



## *SOLON Black 230/02*

Monocrystalline solar modules.

- › Recognized SOLON quality
- › High-performance modules with excellent efficiency
- › Optimal output over decades
- › Very good low light response
- › 10 year product guarantee,  
25 year performance guarantee
- › SOLON solar insurance

# SOLON Black 230/02

## Technical features:

- Highly efficient monocrystalline cell technology
- Module efficiency of up to 14.3%
- Excellent low light response
- 4 mm solar glass and twin-wall frame profile for highest load capacity
- Innovative SOLON connection technology for optimum heat dissipation
- Elegant module design

## SOLON advantages:

- SOLON solar insurance for rooftop installations included<sup>(1)</sup>
- 10 year product guarantee, 25 year performance guarantee
- Individual consulting and support from our service team and our international distribution partners
- On time delivery
- Free module recycling
- Certified quality products (TÜV)

## Electrical data – typical

Capacity rating (±3%)	P <sub>max</sub>	235 Wp <sup>(2)</sup>	230 Wp	225 Wp	220 Wp	215 Wp <sup>(2)</sup>
Module efficiency		14.33%	14.02%	13.72%	13.41%	13.11%
Rated voltage	U <sub>mpp</sub>	29.41 V	29.20 V	29.00 V	28.79 V	28.58 V
Rated current	I <sub>mpp</sub>	7.99 A	7.88 A	7.76 A	7.65 A	7.53 A
Open circuit voltage	U <sub>oc</sub>	36.48 V	36.22 V	35.96 V	35.69 V	35.60 V
Short circuit current	I <sub>sc</sub>	8.47 A	8.38 A	8.29 A	8.20 A	8.11 A

The above values are effective for an irradiation of 1,000 W/m<sup>2</sup>, AM 1.5, and a cell temperature of 25°C according to STC. They are subject to production tolerances. The modules can be delivered with their characteristic data series which have to be used for the detailed system configuration.

## Temperature coefficients (Tc)

Tc of open circuit voltage	-0.37%/K
Tc of short circuit current	0.03%/K
Tc of power	-0.51%/K

## Mechanical specification

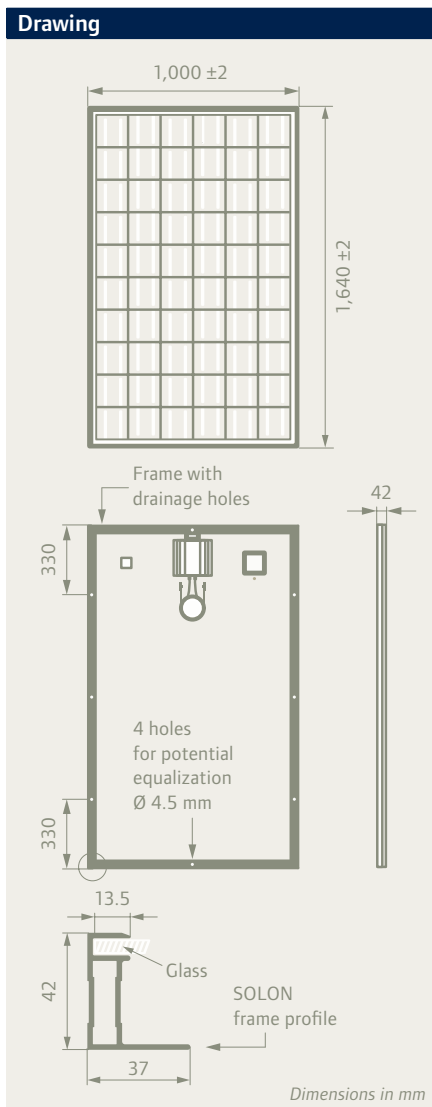
Dimensions (H x W x D)	1,640 x 1,000 x 42 mm
Weight	23.5 kg
Junction box	1 SOLON ED II junction box with 3 bypass diodes
Cable	Solar cable, 900 mm length, 4 mm <sup>2</sup> , prefabricated with MC-4 plug
Application class	Class A at IEC 61730
Front glass	Transparent toughened safety glass, 4 mm
Solar 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	47°C ± 2%
Maximum system voltage	1,000 V
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 86 km/h

## Guarantees and certifications

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



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