

# SOLARWATT ORANGE 60M Easy-In style

Monocrystalline solar cells, 250 Wp – 265 Wp  
framed



## SOLARWATT PROMISE

### Quality

Tested materials and thorough workmanship guarantee high yields and system longevity.

### Made in Germany

SOLARWATT solar modules are exclusively produced in Germany.

### Pure plus sorting (+0 Wp to +5 Wp)

The actual module output is guaranteed to be up to 5 Wp above the nominal value.

### Simple assembly

The SOLARWATT Easy-In System is distinguished by its innovatively simple method for integrating solar modules in pitched roofs.



## SOLARWATT WARRANTY

### Standard warranty

10 year product warranty  
staggered performance warranty covering 25 years

### Extended warranty by purchasing SOLARWATT Full Coverage insurance

12 year product warranty  
linear performance warranty covering 25 years

According to the „Special warranty conditions for SOLARWATT solar modules“

## SOLARWATT ADVANTAGES

- » Independent tests confirm resistance to hail, ammonia, salt mist, flame, and more, PID-free
- » Minimal dazzle effect thanks to structured solar glass
- » Take-back service and module recycling



Please follow the SOLARWATT Easy-In System operating instructions when assembling, connecting, maintaining, and dismantling the system.



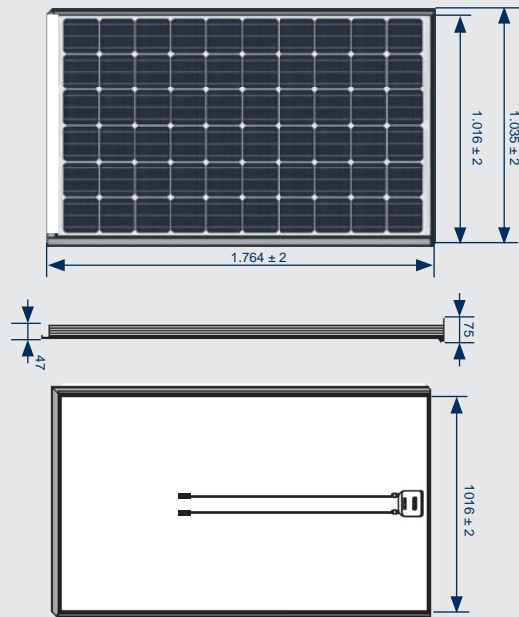
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**Certified acc. to:**  
DIN EN ISO 9001 und 14001  
BS OHSAS 18001:2007

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## Technical Data

### DIMENSIONS



The roof constructions must comply with the general requirements of the directives of the Central Association of the German Roofing Trade (ZVDH); the system is designed for 40 x 60 mm roof battens.

### GENERAL INFORMATION

<b>Module construction</b>	glass-foil laminate; aluminum frame (anodized; color: black)
<b>Covering material</b>	Highly transparent solar glass (tempered), 4 mm
<b>Encapsulation</b>	EVA solar cells EVA
<b>Backing material</b>	Multi-layer composite film, black
<b>Solar cells</b>	60 monocrystalline solar cells 156 x 156 mm with up to 19% efficiency
<b>Connection technology</b>	Junction box with 2 cables, 1.00 m/4 mm <sup>2</sup> , MultiContact MC4 connectors
<b>Bypass diodes</b>	3 units
<b>Application class</b>	Application class A (in accordance with IEC 61730)
<b>Module dimensions/cover dimensions</b>	1,764 x 1,035 x 47 mm / 1,715 x 1,016 x 47 mm
<b>Weight</b>	24 kg
<b>Max. system voltage</b>	1000 V
<b>Reverse-current feed I<sub>R</sub>*</b>	20 A
<b>Mechanical ratings</b>	Approved for loads up to 5,400 Pa Approved for suction loads up to 2,400 Pa (uplift resistance in accordance with DIN 14437) (Wind speed 130 km/h with safety factor 3)
<b>Hail resistance</b>	Tested with simulated hailstones (Ø 25 mm, at ~83km/h)
<b>Certification</b>	IEC 61215 Ed.2, IEC 61730 (incl. protection class II)
<b>Application site</b>	Upright as roof integration in pitched roofs on buildings up to 25 m high; 22° - 65° roof pitch; 16° minimum roof pitch with usage of a water-tight sub-roof according to the guidelines of the ZVDH (Central Association of German Roofers)
<b>System components</b>	Solar modules with special frame, seals, suction protection measures, special screws, sarking membrane, aluminum guide rail
<b>Fire resistance test</b>	DIN ENV 1187

\* Reverse-current feed: The modules may only be used with electricity fed in from third parties if a line fuse with release current < 20 A is used.

### ELECTRICAL PROPERTIES IN STC

STC: Standard Test Conditions: irradiance 1000 W/m<sup>2</sup>, spectral distribution AM 1.5, temperature 25±2 °C, in accordance with EN 60904-3

	250 Wp	255 Wp	260 Wp	265 Wp
<b>Nominal capacity P<sub>max</sub></b>	250 Wp	255 Wp	260 Wp	265 Wp
<b>Nominal voltage U<sub>mpp</sub></b>	31,0 V	31,2 V	31,4 V	31,6 V
<b>Nominal current I<sub>mp</sub></b>	8,07 A	8,18 A	8,29 A	8,39 A
<b>Open circuit voltage U<sub>OC</sub></b>	38,3 V	38,5 V	38,7 V	38,9 V
<b>Short circuit current I<sub>SC</sub></b>	8,51 A	8,56 A	8,61 A	8,69 A

Measurement tolerances in reference to P<sub>max</sub>±5%

### ELECTRICAL PROPERTIES AT NOCT

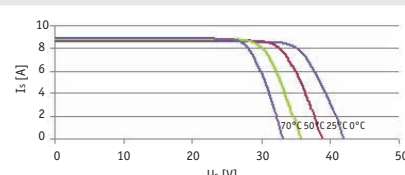
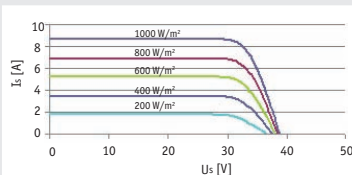
NOCT: Normal Operation Cell Temperature: irradiance 800 W/m<sup>2</sup>, AM 1.5, temperature 20 °C, Wind speed 1m/s, electrical open circuit

	183 W	186 W	190 W	194 W
<b>Nominal capacity P<sub>max</sub></b>	183 W	186 W	190 W	194 W
<b>Nominal voltage U<sub>mpp</sub></b>	28,4 V	28,6 V	28,8 V	28,9 V
<b>Open circuit voltage U<sub>OC</sub></b>	35,7 V	35,9 V	36,1 V	36,2 V
<b>Short circuit current I<sub>SC</sub></b>	6,88 A	6,92 A	6,96 A	7,02 A

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±2% (relative) / -0.6±0.3% (absolute).

### CHARACTERISTIC LINES

Voltage at different irradiances and different temperatures



performance class 265 Wp

### THERMAL PROPERTIES

<b>Operating temperature range</b>	-40 ... +80 °C
<b>Ambient temperature range</b>	-40 ... +45 °C
<b>Temperature coefficient of P<sub>max</sub></b>	-0,41%/K
<b>Temperature coefficient of U<sub>OC</sub></b>	-0,33%/K
<b>Temperature coefficient of I<sub>SC</sub></b>	0,05%/K
<b>NOCT</b>	45 °C