

SCHOTT ADVANCE™ InDaX series



SCHOTT ADVANCE™ InDaX
214/225/230/235

At a glance

- Flexible and quick assembly
- Certified rainproof
- Maximised energy yield
- Certifications
- Double the required standard
- 25 years linear performance guarantee

The long-established German company SCHOTT Solar has offered innovative and certified roof integrated PV solutions since 2003 based on proven crystalline technology. The 4th generation of InDaX® solar elements completely replaces conventional roof building materials while fulfilling two functions: clean, solar electricity generation and a secure roof covering.

Flexible and quick assembly: A simple and quick installation is ensured by a minimum number of parts and a low system weight. The flexible installation sequence also supports a quick assembly.

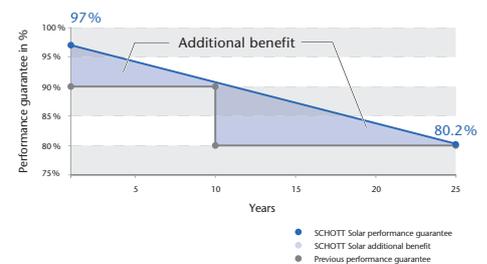
Certified rainproof: The InDaX® system can be used with a roof pitch between 15° and 65°. SCHOTT Solar warrants the installation will remain rainproof for 10 years when the original parts have been used and installed in accordance with the installation instructions*.

Maximised energy yield: The modules are arranged in a shingled array, and a specially developed frame ensures optimized rear-ventilation of each individual module – thereby ensuring high-energy yields.

Certifications: The InDaX® module as a replacement for conventional roof coverings fulfills the protective functions with regard to rainfall, wind load, snow load as well as flying sparks and radiating heat. Moreover, the modules are approved for surface load of 550 kg per square metre.

Double the required standard: The SCHOTT Solar internal quality standard is also applied to the InDaX® system, which requires a test length that is 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

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Technical Data

Data at standard test conditions (STC)

Module type		SCHOTT ADVANCE™ INDX			
Nominal power [Wp]	P_{mpp}	≥ 214	≥ 225	≥ 230	≥ 235
Voltage at nominal power [V]	U_{mpp}	29.5	29.8	30.0	30.2
Current at nominal power [A]	I_{mpp}	7.26	7.55	7,66	7.78
Open-circuit voltage [V]	U_{oc}	36.3	36.7	36.9	37.1
Short-circuit current [A]	I_{sc}	8.04	8.24	8.33	8.42
Module efficiency (%)	η	12.5	13.1	13.4	13.7

STC (1,000 W/m²; AM 1.5; cell temperature 25°C)

Power tolerance (as measured by flasher): -0 W / +10.99 W / +4.99 W

Data at normal operating cell temperature (NOCT)

Nominal power [Wp]	P_{mpp}	154	161	165	169
Voltage at nominal power [V]	U_{mpp}	26.6	26.9	27.1	27.2
Open-circuit voltage [V]	U_{oc}	33.1	33.5	33.7	33.9
Short-circuit current [A]	I_{sc}	6.44	6.60	6.67	6.75
Temperature [°C]	T_{NOCT}	47.2	47.2	47.2	47.2

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) 97 % of the STC module efficiency (1,000 W/m²) 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, black

Dimensions and weight

Dimensions [mm]	1,769 x 999
Dimensions of the installed module, visible [mm]	1,720 x 999
Thickness [mm]	75
Weight [kg]	approx. 21.5
Surface weight [kg/m ²]	approx. 12.1

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/m ² or 550 kg/m ² suction: 2,400 N/m ² or 245 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, IEC 61730, IEC 61701 and DIN EN 15601 and DIN V EN V 1187 part 1 and part 3, the 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.

SCHOTT Solar AG
Hattenbergstrasse 10
55122 Mainz
Germany

Phone: +49 (0)6131/66-14099
Fax: +49 (0)6131/66-14105
solar.sales@schottsolar.com
www.schottsolar.com

