# SCHOTT PROTECT™ POLY series

## SCHOTT PROTECT™ POLY 175/180/185

### At a glance

- Permanently stable energy yields – proven double glass technology from SCHOTT
- Double the required standard
- Increased resistance against environmental influences
- Effective utilisation of roof surfaces and simple installation
- High resistance to adverse weather conditions
- 30 years linear performance guarantee

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

**Permanently stable energy yields:** Due to the one-of-a-kind double glazed technology, the module exhibits excellent long-term stability. In a study conducted by the Fraunhofer-Institute over 26 years, SCHOTT Solar modules still achieved over 90 % of their original performance*.

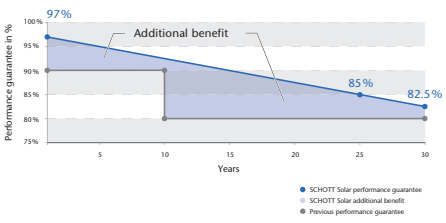
**Double the required standard:** SCHOTT Solar tests its modules for twice as long as required by the IEC.

**Increased resistance against environmental influences:** Using front and backside glass creates a natural barrier against environmental influences such as high humidity or gases such as ammonia – resulting in permanently stable energy yields.

**Effective utilisation of roof surfaces and simple installation:** The optimised module format enables viable installations on small roof surfaces. Moreover, the compact size facilitates handling and installation.

**High resistance to adverse weather conditions:** The test-verified pressure and suction loads of 5,400 Pa ensure the module withstands weather conditions including wind, storms, ice and snow.

**30 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 thirty that the module power output will degrade no more than 0.5 % 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.




** certificate available on www.schottsolar.com/longterm-stability*

*** 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*

SCHOTT solar

# Technical Data

## Data at standard test conditions (STC)

| Module type | | SCHOTT PROTECT™ POLY | | |
|---|---|---|---|---|
| Nominal power [Wp] | $P_{mpp}$ | ≥ 175 | ≥ 180 | ≥ 185 |
| Votalge at nominal power [V] | $U_{mpp}$ | 23.31 | 23.35 | 23.38 |
| Current at nominal power [A] | $I_{mpp}$ | 7.51 | 7.71 | 7.92 |
| Open-circuit voltage [V] | $U_{oc}$ | 29.13 | 29.17 | 29.23 |
| Short-circuit current [A] | $I_{sc}$ | 8.11 | 8.25 | 8.45 |
| Module efficiency (%) | η | 13.05 | 13.42 | 13.80 |

*STC (1,000 W/m², 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] | $P_{mpp}$ | 123 | 130 | 133 |
| Voltage at nominal power [V] | $U_{mpp}$ | 20.7 | 20.9 | 21.0 |
| Open-circuit voltage [V] | $U_{oc}$ | 26.3 | 26.4 | 26.4 |
| Short-circuit current [A] | $I_{sc}$ | 6.45 | 6.68 | 6.84 |
| 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) 98 % of the STC module efficiency (1,000 W/m²) will be achieved.

## Temperature coefficient

| | | |
|---|---|---|
| Nominal power [%/K] | $P_{mpp}$ | -0.45 |
| Open-circuit voltage [%/K] | $U_{oc}$ | -0.33 |
| Short-circuit current [%/K] | $I_{sc}$ | +0.05 |

## Characteristic data

| | |
|---|---|
| Solar cells per module | 48 |
| Cell type | polycrystalline, 156 mm x 156 mm |
| Junction box | IP65 with 3 bypass diodes |
| Connector | Tyco connector IP67 |
| Dimensions junction box [mm] | 110 x 115 x 25 |
| Front panel | thermally treated glass 3.2 mm |
| Backside panel | glass 3 mm |
| Frame material | aluminium eloxide, black |

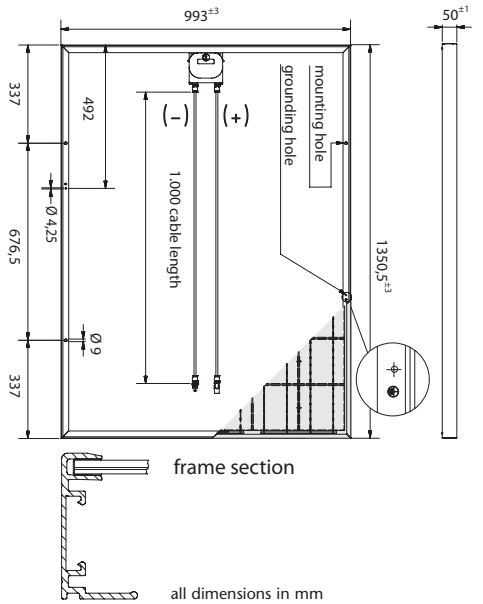
## Dimensions and weight

| | |
|---|---|
| Dimensions [mm] | 1,350.5 x 993 |
| Thickness [mm] | 50 |
| Weight [kg] | 24 |

## Limits

| | |
|---|---|
| Maximum system voltage [$V_{DC}$] | 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/m² or 550 kg/m²<br>Suction: 5,400 N/m² or 550 kg/m² |
| Application classification (to IEC 61730) | A |
| Fire classification (to IEC 61730) | A |

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




## Permissions and certifications

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 ±4 %.*

The **installation manual** 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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