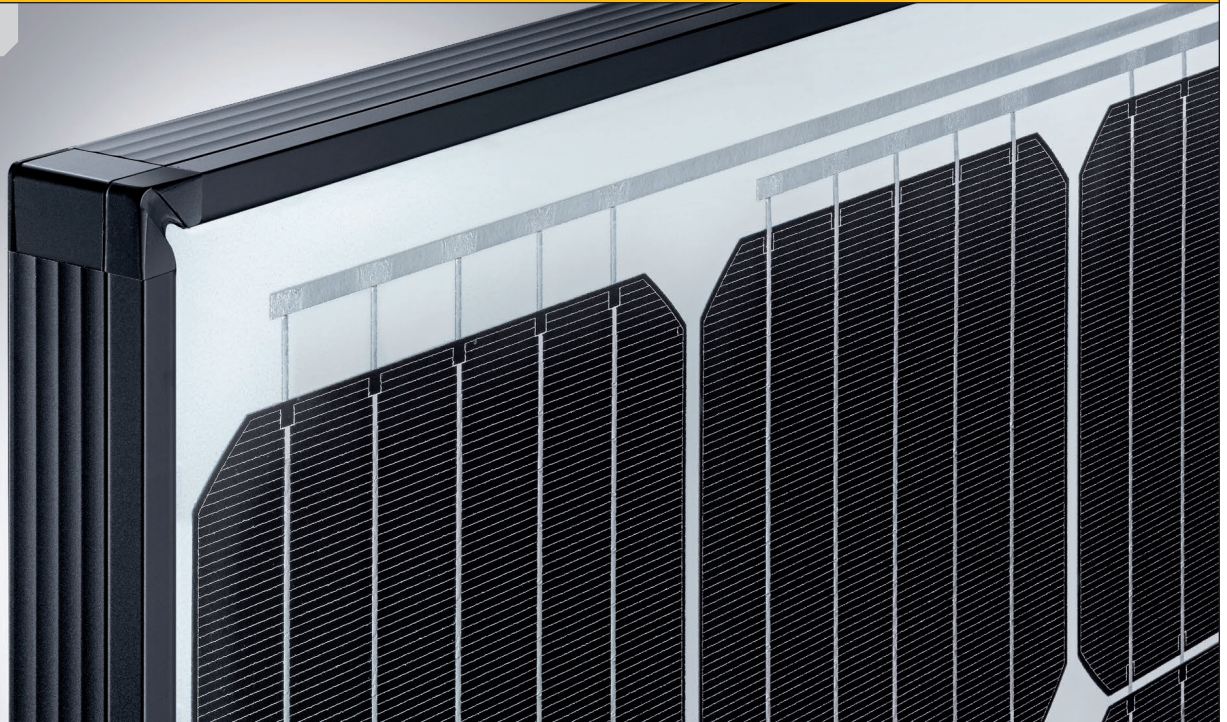


# Sunmodule® Plus

## SW 290 - 300 MONO



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.

- » 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 Efficell™ PERC cell technology 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 290 - 300 MONO



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

|                             |           | SW 290 | SW 295  | SW 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           | $\eta_m$  | 17.3 % | 17.59 % | 17.89 % |

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 290   | SW 295   | SW 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 </td |
| 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/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, 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

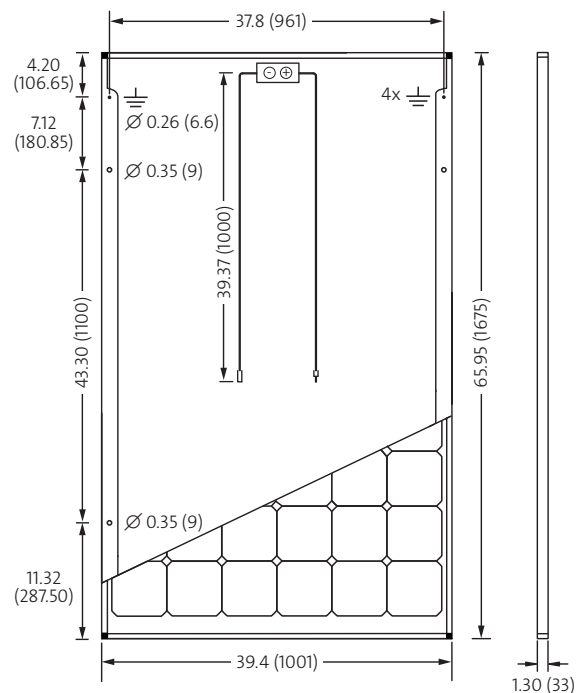
|        |                    |
|--------|--------------------|
| Length | 65.95 in (1675 mm) |
| Width  | 39.40 in (1001 mm) |
| Height | 1.30 in (33 mm)    |
| Weight | 39.7 lb (18.0 kg)  |

### THERMAL CHARACTERISTICS

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

### ORDERING INFORMATION

| Order number | Description                              |
|--------------|--|
| 82000482     | Sunmodule Plus SW 290 mono (black frame) |
| 82000430     | Sunmodule Plus SW 295 mono (black frame) |
| 82000432     | Sunmodule Plus SW 300 mono (black frame) |



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       |           |

\*Supplemental warranty coverage available through SolarWorld Assurance™ Warranty Protection Program – [www.solarworld.com/assurance](http://www.solarworld.com/assurance)