

SOLON Black 230/07

Monocrystalline solar modules.



- › Highly efficient monocrystalline cell technology
- › Module efficiency of up to 15.2 %
- › 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}	250 Wp ²⁾	245 Wp	240 Wp	235 Wp	230 Wp	225 Wp
Module efficiency		15.24 %	14.94 %	14.63 %	14.33 %	14.02 %	13.72 %
Rated voltage	U _{mpp}	30.03 V	29.82 V	29.62 V	29.41 V	29.20 V	29.00 V
Rated current	I _{mpp}	8.34 A	8.22 A	8.11 A	7.99 A	7.88 A	7.76 A
Open circuit voltage	U _{OC}	37.27 V	37.01 V	36.75 V	36.48 V	36.22 V	35.96 V
Short circuit current	I _{SC}	8.74 A	8.65 A	8.56 A	8.47 A	8.38 A	8.29 A
Maximum reverse current	I _R	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

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}	179 Wp	176 Wp	172 Wp	169 Wp	165 Wp	161 Wp
Rated voltage	U _{mpp}	26.92 V	26.73 V	26.55 V	26.36 V	26.17 V	25.99 V
Rated current	I _{mpp}	6.66 A	6.57 A	6.48 A	6.39 A	6.30 A	6.21 A
Open circuit voltage	U _{OC}	33.69 V	33.45 V	33.22 V	32.97 V	32.74 V	32.50 V
Short circuit current	I _{SC}	7.06 A	6.98 A	6.91 A	6.84 A	6.77 A	6.69 A

Temperature coefficients (Tc)

Tc of open circuit voltage	–0.36 %/K
Tc of short circuit 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)	1,640 x 1,000 x 42 mm
Weight	23.5 kg
Junction box	1 junction box with 3 bypass diodes
Cable	Solar cable, length 1,000 mm, 4 mm ² , prefabricated with MC4-combinable plug
Application class	Application class A (according to IEC 61730)
Front glass	Transparent toughened safety glass, 4 mm
Solar cells	60 cells, monocrystalline Si 6.2" (156 x 156 mm)
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Back side	Composite film
Frame	Anodized aluminum 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
Resistance against hail	Maximum diameter of 28 mm with impact speed of 230 km/h

Guarantees and certifications

Product warranty	10 years ³⁾
Performance guarantee	Guaranteed output of 95 % for 5 years, 90 % for 10 years, 87 % for 15, 83 % for 20 years and 80 % for 25 years ³⁾
Approvals and certificates	TÜV: IEC 61215 Edition II, IEC 61730 (incl. Safety Class II)

Drawing

