

## PRODUCT



# SOLARWATT Panel vision GM 3.0 pure

## 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. 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

- ammonia resistant
- intensive hailstorm resistant
- salt mist resistant
- LeTID tested
- 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

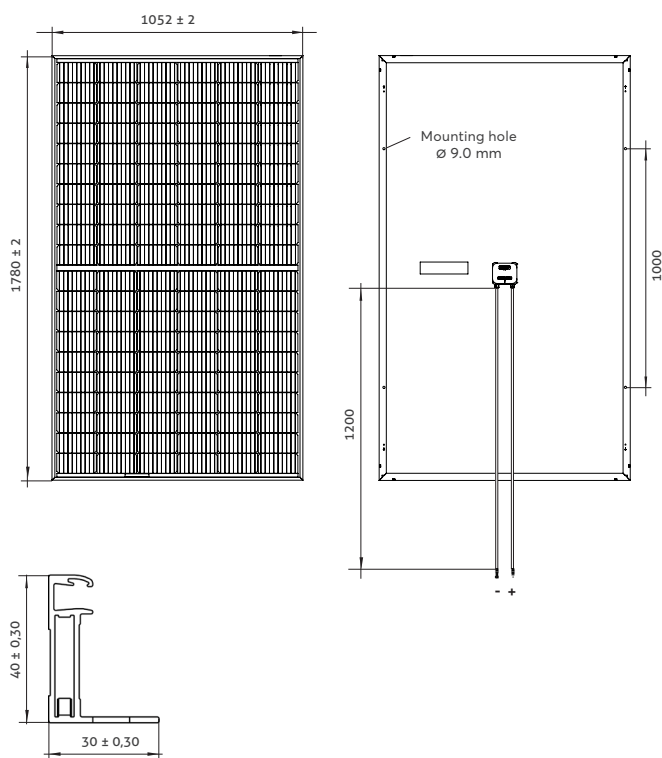
Material Health	Silver
Material Reutilization	Silver
Renewable Energy & Carbon Management	Gold
Water Stewardship	Silver
Social Fairness	Gold
<b>Overall Certification Level</b>	<b>SILVER</b>

### Subject to change | Errors excepted

This data sheet fulfills the requirements listed in IEC 61215-1-1 | EN Cradle to Cradle Certified® is a registered trademark of the Cradle to Cradle Products Innovation Institute.

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## DIMENSIONS



## GENERAL DATA

<b>Module technology</b>	Glass-glass laminate; aluminum frame
<b>Covering material</b>	Tempered solar glass with anti-reflective finish, 2mm
<b>Encapsulation</b>	Solar cells in polymer encapsulation, white
<b>Backing material</b>	Tempered glass, 2mm
<b>Solar cells</b>	120 monocrystalline high power PERC-solar cells
<b>Cell dimensions</b>	166 x 83 mm
<b>L x W x H / Weight</b>	1,780 $\pm$ 2 x 1,052 $\pm$ 2 x 40 $\pm$ 0,3 mm / appr. 25 kg
<b>Connection technology</b>	Cables 2 x 1,2 m/ 4 mm <sup>2</sup> Stäubli Electrical MC4 or MC4-type connectors
<b>Bypass diodes</b>	3
<b>Max. system voltage</b>	1,000 V
<b>IP rating</b>	IP67
<b>Protection class</b>	II (acc. to IEC 61140)
<b>Fire class</b>	A (acc. to IEC 61730/UL 790) E (acc. to EN 13501-1) B <sub>ROOF</sub> (t1) (acc. to EN13501-5)
<b>Certified mechanical ratings as per IEC 61215</b>	Pressure load up to 8,100 Pa (test load 12,150 Pa) Suction load up to 3,600 Pa (test load 5,400 Pa)
<b>Recommended stress load as per Installation Instructions</b>	Please refer to the specifications in the Installation Instructions and Warranty Conditions.
<b>Qualifications</b>	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/m<sup>2</sup>, spectral distribution AM 1,5 | Temperature 25  $\pm$  2 °C, in accordance to EN 60904-3

	370 Wp	375 Wp	380 Wp	385 Wp
<b>Nominal power P<sub>max</sub></b>	370 Wp	375 Wp	380 Wp	385 Wp
<b>Nominal voltage V<sub>mp</sub></b>	34.5 V	34.9 V	35.3 V	35.7 V
<b>Nominal current I<sub>mp</sub></b>	10.8 A	10.8 A	10.8 A	10.9 A
<b>Open circuit voltage V<sub>oc</sub></b>	41.4 V	41.5 V	41.6 V	41.8 V
<b>Short circuit current I<sub>sc</sub></b>	11.4 A	11.4 A	11.4 A	11.5 A
<b>Module efficiency</b>	19.9 %	20.2 %	20.4 %	20.7 %

Measurement tolerances: P<sub>max</sub>  $\pm$ 5 %; V<sub>oc</sub>  $\pm$ 10 %; I<sub>sc</sub>  $\pm$ 10 %, I<sub>mp</sub>  $\pm$ 10 %

Reverse-current power rating I<sub>r</sub>: 20 A, operating modules with an external power source is only permissible if using a phase fuse with a tripping current of  $\leq$  20 A.

## ELECTRICAL DATA (NMOT AND WEAK LIGHT)

NMOT (Nominal Module Operating Temperature): Irradiation intensity 800 W/m<sup>2</sup>, spectral distribution AM 1,5, Temperature 20 °C  
Weak light conditions: Irradiation intensity 200 W/m<sup>2</sup>, Temperature 25 °C, Wind speed 1 m/s, load operation

	277 W	281 W	284 W	288 W
<b>Nominal power P<sub>max@NMOT</sub></b>	277 W	281 W	284 W	288 W
<b>Nominal power P<sub>max@200 W/m<sup>2</sup></sub></b>	72.4 W	73.4 W	74.3 W	75.3 W

Measurement tolerances: P<sub>max</sub>  $\pm$ 5 %; V<sub>oc</sub>  $\pm$ 10 %; I<sub>sc</sub>  $\pm$ 10 %, I<sub>mp</sub>  $\pm$ 10 %

Reduction of module efficiency when irradiance is reduced from 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup> (at 25 °C): 4  $\pm$  2 % (relative) / -0,6  $\pm$  0,3 % (absolute).

## THERMAL FEATURES

<b>Operating temperature range</b>	-40 ... +85 °C
<b>Ambient temperature range</b>	-40 ... +45 °C
<b>Temperature coefficient P<sub>max</sub></b>	-0.34 %/K
<b>Temperature coefficient V<sub>oc</sub></b>	-0.27 %/K
<b>Temperature coefficient I<sub>sc</sub></b>	0.04 %/K
<b>NMOT</b>	44 °C

## TRANSPORT AND PACKAGING

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