

SOLON Black 280/11

Monocrystalline solar modules.



- › Highly efficient monocrystalline cell technology
- › Module efficiency of up to 14.7 %
- › Positive binning of power classes (0 to +4.99 Wp)
- › 4 mm solar glass and twin-wall frame profile for highest load capacity
- › SOLON solar insurance for rooftop installations included ¹⁾
- › 10 year product guarantee and a 5-stage performance guarantee
- › Free module recycling

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Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m², (25 ± 2)°C, AM 1.5 in accordance with EN 60904-3

Capacity rating	P _{max}	290 Wp	285 Wp	280 Wp	275 Wp	270 Wp	265 Wp	260 Wp
Module efficiency		14.65 %	14.39 %	14.14 %	13.89 %	13.64 %	13.38 %	13.13 %
Rated voltage	U _{mpp}	35.60 V	35.40 V	35.20 V	35.00 V	34.80 V	34.60 V	34.40 V
Rated current	I _{mpp}	8.16 A	8.06 A	7.96 A	7.86 A	7.76 A	7.66 A	7.56 A
Open circuit voltage	U _{OC}	44.23 V	43.96 V	43.69 V	43.42 V	43.15 V	42.89 V	42.61 V
Short circuit current	I _{SC}	8.59 A	8.51 A	8.44 A	8.36 A	8.29 A	8.21 A	8.14 A
Maximum reverse current	I _R	15 A	15 A	15 A	15 A	15 A	15 A	15 A
Maximum system voltage		1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V

Measuring tolerance for P_{max}: ±3 %

Reduction of module efficiency from 1,000 W/m² to 200 W/m²: <4 %

Electrical data – typical (NOCT)

NOCT (Normal Operating Cell Temperature): 800 W/m², NOCT, AM 1.5

Capacity rating	P _{max}	208 Wp	204 Wp	201 Wp	197 Wp	194 Wp	190 Wp	186 Wp
Rated voltage	U _{mpp}	31.91 V	31.73 V	31.55 V	31.37 V	31.19 V	31.01 V	30.83 V
Rated current	I _{mpp}	6.52 A	6.44 A	6.36 A	6.29 A	6.21 A	6.13 V	6.05 A
Open circuit voltage	U _{OC}	39.98 V	39.73 V	39.49 V	39.24 V	39.00 V	38.76 V	38.51 V
Short circuit current	I _{SC}	6.94 A	6.87 A	6.81 A	6.75 A	6.69 A	6.63 A	6.57 A

Temperature coefficients (Tc)

Tc of open circuit voltage	-0.36 %/K
Tc of short curcuit current	0.04 %/K
Tc of power	-0.47 %/K

Measuring tolerance for all final data: ±10 % (except P_{max} (STC) and NOCT)

Mechanical specification

Dimensions (H x W x D)	1,980 x 1,000 x 42 mm
Weight	30 kg
Junction box	1 box with 3 bypass diodes
Cable	Solar cable, length 1,500 mm, 4 mm ² , prefabricated with MC4-combinable plug
Application class	Class A at IEC 61730
Front glass	Transparent toughened safety glass, 4 mm
Solar cells	72 cells, monocrystalline Si 6.2" (156 x 156 mm)
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Back side	Composite film
Frame	Anodised aluminium frame with twin-wall profile and drainage holes

Permissible operating conditions

Temperature range	-40 °C to +85 °C
NOCT	48 °C ± 2 °C
Maximum surface load capacity	Tested up to 5,400 Pa according to IEC 61215 (advanced test)
Resistance against hail	Maximum diameter of 28 mm with impact speed of 230 km/h

Guarantees and certifications

Product warranty	10 years ²⁾
Performance guarantee	Guaranteed output of 95 % for 5 years, 90 % for 10 years, 87 % for 15 years, 83 % for 20 years and 80 % for 25 years ²⁾
Approvals and certificates	TÜV: IEC 61215 Edition II, IEC 61730 (incl. Safety Class II)

Drawing

