

SCHOTT PERFORM™ MONO series



SCHOTT PERFORM™ MONO 180/185/190/195

At a glance

- Monocrystalline high efficiency cells >17.6 %
- High annual energy yield
- Positive power tolerance
- Elegant design
- Double the required standard
- 25 years linear performance guarantee

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

Monocrystalline high efficiency cells >17.6 %: The exceptionally high cell efficiency of the SCHOTT PERFORM™ MONO series ensures a high module power. Module efficiencies of up to 14.9 % are possible.

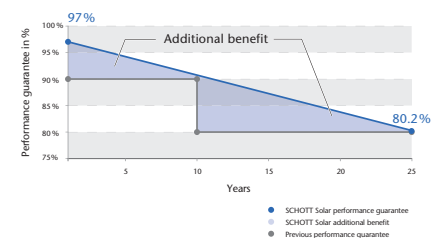
High annual energy yield: The particularly high module efficiency delivers optimum yields for small areas. More power per module ensures high annual energy yields.

Positive power tolerance: SCHOTT Solar modules achieve a positive power tolerance of the nominal rating. This ensures a high energy output.

Elegant design: The dark mono cells with the black Aluminum frame look aesthetically pleasing while providing excellent efficiency. Also, the elegant design reassures a high degree of security for your investment because the solid module frame secures superior torsional resistance.

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

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

Technical Data

Data at standard test conditions (STC)

Module type		SCHOTT PERFORM™ MONO			
Nominal power [Wp]	P_{mpp}	≥ 180	≥ 185	≥ 190	≥ 195
Voltage at nominal power [V]	U_{mpp}	36.2	36.3	36.4	36.5
Current at nominal power [A]	I_{mpp}	4.97	5.10	5.22	5.34
Open-circuit voltage [V]	U_{oc}	44.8	45.0	45.2	45.4
Short-circuit current [A]	I_{sc}	5.40	5.43	5.46	5.49
Module efficiency (%)	η	13.7	14.1	14.5	14.9

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}	130	134	137	141
Voltage at nominal power [V]	U_{mpp}	32.9	32.8	32.9	33.0
Open-circuit voltage [V]	U_{oc}	39.3	40.2	41.0	41.9
Short-circuit current [A]	I_{sc}	4.30	4.32	4.35	4.37
Temperature [°C]	T_{NOCT}	46.0	46.0	46.0	46.0

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) 96 % of the STC module efficiency (1,000 W/m²) will be achieved.

Temperature coefficients

Power [%/K]	P_{mpp}	-0.44
Open-circuit voltage [%/K]	U_{oc}	-0.33
Short-circuit current [%/K]	I_{sc}	+0.03

Characteristic data

Solar cells per module	72
Cell type	monocrystalline (pseudo-square, 125 mm x 125 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, black

Dimensions and weight

Dimensions [mm]	1,620 x 810
Thickness [mm]	50
Weight [kg]	15.5

Limits

Maximum system voltage [V_{DC}]	1,000
Maximum reverse current I_R [A]*	17
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 (to IEC 61730)	C

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

Permission and certificates

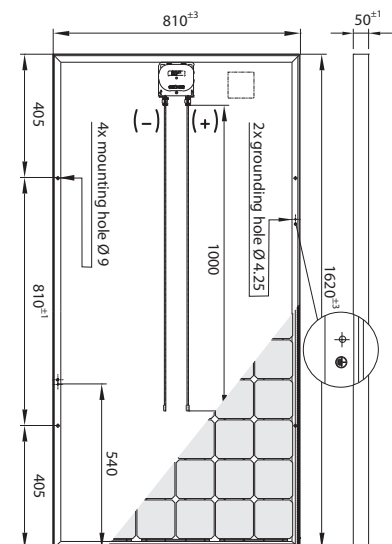
The modules are certified to IEC 61215 ed. 2 and IEC 61730, Electrical Protection Class II and the CE-guidelines. Moreover SCHOTT Solar is certified and registered to ISO 9001 and ISO 14001.

Power measurement accuracy: ± 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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frame section

all dimensions in mm

