

Sunmodule[®] Plus

SW 280 - 290 mono



Data Sheet



Produced in Germany,
the center for solar technology



www.tuv.com
ID 0000039351

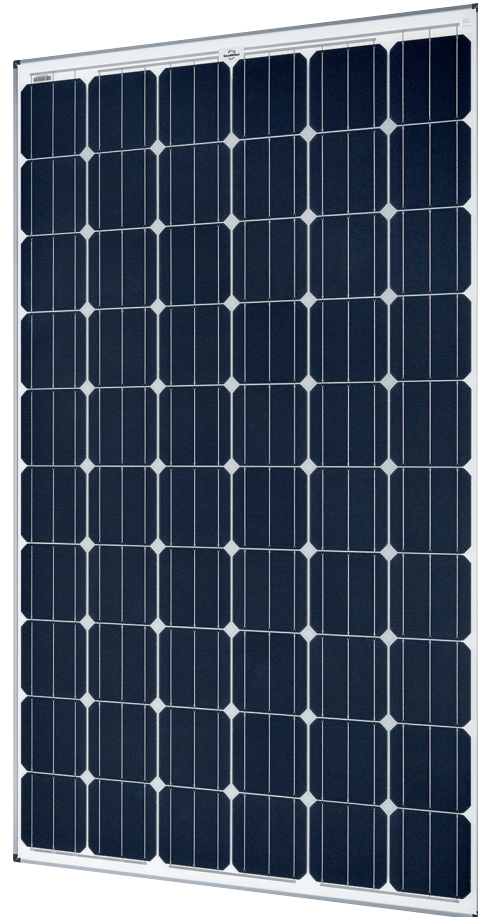
TUV Power controlled:
Lowest measuring tolerance in industry



Sunmodule Plus:
Positive performance tolerance



25 year linear performance warranty and
10 year product warranty



SolarWorld AG relies on Germany as its technology location, thereby ensuring sustainable product quality.

The TUV Rheinland Power controlled inspection mark guarantees that the nominal power indicated for solar modules is inspected at regular intervals and thus ensured. The deviation to TUV is maximum 2 percent.

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.

With its linear performance warranty covering a period of 25 years, SolarWorld guarantees a maximum performance degradation of 0.7% p.a., a significant added value compared to the two-phase warranties common in the industry. Therefore, the service certificate offers comprehensive protection for your investment in the long term.

Sunmodule[®] Plus SW 280 - 290 mono



PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)*

| | | SW 280 | SW 285 | SW 290 |
|-----------------------------|-----------|--------|--------|--------|
| Maximum power | P_{max} | 280 Wp | 285 Wp | 290 Wp |
| Open circuit voltage | U_{oc} | 39.5 V | 39.7 V | 39.9 V |
| Maximum power point voltage | U_{mpp} | 31.2 V | 31.3 V | 31.4 V |
| Short circuit current | I_{sc} | 9.71 A | 9.84 A | 9.97 A |
| Maximum power point current | I_{mpp} | 9.07 A | 9.20 A | 9.33 A |
| Module efficiency | η_m | 16.7 % | 17 % | 17.3 % |

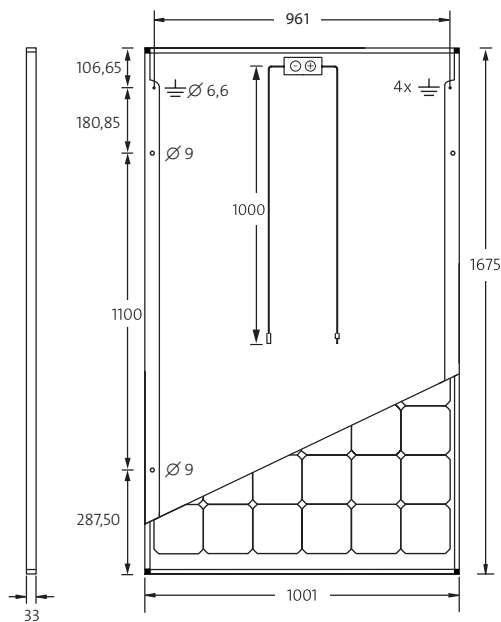
Measuring tolerance (P_{max}) traceable to TUV Rheinland: +/- 2% (TUV Power controlled)

*STC: 1000W/m², 25°C, AM 1.5

PERFORMANCE AT 800 W/m², NOCT, AM 1.5

| | | SW 280 | SW 285 | SW 290 |
|-----------------------------|-----------|----------|----------|----------|
| Maximum power | P_{max} | 209.2 Wp | 213.1 Wp | 217.1 Wp |
| Open circuit voltage | U_{oc} | 36.1 V | 36.4 V | 36.6 V |
| Maximum power point voltage | U_{mpp} | 28.5 V | 28.7 V | 28.8 V |
| Short circuit current | I_{sc} | 7.85 A | 7.96 A | 8.06 A |
| Maximum power point current | I_{mpp} | 7.33 A | 7.43 A | 7.54 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.



DIMENSIONS

| | |
|--------|-------------------------|
| Length | 1675 mm |
| Width | 1001 mm |
| Height | 33 mm |
| Frame | Clear anodized aluminum |
| Weight | 18.0 kg |

THERMAL CHARACTERISTICS

| | |
|--------------|-----------|
| NOCT | 46 °C |
| TC I_{sc} | 0.040 %/K |
| TC U_{oc} | -0.30 %/K |
| TC P_{mpp} | -0.41 %/K |

COMPONENT MATERIALS

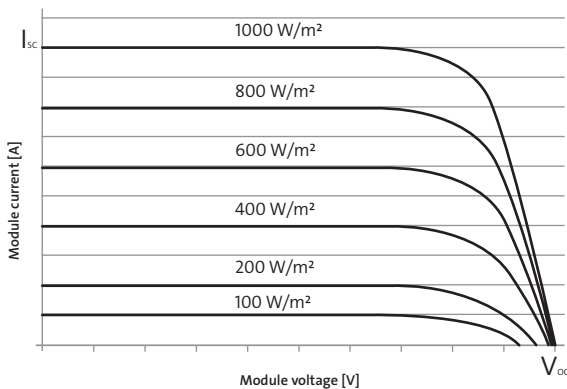
| | |
|------------------|---------------------------|
| Cells per module | 60 |
| Cell type | Mono crystalline |
| Cell dimensions | 156 mm x 156 mm |
| Front | tempered glass (EN 12150) |

ADDITIONAL DATA

| | |
|---------------|---------------|
| Power sorting | -0 Wp / +5 Wp |
| J-Box | IP65 |
| Connector | H4 |

PARAMETERS FOR OPTIMAL SYSTEM INTEGRATION

| | |
|------------------------------|-----------------------------|
| Maximum system voltage SC II | 1000 V |
| Maximum reverse current | 25 A |
| Load / dynamic load | 5.4 / 2.4 kN/m ² |
| Number of bypass diodes | 3 |
| Operating range | -40 °C to +85 °C |



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