

Glass-Glass-Module: SOLARWATT 60M high power



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Certified acc. to DIN EN ISO 9001 and 14001 | BS OHSAS 18001:2007



The innovative glass-glass generation

- Super lightweight thanks to glass just 2 mm thick
- Exceptionally reliable yield rates
- 100 % protection against PID
- Increased fire protection

SOLARWATT 60M high power

- Monocrystalline high power solar cells
- 290 Wp – 305 Wp (100 % plus sorting)



*Test requirements: see rear of data sheet

SOLARWATT Service



SOLARWATT Full Coverage
included (up to 1000 kWp)



Take-back service
as per Delivery Terms for SOLARWATT Solar Modules



Country of origin
Quality made in Germany



Product-warranty
as per Special Warranty Conditions for SOLARWATT Solar Modules



Performance-warranty
as per Special Warranty Conditions for SOLARWATT Solar Modules

Product Quality



long-lasting



innovative



resistant against ammonia



resilient



low-glare



resistant against hail



high-yield



safe



resistant against salt mist

SOLARWATT Expert Installer

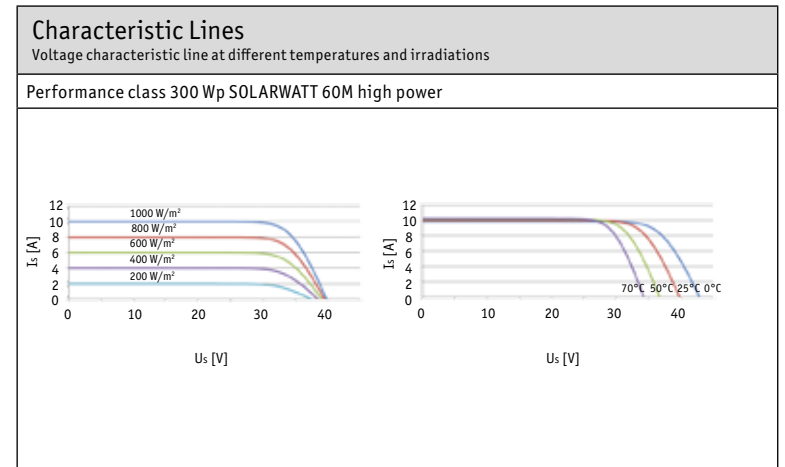
Technical Data Glass-Glass-Module: SOLARWATT 60M high power

Dimensions	
LxWxH	1680 ^{±2} x 990 ^{±2} x 40 ^{±0.3} mm
Connection technology	Cables 2 x 1,0 m/4 mm ² , HC4-Connector
Weight	appr. 22,8 kg

Electrical Data (STC)				
STC: Standard Test Conditions: Irradiation intensity 1000W/m ² , spectral distribution AM 1,5 Temperature 25±2 °C, in accordance to EN 60904-3				
SOLARWATT 60M high power				
Nominal power P_N	290 Wp	295 Wp	300 Wp	305 Wp
Nominal voltage U_{MPP}	31,5 V	31,7 V	31,9 V	32,1 V
Nominal current I_{MPP}	9,30 A	9,40 A	9,50 A	9,60 A
Open circuit voltage U_{OC}	39,4 V	39,6 V	39,8 V	40,0 V
Short circuit current I_{SC}	9,73 A	9,85 A	9,97 A	10,09 A
I_R*	20 A			
Measurement tolerance in reference to P _{max} ±5%;				
Reduction of module efficiency when irradiance is reduced from 1000 W/m ² to 200 W/m ² (at 25 °C): 4 ± 2% (relative) / -0,6 ± 0,3% (absolute).				
* Reverse-current power rating: Operating modules with an external power source is only permissible if using a phase fuse with a tripping current of ≤ 20 A.				

Electrical Data (NOCT)				
NOCT: Normal Operation Cell Temperature: Irradiation intensity 800 W/m ² , AM 1,5 Temperature 20 °C, Wind speed 1m/s, open circuit operation				
SOLARWATT 60M high power				
Nominal power P_N	214 W	218 W	221 W	225 W
Nominal voltage U_{MPP}	29,1 V	29,2 V	29,4 V	29,6 V
Nominal circuit voltage U_{OC}	37,0 V	37,1 V	37,3 V	37,5 V
Short circuit current I_{SC}	7,86 A	7,96 A	8,06 A	8,15 A

General Data	
Module technology	Glass-Glass Laminate; aluminum frame, black anodized
Covering material	Tempered solar glass with anti-reflective finish, 2 mm
Encapsulation	EVA-solar cells-EVA, white
Backing material	Solar glass, 2 mm
Solar cells	60 monocrystalline high power solar cells
Cell dimensions	156 x 156 mm
Bypass diodes	3
Application class	A (acc. to IEC 61730)
Max. system voltage	1000 V
Mechanical Ratings as per IEC 61215 Ed.2	Suction load up to 2400 Pa Applied load up to 5400 Pa
Approved stress load as per SOLARWATT Installation Instructions	Applied load up to 3500 Pa (when installed crosswise ¹⁾) Test condition: sliding load of 5400 Pa (conditions take into account safety factors for snow overhang and ice load per Eurocode 1.) ¹⁾ Please refer to the specifications in the installation instructions.
Qualifications	IEC 61215 Ed.2 IEC 61730 (including Protection Class II)



Thermal Features	
SOLARWATT 60M high power	
Operating temperature range	-40 ... +85 °C
Ambient temperature range	-40 ... +45 °C
Temperature coefficient P_N	-0,39%/K
Temperature coefficient U_{OC}	-0,31%/K
Temperature coefficient I_{SC}	0,05%/K
NOCT	45 °C