

Double glazed module with POLY cells



SCHOTT POLY™
280/290/300

At a glance

- Long life through double glazing
- Double of the required standard
- High resistance to mechanical loads
- High performance output
- Long-term reliability
- Increased resistance to reverse current
- Improved temperature coefficient

SCHOTT POLY™ 280/290/300

The long-established German company SCHOTT Solar operates worldwide and started with the development and manufacturing of components for the solar industry in 1958.

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.

Long life through double glazing: The exceptionally long life is ensured by the use of double glazing.

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 and suction 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 30 years and a product warranty of five years.

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

Improved temperature coefficient: The improved temperature coefficient of the modules lead to an increased module efficiency at high ambient temperature.

Technical Data

Data at standard test conditions (STC)

Module type		SCHOTT POLY™ 280	SCHOTT POLY™ 290	SCHOTT POLY™ 300
Nominal power [Wp]	P_{mpp}	≥ 280	≥ 290	≥ 300
Voltage at nominal power [V]	U_{mpp}	39.1	39.5	39.7
Current at nominal power [A]	I_{mpp}	7.16	7.33	7.55
Open-circuit voltage [V]	U_{oc}	48.1	48.5	48.9
Short-circuit current [A]	I_{sc}	7.95	8.10	8.24
Module efficiency (%)	η	12.7	13.1	13.6

STC (1000 W/m², AM 1.5, cell temperature 25°C)

Power tolerance (as measured by flasher) -0 W / +9.99 W

Data at normal operating cell temperature (NOCT)

Nominal power [Wp]	P_{mpp}	206	213	221
Voltage at nominal power [V]	U_{mpp}	35.8	36.1	36.3
Open-circuit voltage [V]	U_{oc}	44.0	44.4	44.7
Short-circuit current [A]	I_{sc}	6.40	6.52	6.64
Temperature [°C]	T_{NOCT}	48.0	48.0	48.0

NOCT (800 W/m², AM 1.5, windspeed 1 m/s, ambient temperature 20°C)

Data at low irradiation

At a low irradiation intensity of 200 W/m² (AM 1.5 and cell temperature 25°C) 97 % of the STC module efficiency (1000 W/m²) will be achieved.

Temperature coefficients

Power [%/K]	P_{mpp}	-0.43
Open-circuit voltage [%/K]	U_{oc}	-0.32
Short-circuit current [%/K]	I_{sc}	+0.05

Characteristic data

Solar cells per module	80
Cell type	polycrystalline, 156 mm x 156 mm
Junction box	IP65 with four bypass diodes
Connector	Tyco-Connector IP67
Dimensions junction box [mm]	150 x 150 x 25
Front panel	low iron solar glass 3.2 mm
Backside panel	glass
Frame material	anodised aluminium

Dimensions and weight

Dimensions [mm]	1,685 x 1,313
Thickness [mm]	50
Weight [kg]	approx. 41.5

Limits

Maximum system voltage [V _{DC}]	1000
Maximum reverse current I_R [A]*	20
Operating module temperature [°C]	-40 ... +85
Maximum load (to IEC 61215 ed. 2)	pressure: 5,400 N/m ² or 550 kg/m ² suction: 5,400 N/m ² or 550 kg/m ²
Application classification (to IEC 61730)	A
Fire classification (nach IEC 61730)	C

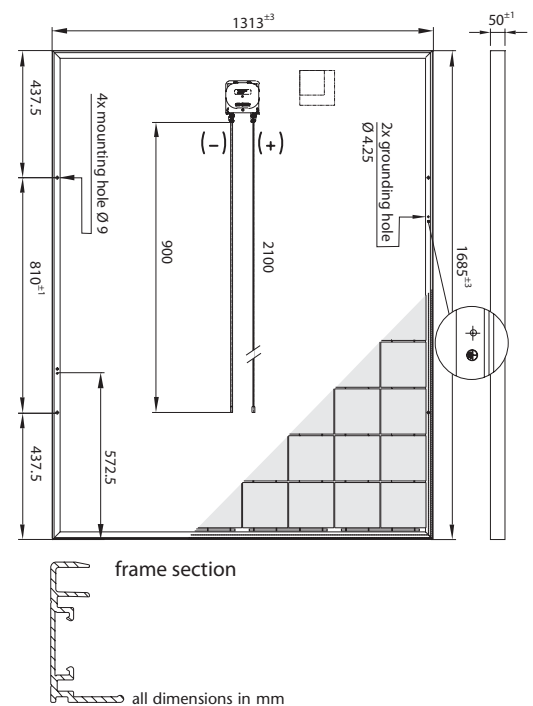
* No external voltage in excess of U_{oc} shall be applied to the module.

Permission and certificates

The modules are certified to IEC 61215 ed. 2 and IEC 61730, Electrical Protection Class II and the CE-guidelines. Moreover SCHOTT Solar is certified and registered to ISO 9001 and ISO 14001.

The **installation manual** contains additional information on installation and operation. Power measurement accuracy: ± 4 %.

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



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