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 resilient, yet just as light as their glass-foil predecessors.

The high-performance PERC 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

- Long-lasting and high-yield
- Salt mist resistant
- 100% plus-sorting
- 100% PID protected

Service

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”

Country of origin
Quality made in Germany
Technical data sheet
Vision 60M (315 and 320 Wp)

General data
- Module technology: Glass-glass laminate; aluminum frame
- Covering material: Tempered solar glass with anti-reflective finish, 2 mm EVA-solar cells-EVA, white
- Backing material: Tempered glass, 2 mm
- Solar cells: 60 monocrystalline high power solar cells
- Cell dimensions: 157 x 157 mm
- L x W x H / Weight: 1.680 x 990 x 40 mm / approx. 22.8 kg
- Connection technology: Cables 2 x 1.0 mm²
- Bypass diodes: 3
- 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)
- Recommended stress load as per Installation Instructions
  - Please refer to the specifications in the Installation Instructions and Warranty Conditions.
- Qualifications: IEC 61215 | IEC 61730 | IEC 61701 | IEC 62804

Dimensions

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 Pmax
  - 315 Wp
  - 320 Wp
- Nominal voltage Vmp
  - 32.5 V
  - 32.7 V
- Nominal current Imp
  - 9.78 A
  - 9.87 A
- Open circuit voltage Voc
  - 40.3 V
  - 40.4 V
- Short circuit current Isc
  - 10.31 A
  - 10.4 A
- Module efficiency
  - 19.1 %
  - 19.4 %

Measurement tolerances: Pmax ±5 %; Voc ±3 %; Isc ±5 %; Imp ±5 %
Reverse-current power rating Ir: 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 1 m/s, load operation
- Nominal power Pmax
  - 315 Wp
  - 320 Wp
  - 233 W
  - 237 W
- Nominal power Pmax at 200 W/m²
  - 62.8 W
  - 63.8 W

Measurement tolerances: Pmax ±5 %; Voc ±3 %; Isc ±5 %; Imp ±5 %
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).

Characteristics lines (Performance Class 320 Wp)

Voltage characteristic line at different temperatures and irradiations

Thermal Features
- Operating temperature range
  - -40... +85 °C
- Ambient temperature range
  - -40... +65 °C
- Temperature coefficient Pmax
  - -0.39 %/K
- Temperature coefficient Voc
  - -0.31 %/K
- Temperature coefficient Isc
  - 0.05 %/K
- NMOT
  - 44 °C