

SOLON Black 230/02

Monocrystalline solar modules.



- › Highly efficient monocrystalline cell technology
- › Module efficiency of up to 14.9%
- › 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}	245 Wp ²⁾	240 Wp	235 Wp	230 Wp	225 Wp ²⁾	220 Wp ²⁾
Module efficiency		14.94%	14.63%	14.33%	14.02%	13.72%	13.41%
Rated voltage	U _{mpp}	29.82 V	29.62 V	29.41 V	29.20 V	29.00 V	28.79 V
Rated current	I _{mpp}	8.22 A	8.11 A	7.99 A	7.88 A	7.76 A	7.65 A
Open circuit voltage	U _{OC}	37.01 V	36.75 V	36.48 V	36.22 V	35.96 V	35.69 V
Short circuit current	I _{SC}	8.65 A	8.56 A	8.47 A	8.38 A	8.29 A	8.20 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}	176 Wp	172 Wp	169 Wp	165 Wp	161 Wp	158 Wp
Rated voltage	U _{mpp}	26.73 V	26.55 V	26.36 V	26.17 V	25.99 V	25.81 V
Rated current	I _{mpp}	6.57 A	6.48 A	6.39 A	6.30 A	6.21 A	6.11 A
Open circuit voltage	U _{OC}	33.45 V	33.22 V	32.97 V	32.74 V	32.50 V	32.26 V
Short circuit current	I _{SC}	6.98 A	6.91 A	6.84 A	6.77 A	6.69 A	6.62 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 SOLON junction box with 3 bypass diodes
Cable	Solar cable, length 1,000 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	60 cells, monocrystalline Si 6.2" (156 x 156 mm)
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Back side	Black composite film
Frame	Anodized aluminum frame with twin-wall profile and drainage holes

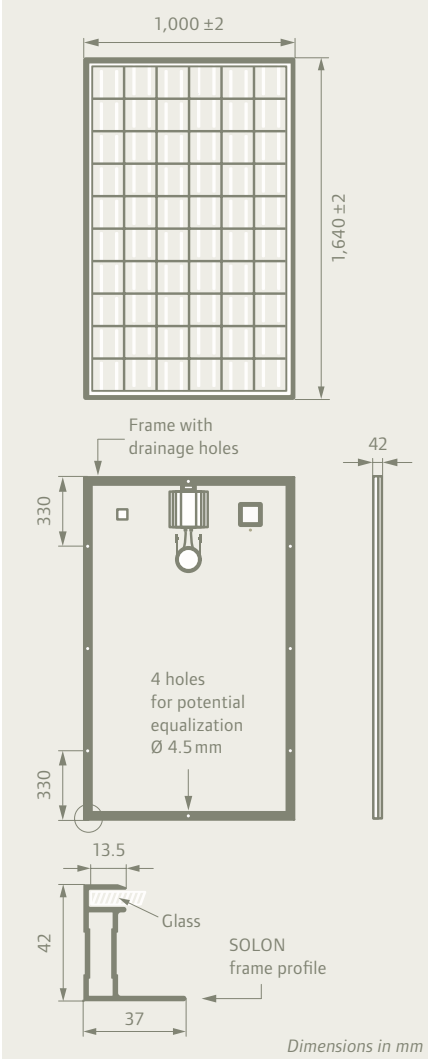
Permissible operating conditions

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 (advanced test)
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



This datasheet complies with the requirements of EN 50380:2003. Subject to modifications and omissions. Electric data without guarantee.