

Glass-Glass-Module: Vision 60M style

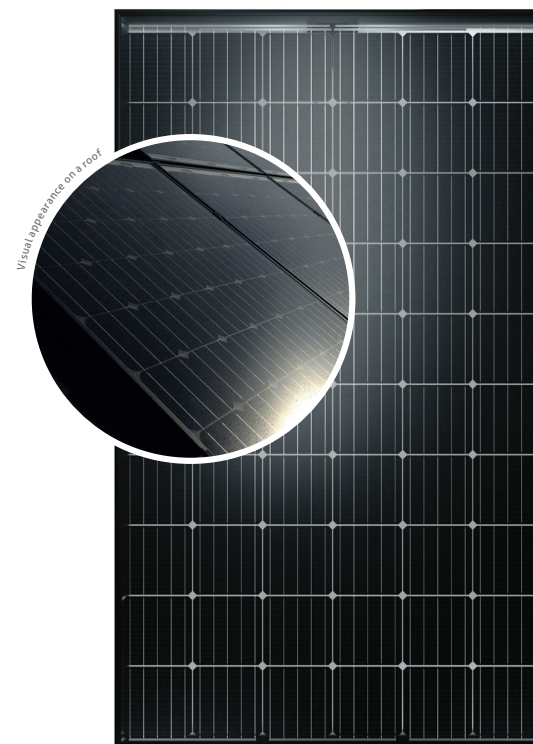
Produce Energy.

THE INNOVATIVE GLASS-GLASS GENERATION VISION 60M STYLE

- Super lightweight thanks to glass just 2 mm thick
- 100 % plus sorting
- Monocrystalline high power PERC solar cells
- Exceptionally reliable yield rates
- Increased fire protection
- 100 % protection against PID

Product Quality

- long-lasting
- resilient
- high-yield
- innovative
- safe
- low-glare
- ammonia resistant
- large hailstone resistant
- salt mist resistant



SOLARWATT Service



Full Coverage
included (up to 1,000 kWp)*



Simple returns policy
as per „Delivery Terms for
SOLARWATT Solar Modules“



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



Performance-warranty
on 87 % of nominal power as per „Warranty
Conditions for SOLARWATT Solar Modules“

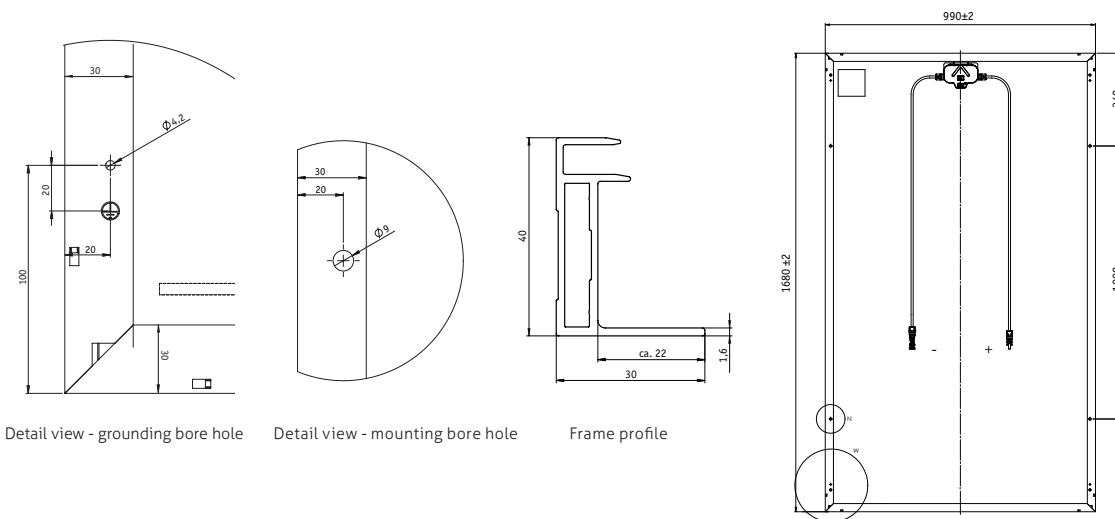


Country of origin
Quality made in Germany

* country-specific deviations apply

Technical Data | Vision 60M style

DIMENSIONS



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, transparent
Backing material	Tempered glass, 2 mm
Solar cells	60 monocrystalline high power PERC solar cells
Cell dimensions	157 x 157 mm
L x W x H / Weight	1,680 ^{±2} x 990 ^{±2} x 40 ^{±0,3} mm / appr. 22,8 kg
Connection technology	Cables 2 x 1,0 m/4 mm ² , Hirschmann HC4-connector
Bypass diodes	3
Max. system voltage	1,000 V
Application class	II (acc. to IEC 61730)
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 SOLARWATT Installation Instructions	Please refer to the specifications in the Installation Instructions and Warranty Conditions.
Qualifications	IEC 61215 IEC 61730 (including Protection Class II)

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

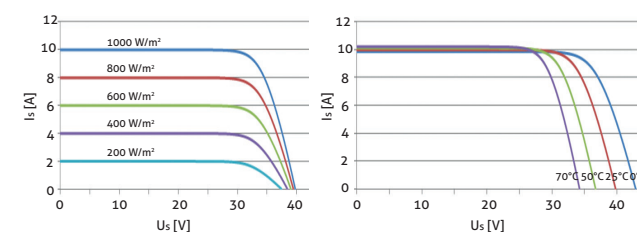
	300 Wp	305 Wp	310 Wp	315 Wp
Nominal power P_{max}	300 Wp	305 Wp	310 Wp	315 Wp
Nominal voltage V_{MP}	32,5 V	32,7 V	32,9 V	33,0 V
Nominal current I_{MP}	9,32 A	9,42 A	9,52 A	9,62 A
Open circuit voltage V_{OC}	39,9 V	40,1 V	40,3 V	40,4 V
Short circuit current I_{SC}	9,88 A	10,00 A	10,12 A	10,22 A
Module efficiency	18,2 %	18,5 %	18,8 %	19,1 %

Measurement tolerances: $P_{max} \pm 5 \%$; $U_{OC} \pm 10 \%$; $I_{SC} \pm 10 \%$

Reverse-current power rating I_{Rc} : 15 A, operating modules with an external power source is only permissible if using a phase fuse with a tripping current of ≤ 15 A.

CHARACTERISTIC LINES (Performance Class 305 Wp)

Voltage characteristic line at different temperatures and irradiances



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

	222 W	226 W	230 W	233 W
Nominal power $P_{max @ NMOT}$	222 W	226 W	230 W	233 W
Nominal power $P_{max @ 200 W/m^2}$	60,2 W	60,8 W	61,8 W	62,8 W

Measurement tolerances: $P_{max} \pm 5 \%$; $U_{OC} \pm 10 \%$; $I_{SC} \pm 10 \%$

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).

THERMAL FEATURES

Operating temperature range	-40 ... +85 °C
Ambient temperature range	-40 ... +45 °C
Temperature coefficient P_{max}	-0,39 %/K
Temperature coefficient V_{OC}	-0,31 %/K
Temperature coefficient I_{SC}	0,05 %/K
NMOT	44 °C