

PRODUCT



SOLARWATT Panel vision GM 3.0 style

Glass-Glass module

Solid quality with high performance

Thanks to their modern design Solarwatt glass-glass modules deliver the highest long-term yields. They are robust and more resilient than their predecessors. Bifacial PERC half-cut-cells enable modules that are optimized for maximum performance.

The solar cells are embedded almost indestructibly in the glass-glass composite and thus optimally protected against all weather effects and mechanical stress. Solarwatt can therefore offer a 30-year warranty on performance and product quality.



PRODUCT QUALITY

- bifacial PERC half-cut-cells
- transparent embedding of the cells
- LeTID tested
- ammonia resistant
- intensive hailstorm resistant
- salt mist resistant
- 100 % plus-sorting
- PID protected
- snow-load warranty
- max. 12,150/ 5,400 Pa



SERVICE

Simple returns policy

as per „Delivery terms for Solarwatt solar modules“

30 Year Product Warranty

as per „Warranty conditions for SOLARWATT Panel vision“

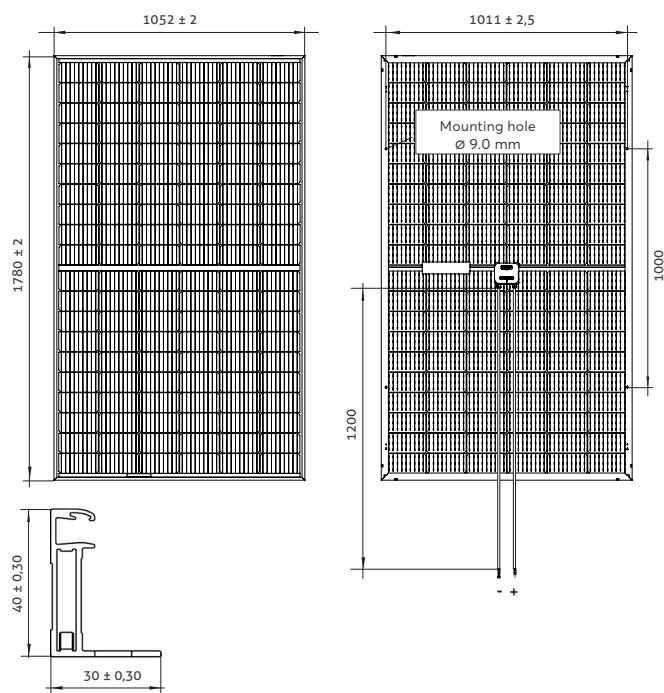
30 Year Performance Warranty

on 90 % of nominal power as per „Warranty conditions for SOLARWATT Panel vision“



Product Scorecard	
Material Health	Silver
Material Reutilization	Silver
Renewable Energy & Carbon Management	Gold
Water Stewardship	Silver
Social Fairness	Gold
Overall Certification Level	SILVER

DIMENSIONS



GENERAL DATA

Module technology	Glass-glass laminate, aluminum frame, black
Covering material	Tempered solar glass with anti-reflective finish, 2 mm
Encapsulation	Solar cells in polymer encapsulation, transparent
Backing material	Tempered glass, 2 mm
Transparent areas	appr. 7.4 %
Solar cells	120 monocrystalline, bifacial, high power PERC-solar cells
Cell dimensions	166 x 83 mm
L x W x H / Weight	1,780 ^{±2} x 1,052 ^{±2} x 40 ^{±0,3} mm / appr. 25 kg
Connection technology	Cables 2 x 1,2 m/ 4 mm ² Stäubli Electrical MC4 or MC4-type connectors
Bypass diodes	3
Max. system voltage	1,000 V
IP rating	IP67
Protection class	II (acc. to IEC 61140)
Fire class	A (acc. to IEC 61730/UL 790), B (acc. to EN 13501-1), B _{ROOF} (t1) (acc. to EN13501-5)
Certified mechanical ratings as per IEC 61215	Pressure load up to 8,100 Pa (test load 12,150 Pa) Suction load up to 3,600 Pa (test load 5,400 Pa)
Recommended stress load as per Installation Instructions	Please refer to the specifications in the Installation Instructions and Warranty Conditions.
Qualifications	IEC 61215 IEC 61730 LeTID IEC 61701 IEC 62804 IEC 62716 MCS 005

ELECTRICAL DATA (STC)

STC (Standard Test Conditions): Irradiation intensity 1,000 W/m², spectral distribution AM 1,5 | Temperature 25 ± 2 °C, in accordance to EN 60904-3

Nominal power P_{max}	360 Wp	365 Wp	370 Wp
Nominal voltage V_{mp}	34.5 V	35.0 V	35.5 V
Nominal current I_{mp}	10.5 A	10.5 A	10.5 A
Open circuit voltage V_{oc}	41.3 V	41.4 V	41.5 V
Short circuit current I_{sc}	11.1 A	11.1 A	11.1 A
Module efficiency	19.4 %	19.6 %	19.9 %

Measurement tolerances: P_{max} ±5 %; V_{oc} ±10 %; I_{sc} ±10 %, I_{mp} ±10 %

Reverse-current power rating I_r: 20 A, operating modules with an external power source is only permissible if using a phase fuse with a tripping current of ≤ 20 A.

ELECTRICAL DATA (NMOT AND WEAK LIGHT)

NMOT (Nominal Module Operating Temperature): Irradiation intensity 800 W/m², spectral distribution AM 1,5, Temperature 20 °C
Weak light conditions: Irradiation intensity 200 W/m², Temperature 25 °C, Wind speed 1 m/s, load operation

Nominal power P_{max @NMOT}	269 W	273 W	277 W
Nominal power P_{max @200 W/m²}	70.3 W	71.3 W	72.3 W

Measurement tolerances: P_{max} ±5 %; V_{oc} ±10 %; I_{sc} ±10 %, I_{mp} ±10 %

Reduction of module efficiency when irradiance is reduced from 1,000 W/m² to 200 W/m² (at 25 °C): 4 ± 2 % (relative) / -0,6 ± 0,3 % (absolute).

BIFACIAL SPECIFICATIONS

Bifacial gain: Possible additional power by backside compared to front side power, depending on the mounting situation.

	P _{max}	I _{sc}	P _{max}	I _{sc}	P _{max}	I _{sc}
0 %	360 W	11.1 A	365 W	11.1 A	370 W	11.1 A
5 %	378 W	11.7 A	383 W	11.7 A	389 W	11.7 A
10 %	396 W	12.2 A	402 W	12.2 A	407 W	12.2 A
15 %	414 W	12.8 A	420 W	12.8 A	426 W	12.8 A
20 %	432 W	13.3 A	438 W	13.3 A	444 W	13.3 A

THERMAL FEATURES

Operating temperature range	-40 ... +85 °C
Ambient temperature range	-40 ... +45 °C
Temperature coefficient P_{max}	-0,34 %/K
Temperature coefficient V_{oc}	-0,27 %/K
Temperature coefficient I_{sc}	0,04 %/K
NMOT	44 °C

TRANSPORT AND PACKAGING

Modules per pallet	32
Pallet dimensions (gross) L x W x H	1,800 x 1,070 x 1,550 mm
Gross weight per pallet	847 kg
Pallets per truck	14
Modules per truck	448