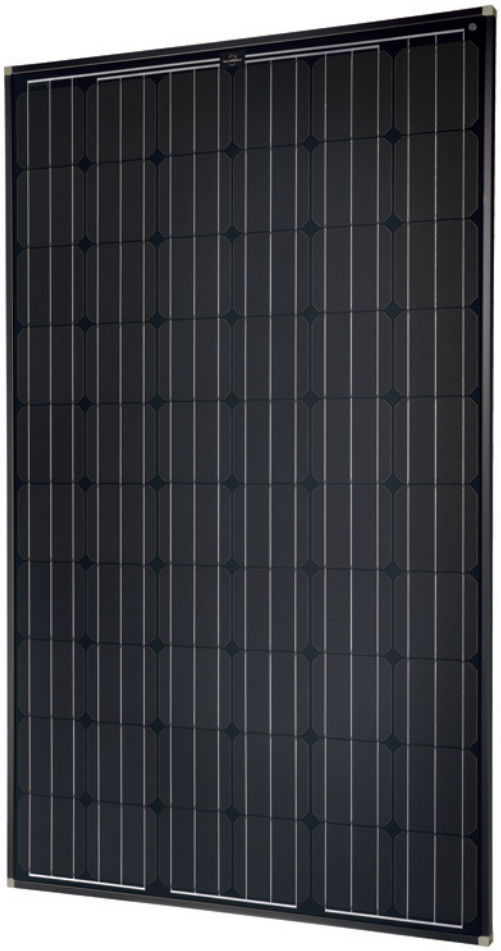
Every component is tested to meet
3 times IEC requirements

Designed to withstand heavy
accumulations of snow and ice

Sunmodule Plus:
Positive performance tolerance

25-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.

**SolarWorld Plus-Sorting**
Plus-Sorting guarantees highest system efficiency. SolarWorld only delivers modules that have greater than or equal to the nameplate rated power.

**25-year linear performance guarantee and extension of product warranty to 10 years**
SolarWorld guarantees a maximum performance digression of 0.7% p.a. in the course of 25 years, a significant added value compared to the two-phase warranties common in the industry. In addition, SolarWorld is offering a product warranty, which has been extended to 10 years.*

*in accordance with the applicable SolarWorld Limited Warranty at purchase.
www.solarworld.com/warranty

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

• Ammonia resistance tested
• Periodic Inspection
• Power Controlled

PERFORMANCE TESTED
SALT MIST RESISTANT
PHOTOVOLTAIC PRODUCT

UL 1703

ISO 9001
ISO 14001
Certified

Home Innovation
NGBS GREEN CERTIFIED

MADE IN USA OF US
AND IMPORTED PARTS

solarworld.com

# Sunmodule® Plus
# SW 280 MONO BLACK

SOLARWORLD
REAL VALUE

## PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)*

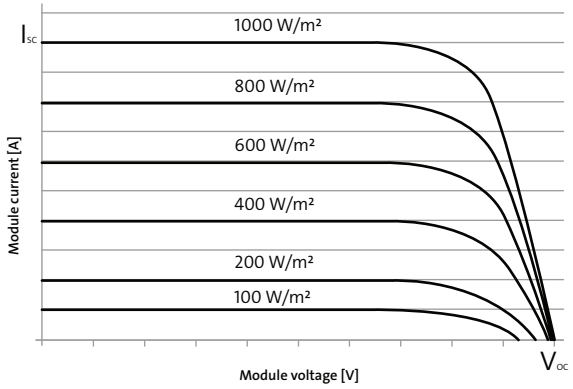
| | | |
|---|---|---|
| *Maximum power* | $P_{max}$ | 280 Wp |
| *Open circuit voltage* | $V_{oc}$ | 39.5 V |
| *Maximum power point voltage* | $V_{mpp}$ | 31.2 V |
| *Short circuit current* | $I_{sc}$ | 9.71 A |
| *Maximum power point current* | $I_{mpp}$ | 9.07 A |
| *Module efficiency* | $\eta_m$ | 16.7 % |

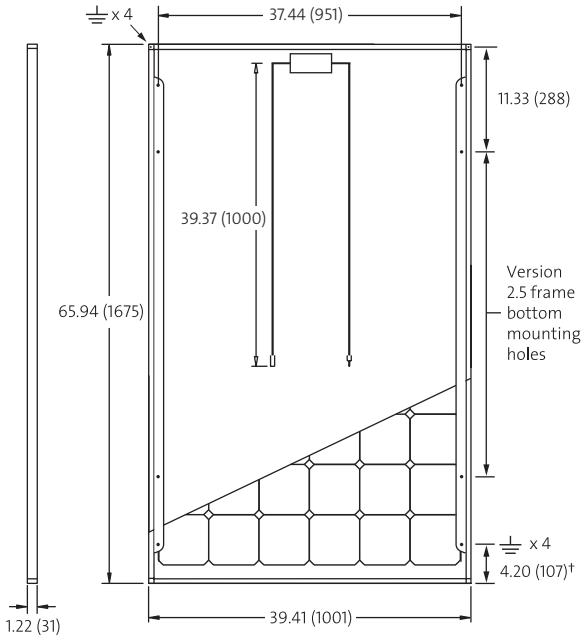
*STC: 1000 W/m², 25°C, AM 1.5

1) Measuring tolerance ($P_{max}$) traceable to TUV Rheinland: +/- 2% (TUV Power Controlled).

## THERMAL CHARACTERISTICS

| | |
|---|---|
| *NOCT* | 48 °C |
| *TC $I_{sc}$* | 0.044 %/°C |
| *TC $V_{oc}$* | -0.31 %/°C |
| *TC $P_{mpp}$* | -0.43 %/°C |
| *Operating temperature* | -40°C to 85°C |




## PERFORMANCE AT 800 W/m², NOCT, AM 1.5

| | | |
|---|---|---|
| *Maximum power* | $P_{max}$ | 207.2 Wp |
| *Open circuit voltage* | $V_{oc}$ | 35.8 V |
| *Maximum power point voltage* | $V_{mpp}$ | 28.3 V |
| *Short circuit current* | $I_{sc}$ | 7.85 A |
| *Maximum power point current* | $I_{mpp}$ | 7.33 A |

Minor reduction in efficiency under partial load conditions at 25°C: at 200 W/m², 100% (+/-2%) of the STC efficiency (1000 W/m²) is achieved.

## COMPONENT MATERIALS

| | |
|---|---|
| *Cells per module* | 60 |
| *Cell type* | Mono crystalline |
| *Cell dimensions* | 6.17 in x 6.17 in (156.75 x 156.75 mm) |
| *Front* | Tempered glass (EN 12150) |
| *Frame* | Black anodized aluminum |
| *Weight* | 39.5 lbs (17.9 kg) |

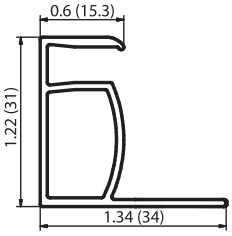
## SYSTEM INTEGRATION PARAMETERS

| | | |
|---|---|---|
| *Maximum system voltage SC II / NEC* | | 1000 V |
| *Maximum reverse current* | | 25 A |
| *Number of bypass diodes* | | 3 |
| *Design Loads** | *Two rail system* | 113 psf downward<br>64 psf upward |
| *Design Loads** | *Three rail system* | 170 psf downward<br>71 psf upward |
| *Design Loads** | *Edge mounting* | 30 psf downward<br>30 psf upward |

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

## ADDITIONAL DATA

| | |
|---|---|
| *Power sorting*[1] | -0 Wp / +5 Wp |
| *J-Box* | IP65 |
| *Module leads* | PV wire per UL4703 with H4 connectors |
| *Module type (UL 1703)* | 1 |
| *Glass* | Low iron tempered with ARC |




### 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†

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