# **SOLARWATT**®

#### **PRODUCT**



# Glass-Foil-Module

# Best price-performance ratio

With the classic models, Solarwatt offers affordable, robust, high-performance solar modules of proven quality. They are durable and high-yielding as well as resistant to weather effects and environmental influences.

The classic-modules are produced on state-of-the-art production lines and meet the high Solarwatt quality standards. They will therefore generate solar power well beyond their warranty period.

The modules come with a solid 15-year product guarantee.

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# PRODUCT QUALITY

- ammonia resistant
- salt mist resistant
- LeTID tested
- PID protected
- 100% plus-sorting
- max. 5,400 / 2,400 Pa

# **SERVICE**

#### FullCoverage insurance

optional (up to 1,000 kWp\*)

### simple returns policy

as per "Delivery terms for Solarwatt solar modules"

# 15 year product warranty

12 years product warranty outside Europe and Australia as per "Warranty conditions for Solarwatt solar modules"

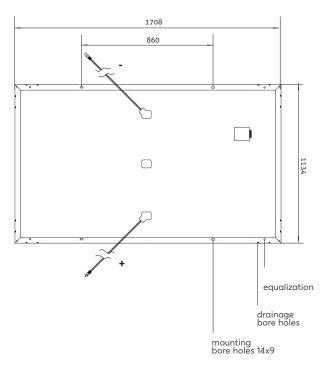
# 25 year performance warranty

on 84.8 % of nominal power as per "Warranty conditions for Solarwatt solar modules"

<sup>\*</sup> country-specific deviations apply



#### **DIMENSIONS**



#### **GENERAL DATA** Module technology Glass-foil laminate; aluminum frame, black Covering material Tempered solar glass with anti-reflective finish Solar cells in polymer encapsulation Encapsulation Backing material Multi-layer composite film, black Solar cells 108 monocrystalline high power PERC solar cells Cell dimensions 182 x 91 mm L x W x H / Weight 1,708 x 1,134 $^{\pm 2}$ x 30 $^{\pm 0,3}$ mm / ca. 20.0 kg Cables 2x 1.2 m / 4 mm<sup>2</sup> technology Stäubli Electrical MC4-connectors Bypass diodes 3 1,000 V Max. system voltage IP68 IP rating **Protection class** II (acc. to IEC 61140) C (acc. to IEC 61730) Certified mechanical Pressure load up to 3,600 Pa (test load 5,400 Pa) Suction load up to 1,600 Pa (test load 2,400 Pa) ratings as per IEC 61215 Recommended stress Please refer to the specifications in the Installation load as per Installa-Instructions and Warranty Conditions. tion Instructions IEC 61215 (incl. LeTID) | IEC 61730 | 2 PfG 2387 (PID) Qualifications IEC 61701 | IEC 62716 | MCS 005

## **ELECTRICAL DATA (STC)**

STC (Standard Test Conditions): Irradiation intensity 1,000 W/m², spectral distribution AM 1.5 | Temperature 25  $\pm 2$  °C, in accordance to EN 60904-3

Nominal power P <sub>max</sub>	390 Wp	395 Wp	400 Wp
Nominal voltage V <sub>mp</sub>	30.0 V	30.2 V	30.4 V
Nominal current Imp	13.0 A	13.1 A	13.2 A
Open circuit voltage Voc	37.0 V	37.1 V	37.2 V
Short circuit current Isc	13.4 A	13.5 A	13.6 A
Module efficiency	20.3 %	20.5 %	20.8 %

Measurement tolerances:  $P_{\text{max}}$  ±5 %;  $V_{\text{OC}}$  ±10 %;  $I_{\text{SC}}$  ±10 %,  $I_{\text{MP}}$  ±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  $\leq$  20 A.

# **ELECTRICAL DATA (NMOT AND WEAK LIGHT)**

NMOT (Nominal Module Operating 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 @NMOT	292 W	296 W	300 W
Nominal power P <sub>max @200 W/m²</sub>	76.0 W	77.0 W	78.0 W

Measurement tolerances: Pmax ±5 %; Voc ±10 %; Isc ±10 %, Imp ±10 %

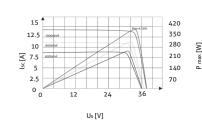
Reduction of module efficiency when irradiance is reduced from 1,000 W/m² to 200 W/m² (at 25 °C): 4 ±2 % (relative) / –0.6±0.3 % (absolute).

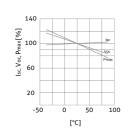
## **THERMAL FEATURES**

-40 +45 °C
-0.33 %/K
-0.25 %/K
0.05 %/K
44 °C

#### CHARACTERISTIC LINES (Performance Class 400 Wp)

Voltage characteristic line at different temperatures and irradiations





#### TRANSPORT AND PACKAGING

Modules per pallet	36
Modules per container	936
Pallets per truck	14 / 28
Modules per truck	504 / 1,008
Gross weight per pallet	760 / 1,520 kg
Pallet dimensions (packing size)	1,750 x 1,130 x 1,250 mm