

# SCHOTT Solar polycrystalline solar modules

SCHOTT POLY™ 165/170/175/180

The long-established German company SCHOTT Solar is a world leader in the photovoltaic industry and has more than 50 years of experience in the development and production of components for solar applications.

SCHOTT Solar polycrystalline modules are specifically designed for both roof- and ground-mounted applications. Due to strict internal quality standards, all modules benefit from exceptionally long durability, which results in maximised profitability. The polycrystalline cells within each module are sorted to particularly narrow performance tolerances, thereby allowing series interconnections with minimal mismatch losses.

**Double of the required standard:** SCHOTT Solar tests its modules for twice as long as is required by the IEC.

**High resistance to mechanical loads:** The solid anodised aluminium frame ensures superior torsional resistance. SCHOTT Solar polycrystalline modules are also tested to an extreme loading pressure of 5,400 Pa – which equates to 550 kg per square metre and a reassuring level of security for your investment.

**High performance output:** All SCHOTT Solar polycrystalline modules hold a positive tolerance of their nominal power rating. This ensures a stable high-energy output and a quick return on investment.

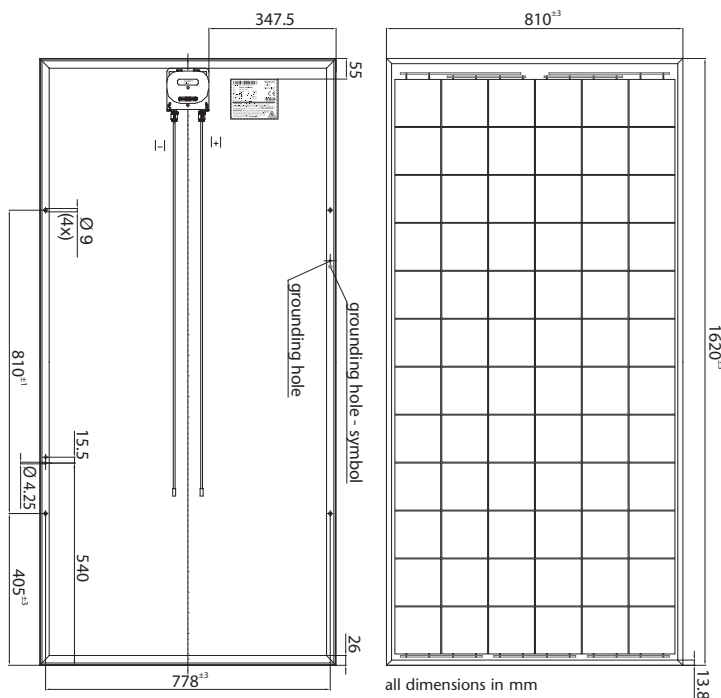
**Long-term reliability:** SCHOTT Solar offers a power output guarantee of 20 years and a product warranty of five years.

**Increased reverse current:** SCHOTT Solar polycrystalline modules have a high resistance to reverse current, minimising the wiring costs.

- Double of the required standard
- High resistance to mechanical loads
- High performance output
- Long-term reliability
- Increased reverse current



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**SCHOTT**  
solar

## Technical Data

### Electrical data

Electrical data refer to Standard Test Conditions (STC):  
Irradiance 1000 W/m<sup>2</sup>, spectrum Air Mass 1.5 and cell temperature 25°C



Nominal power [Wp]	P <sub>nom</sub>	165	170	175	180
Voltage at nominal power [V]	U <sub>mpp</sub>	35.1	35.5	35.9	36.3
Current at nominal power [A]	I <sub>mpp</sub>	4.70	4.78	4.87	4.95
Open-circuit voltage [V]	U <sub>oc</sub>	43.6	44.0	44.3	44.6
Short-circuit current [A]	I <sub>sc</sub>	5.27	5.30	5.34	5.39
Modular efficiency level (%)	η	12.6	13.0	13.3	13.7

Rating tolerance for power output is ± 4 % and rating tolerance for all other parameters is ± 10 %.

### Data at normal operating cell temperature (NOCT)

Irradiance 800 W/m<sup>2</sup>, spectrum Air Mass 1.5, windspeed 1m/s and cell temperature 20°C



Nominal power [Wp]	P <sub>nom</sub>	118	122	125	129
Voltage at nominal power [V]	U <sub>mpp</sub>	31.2	31.5	31.9	32.2
Open-circuit voltage [V]	U <sub>oc</sub>	40.0	40.3	40.6	40.9
Short-circuit current [A]	I <sub>sc</sub>	4.24	4.26	4.29	4.33
Temperature [°C]	T <sub>NOCT</sub>	47.1	47.1	47.1	47.1

Rating tolerance for power output is ± 4 % and rating tolerance for all other parameters is ± 10 %.

### Temperature coefficients



Power [%/K]	T <sub>K</sub> (P <sub>n</sub> )	-0.48	-0.48	-0.48	-0.48
Open-circuit voltage [mV/K]	T <sub>K</sub> (U)	-153	-154	-155	-156
Short-circuit current [mA/K]	T <sub>K</sub> (I)	1.21	1.22	1.23	1.24

### Characteristic data



Solar cells per module	72
Cell type	MAIN-Iso (polycrystalline silicon, 125 x 125 mm <sup>2</sup> , full-square)
Connection	Junction box IP65 with 3 bypass diodes, solar cable (length: 1 m, diameter: 4 mm <sup>2</sup> ) with Tyco Solarlok Interconnection
Dimensions	
junction box [mm]	110 x 115 x 25
Front panel	low iron solar glass 3.2 mm
Frame material	anodised aluminium

### Dimensions and weight



Dimensions [mm]	1,620 x 810 (tolerance ± 3 mm)
Thickness [mm]	50 (tolerance ± 1 mm)
Weight [kg]	15.5

### Limits



System voltage [V <sub>DC</sub> ]	1000
Maximum reverse current I <sub>R</sub> [A]*	17
Operating module temperature [°C]	-40... +85
Maximum load (to IEC 61215 Ed. 2)	Pressure: 5,400 N/m <sup>2</sup> or 550 kg/m <sup>2</sup>
Application classification (to IEC 61730)	A
Fire classification (to IEC 61730)	C

\* No external current in excess of U<sub>oc</sub> shall be applied to the module.

### Permission and certificates



The modules are certified to IEC 61215 ed. 2 and IEC 61730, Electrical Protection Class II and the CE-guidelines.

The **installation manual** contains additional information on installation and operation.

All information complies with the requirements of the standard EN 50380.

MANAGEMENTSYSTEM  
Certified by DQS according to  
DIN EN ISO 9001:2000 · Reg.-No. 2184  
DIN EN ISO 14001:2005 · Reg.-No. 2184

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