

# SOLON 230/02

*Design Module for Highest Standards.*



- › Highly efficient monocrystalline cell technology
- › Sleek aesthetics
- › Module efficiency levels of up to 16.2 %
- › Positive sorting of power classes (0 to +4.99 Wp)
- › Highest stability due to 4 mm solar glass and a frame with twin-wall profile
- › 10-year product warranty and 5-level performance guarantee
- › Performance stability without PID losses

# Stunning Aesthetics. No Compromise on Performance.

SOLON modules offer the highest output – for decades. The SOLON Black 230/02 is the perfect choice for customers who value reliability and high output when choosing a solar power system – as well as sleek aesthetics. The monocrystalline design modules are made entirely of black components. They combine tried-and-tested SOLON technology and a unified rooftop appearance.

## Maximum Efficiency.

- › The latest high-efficiency monocrystalline cell technology from the world's leading cell suppliers
- › Excellent low light performance
- › Improved output due to positive sorting of power classes (0 to +4.99 Wp)
- › PID-free products with guaranteed performance stability
- › Exceptional module efficiency levels of up to 16.2%
- › Significantly higher output than the competitors' modules

## Highest Stability and Longevity.

- › Comprehensive lifespan tests, including outdoor tests, climate chamber storage, and participation in key PV comparative studies
- › Suitable for challenging installation sites due to exceptional mechanical resistance
- › 45 mm anodized aluminum frame with twin-wall profile
- › Drainage holes for outstanding weather-resistance
- › Ultra-hardened, low-reflection 4 mm solar glass
- › Corrosion-proof components
- › SOLON junction box with a metal cover and integrated cooling fins for optimum heat dissipation

## Exceptional Quality.

- › All system components meet stringent SOLON quality criteria
- › Rigorous process and material monitoring for the industry's highest quality standards
- › Outstanding workmanship
- › Continuous auditing using internal and external tests

## Safety Included.

- › The most mechanically resistant product on the market
- › The only product where the module construction has undergone independent statics testing
- › High mechanical durability: tested to 5,400 Pa (550 kg/m<sup>2</sup>)
- › Comprehensive SOLON warranties

## SOLON Advantages:

- › 10-year product warranty<sup>1)</sup>
- › 5-level performance guarantee for 25 years<sup>1)</sup>
- › Photovoltaic insurance included<sup>2)</sup>
- › Positive sorting of power classes (0 to +4.99 Wp)
- › Free module recycling

<sup>1)</sup> According to the SOLON Product and Performance Guarantee.

<sup>2)</sup> For more information please visit [www.solon.com/service](http://www.solon.com/service).

# SOLON Black 230/02



## Electrical data – typical (STC)

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

Power rating	$P_{max}$	265 Wp <sup>1)</sup>	260 Wp	255 Wp	250 Wp	245 Wp
Module efficiency		16.16 %	15.85 %	15.55 %	15.24 %	14.94 %
Rated voltage	$V_{mpp}$	30.7 V	30.5 V	30.2 V	30.0 V	29.8 V
Rated current	$I_{mpp}$	8.67 A	8.57 A	8.45 A	8.34 A	8.22 A
Open circuit voltage	$V_{OC}$	38.1 V	37.8 V	37.5 V	37.3 V	37.0 V
Short circuit current	$I_{SC}$	9.01 A	8.92 A	8.83 A	8.74 A	8.65 A
Maximum reverse current	$I_R$	20 A	20 A	20 A	20 A	20 A
Maximum system voltage		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/m<sup>2</sup> to 200 W/m<sup>2</sup>: <4%

## Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m<sup>2</sup>, NOCT, AM 1.5

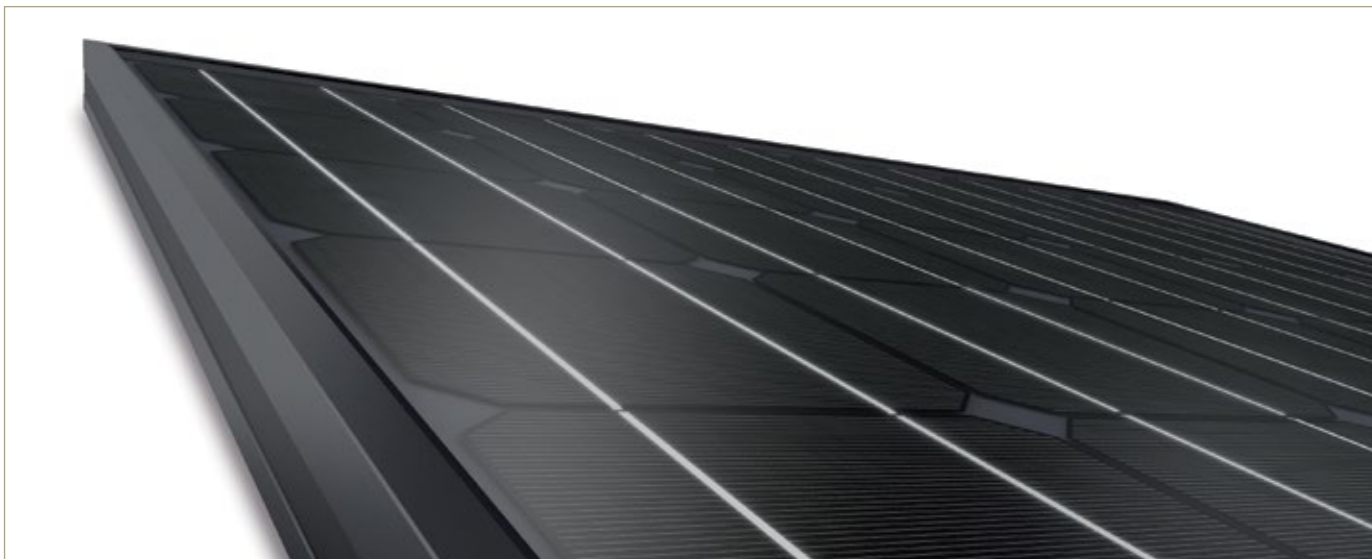
Power rating	$P_{max}$	190 Wp	186 Wp	183 Wp	179 Wp	176 Wp
Rated voltage	$V_{mpp}$	27,5 V	27,3 V	27,1V	26,9 V	26,7 V
Rated current	$I_{mpp}$	6,92 A	6,83 A	6,75 A	6,66 A	6,57 A
Open circuit voltage	$V_{OC}$	34,4 V	34,2 V	33,9 V	33,7 V	33,5 V
Short circuit current	$I_{SC}$	7,27 A	7,20 A	7,13 A	7,06 A	6,98 A

## Thermal data

Tc of open circuit voltage		-0.33%/K
Tc of short circuit current		0.04%/K
Tc of power		-0.43%/K
NOCT (according to IEC 61215)		48°C ± 2°C

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

<sup>1)</sup> Available in limited amounts upon request.





# SOLON Black 230/02

## Mechanical specifications

Dimensions (H x W x D)	1,640 x 1,000 x 45 mm
Weight	22.7 kg
Junction box	1 SOLON junction box (IP65) with 3 bypass diodes
Cable	Solar cable, length 1,000 mm, 4 mm <sup>2</sup> , prefabricated with MC4-combinable plug (IP67)
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

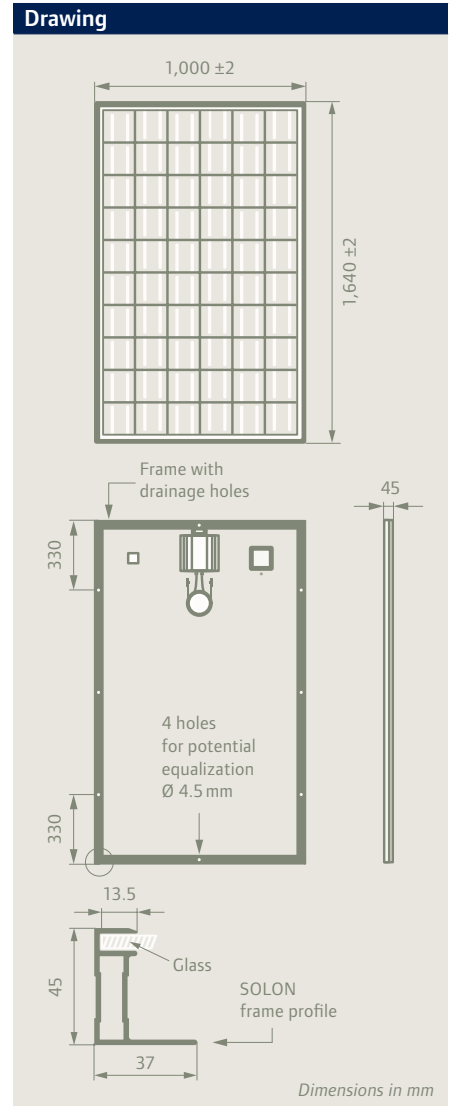
Temperature range	-40°C to +85°C
Maximum surface load capacity	Tested up to 5,400 Pa according to IEC 61215 (advanced test)
Resistance against hail	Maximum diameter of 25 mm with impact speed of 83 km/h

## Guarantees and certifications

Product guarantee	10 years <sup>2)</sup>
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 <sup>3)</sup>
Approvals and certificates	IEC 61215 Edition II, IEC 61730 (incl. Safety Class II), IEC 68-2-52 (Salt mist resistance), MCS

This datasheet complies with the requirements of EN 50380:2003. Subject to modifications.  
Electrical data without guarantee. SOLON is certified to ISO 9001, ISO 14001 and OHSAS 18001.

<sup>2)</sup> According to SOLON Product- and Performance Guarantee.



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