



Technical data sheet

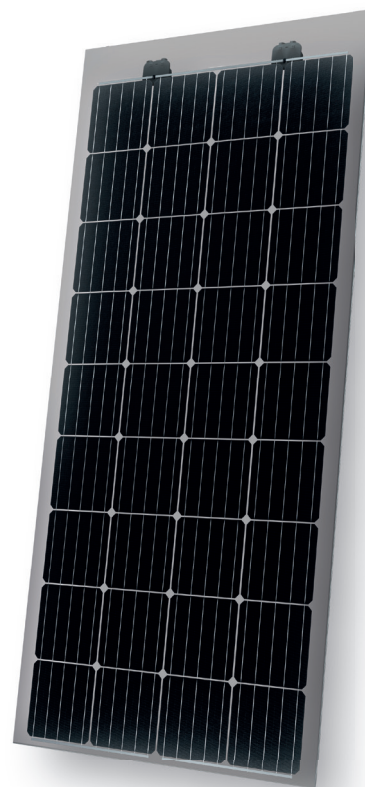
Vision 36M glass

Glass-glass module High yield and transparent

Thanks to their modern design SOLARWATT glass-glass modules deliver the highest long-term yields. They are robust and resilient, yet just as light as their glass-foil predecessors.

The high-performance 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.

The SOLARWATT FullCoverage insurance is included for 5 years and free of charge. It insures almost all risks and takes effect even if the modules do not produce electricity or deliver less than expected in the event of damage.



Product Quality

- **National technical approval (AbZ)**



- ammonia resistant
- intensive hailstorm resistant
- salt mist resistant
- 100 % plus-sorting
- 100 % PID protected



Service

FullCoverage insurance
included (up to 1,000 kWp*)

Simple returns policy
as per „Delivery terms for
SOLARWATT solar modules“

* country-specific deviations apply

30 Year Product Warranty
as per „Warranty conditions for SOLARWATT
solar modules“

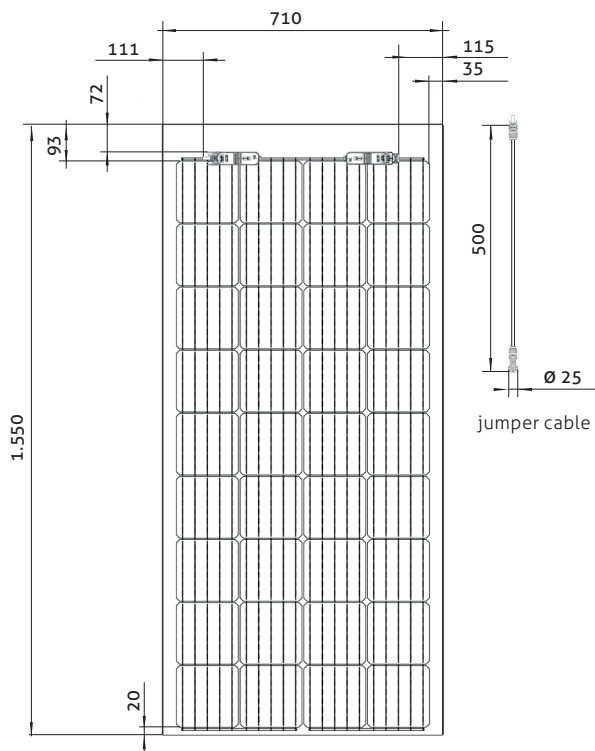
30 Year Performance Warranty
on 87 % of nominal power as per „Warranty
conditions for SOLARWATT solar modules“

Subject to change | Errors excepted

AZ-TDB-PMS-0475 | This data sheet fulfills the requirements listed in IEC 61215-1-1 | REV 017 | 12/2020 | EN

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Certified acc. to DIN EN ISO 9001, 14001, 45001, 50001

Dimensions



General data

Module technology	Glass-glass laminate
Covering material	Partially tempered high transparent float glass with anti-reflective finish, 4 mm
Encapsulation	EVA-solar cells-EVA, transparent
Backing material	Partially tempered float glass, 4 mm
Transparent areas	appr. 20 %
Solar cells	36 monocrystalline high power PERC solar cells
Cell dimensions	157 x 157 mm
L x W x H	1550 ⁺² x 710 ⁺² x 9 ⁺¹ (without junction box) mm
Height of junction box	22 mm
Weight	ca. 25 kg
Connection technology	TE Connectivity PV4-S 2x junction box with connector face (+/-) 1x jumper cable 0,5 m, 4 mm ²
Bypass diodes	2
Max. system voltage	1,000 V
IP rating	IP67
Protection class	II (acc. to IEC 61140)
Fire class	C (acc. to IEC 61730), E (acc. to EN 13501)
Certified mechanical ratings as per IEC 61215	Suction load up to 2,400 Pa (test load 3,600 Pa) Pressure load up to 5,400 Pa (test load 8,100 Pa)
Qualifications	IEC 61215 IEC 61730 IEC 61701 IEC 62804 National technical approval (AbZ)

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}	175 Wp	180 Wp
Nominal voltage V_{MP}	19,8 V	20,0 V
Nominal current I_{MP}	9,03 A	9,11 A
Open circuit voltage V_{OC}	24,7 V	24,9 V
Short circuit current I_{SC}	9,55 A	9,63 A
Module efficiency	16,1 %	16,6 %

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 Operation 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 1m/s, load operation

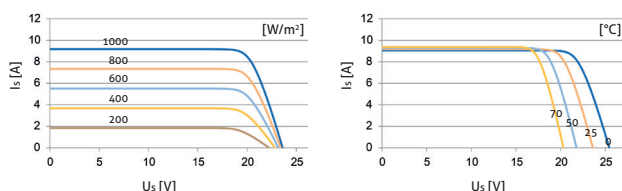
Nominal power $P_{max @ NMOT}$	130 W	134 W
Nominal power $P_{max @ 200 W/m^2}$	34,9 W	35,9 W

Measurement tolerances: P_{max} ±5 %; V_{OC} ±10 %; I_{SC} ±10 %, I_{MP} ±10 %

Reduction of module efficiency when irradiance is reduced from 1000 W/m² to 200 W/m² (at 25 °C): 4 ± 2 % (relative) / -0,6 ± 0,3 % (absolute).

Characteristic lines (Performance Class 175 Wp)

Voltage characteristic line at different temperatures and irradiances



Thermal Features

Operating temperature range	-40 ... +85 °C
Ambient temperature range	-40 ... +45 °C
Temperature coefficient P_{max}	-0,38 %/K
Temperature coefficient V_{OC}	-0,31 %/K
Temperature coefficient I_{SC}	0,05 %/K
NMOT	44 °C