

High-quality crystalline solar cells ensure maximum energy yield. SCHOTT Solar modules have been awarded top ratings in a number of independent studies and surveys. Every module type is designed from frame to connection box for cost-effective system integration.



SCHOTT POLY™ 160/165/170/175/180

All modules are not equal – tested and proven quality
An essential factor for calculating return is the number of kilowatt hours (kWh) of energy the solar power system delivers on a sustained basis per installed kilowatt peak (kWp). However, this yield is dependent on the performance and reliability of the modules. Tests carried out by independent institutes show there are big differences to be found here. Our modules fulfil the highest quality criteria and in independent tests reliably rank at the top. Find out for yourself:

- LEE (Laboratory of Energy, Ecology and Economy)-TISO
- University of Oxford (study)
- Stiftung Warentest (Consumer Goods Testing Foundation)
- Test results: Fraunhofer Institute ISE

Our goal is durability: we don't just want to be good, but significantly better. So that you have better returns.

SCHOTT SOLAR – NATURALLY WITH CERTIFICATION

- DIN EN ISO 9001:2000 attests to our stringent quality management system.
- ISO 14001:2005 certifies that we operate a responsible environmental management system.



TECHNICAL DATA

Electrical data

The electrical data apply to standard test conditions (STC): Irradiance at the module level of 1000 W/m² with spectrum AM 1.5 and a cell temperature of 25 °C



Nominal power	P _{nom}	160 Wp	165 Wp	170 Wp	175 Wp	180 Wp
Voltage at maximum-power point	U _{mpp}	34.7 V	35.1 V	35.5 V	35.9 V	36.3 V
Current at maximum-power point	I _{mpp}	4.61 A	4.70 A	4.78 A	4.87 A	4.95 A
Open-circuit voltage	U _{oc}	43.2 V	43.6 V	44.0 V	44.3 V	44.6 V
Short-circuit current	I _{sc}	5.22 A	5.27 A	5.30 A	5.34 A	5.39 A

The rated power may vary by ± 4% and all other electrical parameters by ± 10%

Dimensions and weights



Dimensions (tolerances ± 3 mm)	1,620 mm x 810 mm
Thickness with frame (± 1 mm)	50 mm
Weight	approx. 15.5 kg

Characteristic data



Solar cells per module	72
Type of solar cell	MAIN-Isotex solar cell (multi-crystalline, 12.5 x 12.5 cm², full-square)
Connection	Connection box with bypass diodes, 4 mm² solar cable with Tyco-Connectors, length of pole 1 m each

Temperature coefficients



Power	T _K (P _n)	-0.47 %/°C
Open-circuit voltage	T _K (U _{oc})	-0.38 %/°C
Short-circuit current	T _K (I _{sc})	+0.10 %/°C

Limits



Max. system voltage	1000 V DC
Operating module temperature	-40 ... +85 °C
Max. load	Pressure: 5,400 N/m² or 550 kg/m² (IEC 61215 Ed. 2) Suction: 5,400 N/m² or 550 kg/m²

The right is reserved to make technical modifications.

Qualifications



The SCHOTT POLY™ 160/165/170/175/180 complies with the requirements of IEC 61215 and IEC 61730. Electrical Protection Class II and the CE-guidelines.



Convincing in Every Way: Be on the Safe Side with SCHOTT Solar

Choosing modules for solar power systems provides you with a wide choice. There is hardly any difference in the specifications of a lot of manufacturers. Regarding systems which are meant to run in all weathers – and for far more than 20 years – you can only see their real performance after some practical experience. Our products have proven, by operating durably and efficiently all over the world, that they deserve your trust.

Your advantages at a glance

- ★ Experience
- ★ Confidence
- ★ Security
- ★ Quality
- ★ Durability
- ★ Energy yield
- ★ Future technology



Years of Experience and Expertise – Security Worth your Confidence



Dual benefit for customers:
quality and experience

At the Otto Schott Research Centre in Mainz, one of the world's most modern glass research operations, as well as in Duryea, Pennsylvania (USA) and in many more of SCHOTT AG's development laboratories, over 800 highly qualified personnel are developing new products, as well as the materials, technologies, production plants and systems required for their manufacture. Every single customer who buys a SCHOTT Solar AG product benefits from this in-depth expertise.

Apart from solar power modules, the SCHOTT Group also produces receiver pipes for solar thermal power plants. Similar to photovoltaics, solar thermal technology has been growing apace for years.

SCHOTT Solar AG: already on the market for 50 years and a reliable partner for the future.

Proved and tested a thousand times over: modules with a total output of more than 400 MWp in use worldwide!

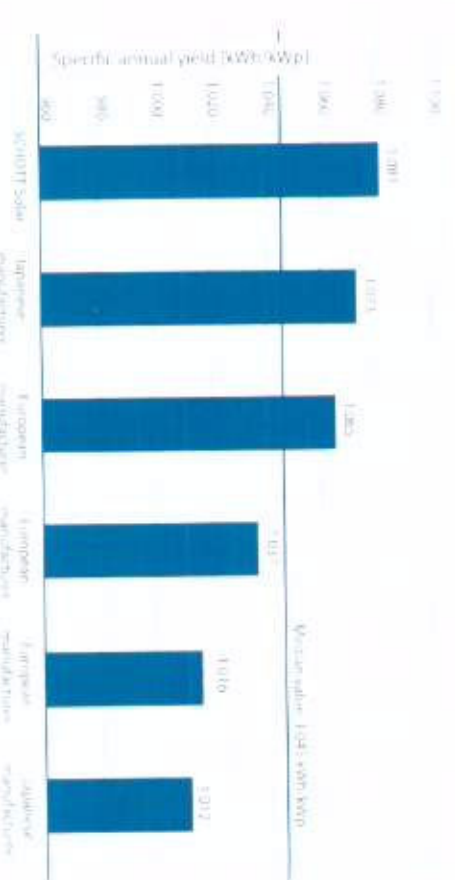
SCHOTT Solar modules are outstanding:

- Stress-relieved soldering technology during module assembly
- Optimum combination of high quality materials and components
- Reliability, even when exposed to extreme climatic conditions.
- Wide distance of cells from the frame reduces overshadowing by the frame.

Solar cell production - an innovative process

- Every solar cell is manufactured in a highly automated line process. This makes it easier to efficiently monitor quality, and ensures high repeatability.
- The unique finger structure (accumulators on the upper side of the cell) increases the energy yield.
- The dark anti-reflective coating guarantees high light efficiency.

Long-term satisfaction with your solar power system is largely dependent upon the yield and life span of your solar modules.



The convincing result of this study from 2003 showed in practice that SCHOTT Solar achieved significantly higher yields. This was persuasively demonstrated in the statistical evaluation of several hundred installations in southern Germany.



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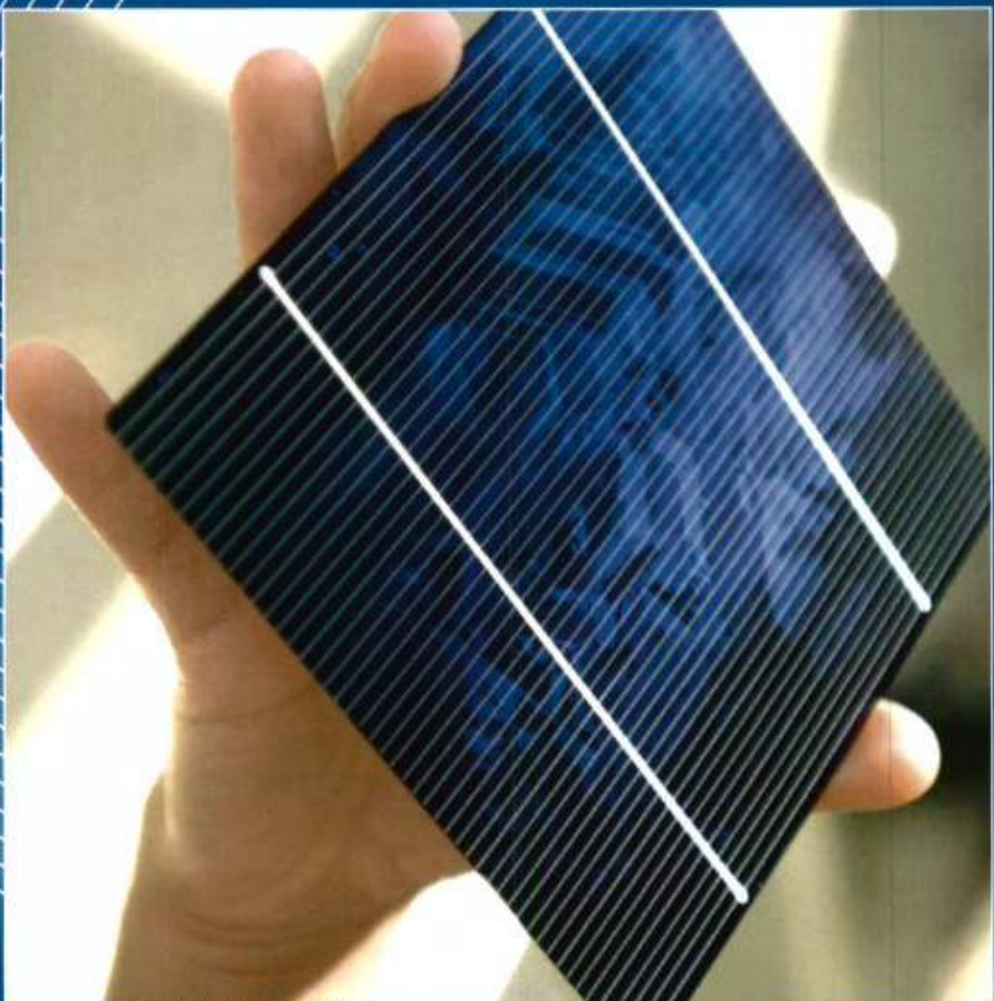
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Quality through Experience – Security for the Future

Top Quality and Long Life Span
for High Energy Yields



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