

# Sunmodule<sup>®</sup> Bisun SW 270 duo



TUV Power controlled:  
Lowest measuring tolerance in industry



Robust design provides excellent  
weather resistance



Energy boost through use of high  
efficient duo cell



Sunmodule Bisun:  
Positive performance tolerance



30-year linear performance warranty  
and 10-year product warranty



SolarWorld's Bisun solar modules boost energy production up to 25% through the use of innovative and highly efficient duo cells - an innovative development based on PERC cell technology. The bifacial cells convert the sunlight into power not only from the front of the module but from the back as well.

Innovative glass technologies on the front and backside make the Sunmodule Bisun solar modules extremely weather resistant and robust, offering higher mechanical resilience and a longer service life.

SolarWorld sets new standards with a ground-breaking 30-year linear performance guarantee: a maximum degradation of just 0.35% p.a. provides guaranteed module performance of 90% after 21 years, and 86.85% after 30 years.

The TUV Rheinland Power controlled inspection mark also guarantees that the nominal power of the solar modules is inspected at regular intervals to insure accuracy. The maximum allowed deviation is 2 percent.



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Blowing sand resistance, IEC 60068-2-68
- Ammonia resistance, IEC 62716
- Salt mist corrosion, IEC 61701
- Periodic inspection



- Periodic inspection
- Power controlled



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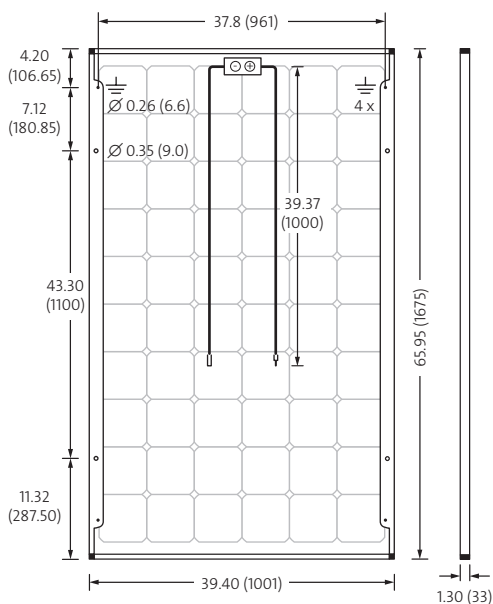
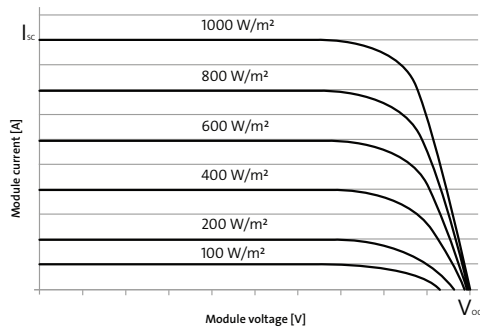
## PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)\*

Energy boost		6 %	10 %	20 %	25 %
Maximum power	$P_{max}$	285 Wp	295 Wp	319 Wp	331 Wp
Open circuit voltage	$V_{oc}$	39.0 V	39.0 V	39.0 V	39.0 V
Maximum power point voltage	$V_{mpp}$	31.0 V	30.9 V	30.6 V	30.5 V
Short circuit current	$I_{sc}$	9.84 A	10.21 A	11.14 A	11.60 A
Maximum power point current	$I_{mpp}$	9.20 A	9.55 A	10.42 A	10.85 A
Module efficiency	$\eta_m$	16.99 %	17.57 %	19.03 %	19.72 %

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

Maximum power	$P_{max}$	270 Wp
Open circuit voltage	$V_{oc}$	39.0 V
Maximum power point voltage	$V_{mpp}$	31.3 V
Short circuit current	$I_{sc}$	9.28 A
Maximum power point current	$I_{mpp}$	8.68 A
Module efficiency	$\eta_m$	16.10 %

\*STC: 1000W/m<sup>2</sup>, 25°C, AM 1.5



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

## PERFORMANCE AT 800 W/M<sup>2</sup>, NOCT, AM 1.5

Maximum power	$P_{max}$	201 Wp
Open circuit voltage	$V_{oc}$	35.7 V
Maximum power point voltage	$V_{mpp}$	28.6 V
Short circuit current	$I_{sc}$	7.50 A
Maximum power point current	$I_{mpp}$	7.01 A
Module efficiency	$\eta_m$	12.01 %

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

## COMPONENT MATERIALS

Cells per module	60	Front	Low-iron tempered glass with ARC (EN 12150)
Cell type	bifacial duo	Frame	Clear anodized aluminum
Cell dimensions	6.17 in x 6.17 in (156.75 x 156.75 mm)	Weight	47.4 lbs (21.5 kg)

## THERMAL CHARACTERISTICS

NOCT	48 °C
$TCI_{sc}$	0.044 % / °C
$TCV_{oc}$	-0.30 % / °C
$TCV_{mpp}$	-0.43 % / °C
Operating temp	-40 to +85 °C

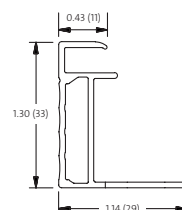
## ADDITIONAL DATA

Power sorting	-0 Wp/+5 Wp
J-Box	IP65
Connector	PV wire per UL4703 with H4/UTX connectors
Module fire performance	(UL 1703) Type 3

## PARAMETERS FOR OPTIMAL SYSTEM INTEGRATION

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, 64 psf upward
Design loads*	Three rail system	178 psf downward, 64 psf upward
Design loads*	Edge mounting	178 psf downward, 41 psf upward

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



- Compatible with both "Top-Down" and "Bottom" mounting methods
- Grounding Locations:
  - 4 locations along the length of the module in the extended flange.

SW-01-7121US-G 160328