

SCHOTT Solar thin film solar modules

SCHOTT ASI™ 95/97/100/103

The long-established German company SCHOTT Solar is a world leader in the photovoltaic industry and has more than 50 years of experience in the development and production of components for solar applications.

The ASI® thin film technology is the result of extensive experience and the most modern production standards. Thin film solar modules with ASI® cell technology guarantee long-lasting high performance and an above-average energy output year after year.

High energy output: SCHOTT ASI™ modules are characterised by their ability to produce an excellent energy output in a range of climatic conditions. Performance remains high, whether in diffused light conditions, in high temperatures, with poor module ventilation, with partial obscuring of module surfaces, or even with non ideal module orientation.

Simple and low-cost installation: The bypass diode is integrated into the junction box. With a low modular current of 17 V and a high maximum system current of 1000 V connection is simple, fast and low-cost.

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

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.

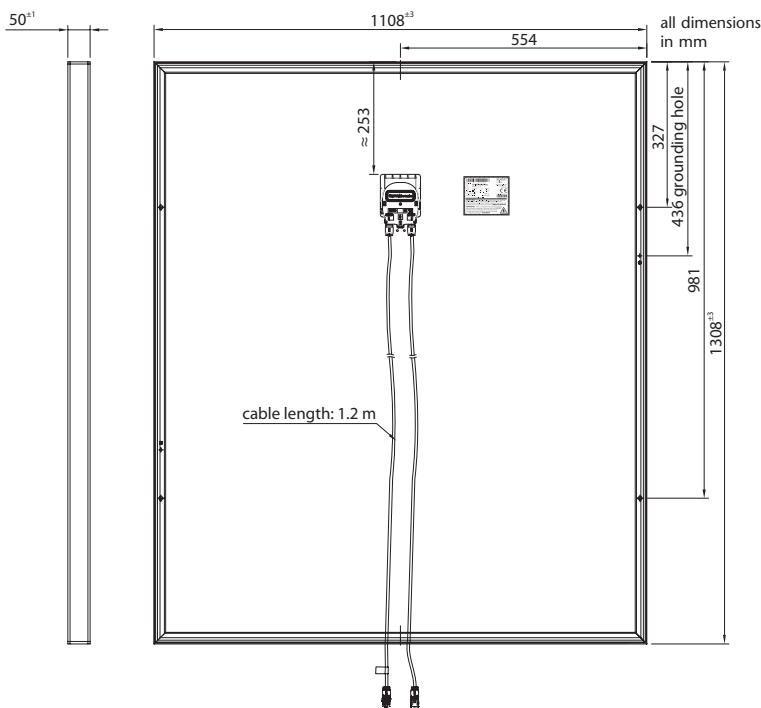
Long-term reliability “Made in Germany”: SCHOTT Solar offers a power output guarantee of 25 years and a product warranty of five years.

Long-term stability of encapsulation: SCHOTT ASI™ modules with the proven ASI® encapsulation have exceptionally high resistance to UV radiation, as well as to extremes of temperature and weather.

- High energy output
- Simple and low-cost installation
- Double of the required standard
- High performance output
- Long-term reliability “Made in Germany”
- Long-term stability of encapsulation



SCHOTT ASI™ 95/97/100/103



SCHOTT
solar

Technical Data

Electrical data

Electrical data refer to Standard Test Conditions (STC):
Irradiance 1000 W/m², spectrum Air Mass 1.5 and cell temperature 25°C



Product name	SCHOTT ASI™ 95		SCHOTT ASI™ 97		SCHOTT ASI™ 100		SCHOTT ASI™ 103	
	stabilised value	initial value	stabilised value	initial value	stabilised value	initial value	stabilised value	initial value
Nominal power [Wp] P _{mpp}	≥ 95	116	≥ 97	118	≥ 100	122	≥ 103	126
Voltage at nominal power [V] U _{mpp}	17.4	19.3	17.4	19.3	17.5	19.4	17.6	19.5
Current at nominal power [A] I _{mpp}	5.47	6.00	5.57	6.10	5.71	6.30	5.86	6.40
Open-circuit voltage [V] U _{oc}	23.6	24.6	23.7	24.7	23.8	24.8	23.9	24.9
Short-circuit current [A] I _{sc}	6.69	6.90	6.72	6.90	6.79	7.00	6.91	7.10
Module efficiency level (%) η	6.6		6.7		6.9		7.1	

Sorting of module performance by flash data report (-0 %, positive tolerance only)
Rating tolerance for power output is ± 5 % and rating tolerance for all other parameters is ± 10 %.

Data at normal operating cell temperature (NOCT)

Irradiance 800 W/m², spectrum Air Mass 1.5, windspeed 1 m/s and ambient temperature 20°C



Nominal power [Wp] P _{mpp}	75	77	79	82
Voltage at nominal power [V] U _{mpp}	17.2	17.2	17.3	17.4
Open-circuit voltage [V] U _{oc}	23.3	23.4	23.5	23.6
Short-circuit current [A] I _{sc}	5.35	5.37	5.43	5.48
Temperature [°C] T _{NOCT}	49	49	49	49

Rating tolerance for power output is ± 5 % and rating tolerance for all other parameters is ± 10 %.

Data at low irradiation intensity

Irradiance 200 W/m², spectrum Air Mass 1.5 and cell temperature 25°C



Nominal power [Wp] P _{mpp}	19.0	19.4	20.0	20.6
Voltage at nominal power [V] U _{mpp}	17.4	17.4	17.6	17.6
Current at nominal power [A] I _{mpp}	1.09	1.11	1.14	1.17
Open-circuit voltage [V] U _{oc}	21.2	21.3	21.4	21.5
Short-circuit current [A] I _{sc}	1.27	1.28	1.29	1.31
Module efficiency level (%) η	6.6	6.7	6.9	7.1

Rating tolerance is ± 10 %.

Temperature coefficients



Power [%/K] T _K (P _n)	-0.20	-0.20	-0.20	-0.20
Voltage [%/K] T _K (U)	-0.33	-0.33	-0.33	-0.33
Open-circuit voltage [mV/K] T _K (U _{oc})	-78	-78	-79	-79
Short-circuit current [%/K] T _K (I)	0.08	0.08	0.08	0.08

Rating tolerance for all parameters is ± 10 %.

Characteristic data



Solar cells per module	56
Cell type	a-Si/a-Si tandem (amorphous silicon)
Connection	Junction box IP65 with bypass diode, 4 mm ² -solar cable with Tyco-Connectors, length of pole 1.2 m each
Dimensions	
junction box [mm]	138 x 90 x 22
Front panel	thermally treated float glass 4mm
Frame material	aluminium - black

Dimensions and weight



Dimensions [mm]	1,108 x 1,308 (tolerance ± 3 mm)
Thickness [mm]	50 (tolerance ± 1 mm)
Weight [kg]	18

Limits



System voltage [V _{DC}]	1000
Maximum reverse current I _R [A]*	15
Operating module temperature [°C]	-40... +85
Maximum load (to IEC 61646)	Pressure: 2,400 N/m ² or 245 kg/m ² Suction: 2,400 N/m ² or 245 kg/m ²
Fire classification (to IEC 61730)	A
Application 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 61646 ed. 2 and IEC 61730, Electrical Protection Class II and the CE-guidelines.



The **installation manual** contains additional information on installation and operation.

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

SCHOTT Solar AG
Carl-Zeiss-Strasse 4
63755 Alzenau
Germany

Phone: +49 (0) 60 23 / 91 - 1712
Fax: +49 (0) 60 23 / 91 - 1700
solar.sales@schottsolar.com
www.schottsolar.com

SCHOTT
solar