

## SCHOTT PERFORM™ POLY series



**SCHOTT PERFORM™ POLY**  
220/225/230/235/240

### At a glance

- Double the required standard
- High resistance to mechanical loads
- High performance output
- Increased resistance to reverse current
- Improved temperature coefficient
- 25 years linear performance guarantee

The global German company SCHOTT Solar started developing and manufacturing components for the solar industry in 1958.

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

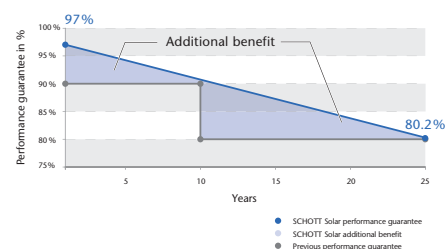
**High resistance to mechanical loads:** The solid anodised aluminium frame ensures superior torsional resistance. SCHOTT Solar polycrystalline modules are also tested to extreme pressure and suction loads of 5,400 Pa – which equates to 550 kg per square metre and a reassuring level of security for your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

**High performance output:** All SCHOTT Solar polycrystalline modules achieve a positive tolerance of their nominal power rating. This ensures a stable high-energy output.

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

**Improved temperature coefficient:** The improved temperature coefficient of the modules results in increased module efficiencies at high ambient temperatures.

**25 years linear performance guarantee\*:** SCHOTT Solar guarantees for a period of one year from date of delivery that the module power output will be at least 97 % of the rated power output. Due to its long and successful experience in solar technology, the manufacturer guarantees from year two through year twenty five that the module power output will degrade no more than 0.7 % per year of the rated power output from the date of original sale by SCHOTT Solar. Moreover, SCHOTT Solar offers a product warranty of 10 years.



\* on the basis of the Special Terms and Conditions on Warranties and Guarantees valid at the date of purchase available on [www.schottsolar.com/performance-guarantee](http://www.schottsolar.com/performance-guarantee)

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solar

# Technical Data

## Data at standard test conditions (STC)

Module type		SCHOTT PERFORM™ POLY				
Nominal power [Wp]	$P_{mpp}$	$\geq 220$	$\geq 225$	$\geq 230$	$\geq 235$	$\geq 240$
Voltage at nominal power [V]	$U_{mpp}$	29.7	29.8	30.0	30.2	30.4
Current at nominal power [A]	$I_{mpp}$	7.41	7.55	7.66	7.78	7.90
Open-circuit voltage [V]	$U_{oc}$	36.5	36.7	36.9	37.1	37.3
Short-circuit current [A]	$I_{sc}$	8.15	8.24	8.33	8.42	8.52
Module efficiency (%)	$\eta$	13.1	13.4	13.7	14.0	14.3

STC (1,000 W/m<sup>2</sup>; AM 1.5; cell temperature 25°C)

Power tolerance (as measured by flasher): -0 W / +4.99 W

## Data at normal operating cell temperature (NOCT)

Nominal power [Wp]	$P_{mpp}$	158	161	165	169	172
Voltage at nominal power [V]	$U_{mpp}$	26.7	26.9	27.1	27.2	27.4
Open-circuit voltage [V]	$U_{oc}$	33.3	33.5	33.7	33.9	34.1
Short-circuit current [A]	$I_{sc}$	6.53	6.60	6.67	6.75	6.83
Temperature [°C]	$T_{NOCT}$	47.2	47.2	47.2	47.2	47.2

NOCT (800 W/m<sup>2</sup>, AM 1.5, windspeed 1 m/s, ambient temperature 20°C)

## Data at low irradiation

At a low irradiation intensity of 200 W/m<sup>2</sup> (AM 1.5 and cell temperature 25°C) 97 % of the STC module efficiency (1,000 W/m<sup>2</sup>) will be achieved.

## Temperature coefficients

Power [%/K]	$P_{mpp}$	-0.45
Open-circuit voltage [%/K]	$U_{oc}$	-0.33
Short-circuit current [%/K]	$I_{sc}$	+0.04

## Characteristic data

Solar cells per module	60
Cell type	polycrystalline, 156 mm x 156 mm
Junction box	IP65 with three bypass diodes
Connector	Tyco-Connector IP67
Dimensions junction box [mm]	110 x 115 x 25
Front panel	low iron solar glass 3.2 mm
Backside panel	foil
Frame material	anodised aluminium

## Dimensions and weight

Dimensions [mm]	1,685 x 993
Thickness [mm]	50
Weight [kg]	approx. 20

## Limits

Maximum system voltage [V <sub>DC</sub> ]	1,000
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 <sup>2</sup> or 550 kg/m <sup>2</sup> suction: 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 voltage in excess of  $U_{oc}$  shall be applied to the module.

## Permission and certificates

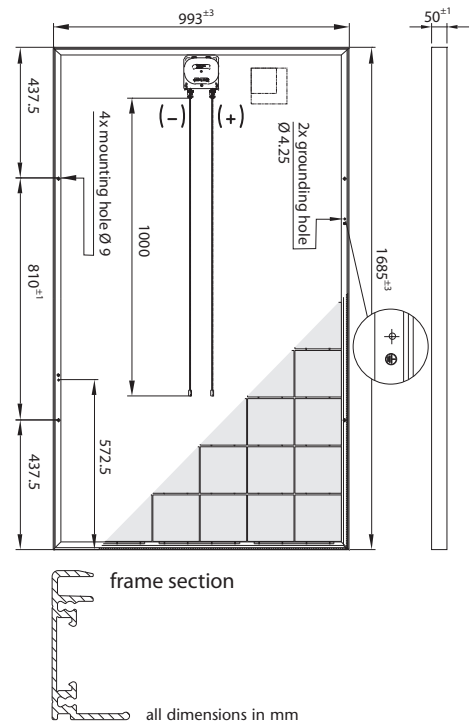
The modules are certified to IEC 61215 ed. 2 and IEC 61730, Electrical Protection Class II and the CE-guidelines. Moreover SCHOTT Solar is certified and registered to ISO 9001 and ISO 14001.

Power measurement accuracy:  $\pm 4$  %

The installation manual contains additional information on installation and operation. SCHOTT Solar AG reserves the right to make specification changes in this datasheet without notice. All information complies with the requirements of the standard EN 50380.

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