SOLON 230/07 Black / Blue · EN

SOLON 230/07

Crystalline PV Modules for Assured Quality.

- Highly efficient monocrystalline and polycrystalline cell technology
- 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
- Photovoltaic insurance included
- 10-year product warranty and 5-level performance guarantee
- Performance stability without PID losses
- Free module recycling

Independent Photovoltaics Module Test by Solarpraxis and TÜV Rheinland
PV Test
Solon
Solon Blue 230/07-235W
EXCELLENT
pv magazine 11/2011

ÖKO-TEST
LIFE WORTH LIVING
Photovoltaic modules
SOLON Blue 230/07, 225 W
Excellent
Edition 05/2010

Made by SOLON

SOLON

For Everyone Who Values Quality.

Long-term, reliable output requires a focus on product quality. And SOLON solar modules match up in every way. In addition to the TÜV certification, we also test every module and component under even more rigorous conditions at SOLON's own R&D center. The result: Our modules – SOLON Black 230/07 and SOLON Blue 230/07 – are the only products on the market where the module construction has undergone independent statics testing.

Maximum Efficiency.

- The latest high-efficiency monocrystalline and polycrystalline 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 of up to 16.2 %

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^2)
- Comprehensive SOLON warranties

SOLON Advantages:

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

[1)] According to the SOLON Product and Performance Guarantee.
*[2)] For more information please visit **www.solon.com/service**.*

SOLON 230/07

SOLON Black 230/07
(monocrystalline)

Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m², (25 ± 2)°C, AM 1.5 in accordance with EN 60904-3						
Power rating	P_{max}	265 Wp [1)]	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/m² to 200 W/m²: <4 %

Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m², 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)

SOLON Blue 230/07
(polycrystalline)

Electrical data – typical (STC)

STC (Standard Test Conditions): 1,000 W/m², (25 ± 2)°C, AM 1.5 in accordance with EN 60904-3						
Power rating	P_{max}	260 Wp [1)]	255 Wp	250 Wp	245 Wp	240 Wp
Module efficiency		15.85 %	15.55 %	15.24 %	14.94 %	14.63 %
Rated voltage	V_{mpp}	30.7 V	30.5 V	30.3 V	30.1 V	29.9 V
Rated current	I_{mpp}	8.52 A	8.40 A	8.28 A	8.16 A	8.03 A
Open circuit voltage	V_{OC}	37.7 V	37.5 V	37.4 V	37.2 V	37.0 V
Short circuit current	I_{SC}	8.95 A	8.83 A	8.71 A	8.59 A	8.47 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/m² to 200 W/m²: <5 %

Electrical data – typical (NOCT)

NOCT (Nominal Operating Cell Temperature): 800 W/m², NOCT, AM 1.5						
Power rating	P_{max}	189 Wp	186 Wp	182 Wp	178 Wp	175 Wp
Rated voltage	V_{mpp}	27.9 V	27.8 V	27.6 V	27.4 V	27.3 A
Rated current	I_{mpp}	6.78 A	6.69 A	6.60 A	6.51 A	6.41 A
Open circuit voltage	V_{OC}	34.4 V	34.3 V	34.1 V	34.0 V	33.8 V
Short circuit current	I_{SC}	7.27 A	7.17 A	7.07 A	6.97 A	6.88 A

Thermal data

Tc of open circuit voltage	−0.32 %/K
Tc of short circuit current	0.05 %/K
Tc of power	−0.41 %/K
NOCT (according to IEC 61215)	46°C ± 2°C

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

[1)] Available in limited amounts upon request.

SOLON 230/07

SOLON Black 230/07 and SOLON Blue 230/07.

Mechanical specifications

Dimensions (H x W x D)	1,640 x 1,000 x 45 mm
Weight	22.7 kg
Junction box	1 junction box (IP65) with 3 bypass diodes
Cable	Solar cable, length 1,000 mm, 4 mm², prefabricated with MC4-combinable plug (IP67)
Application class	Application class A (according to IEC 61730)
Front glass	Transparent toughened safety glass, 4 mm
Solar cells	60 cells, monocrystalline or polycrystalline 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
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

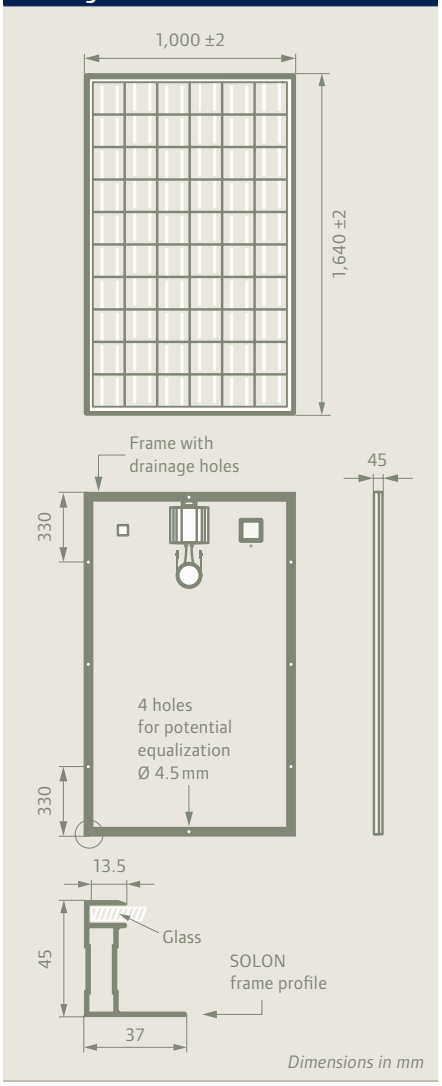
Guarantees and certifications

Product guarantee	10 years [2)]
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 [2)]
Approvals and certificates	IEC 61215 Edition II, IEC 61730 (incl. Safety Class II), IEC 62716 (Ammonia resistance), 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.

[2)] According to SOLON Product and Performance Guarantee.

Drawing



Dimensions in mm

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· SOLON · free module recycling

CEC Approved

APPROVED PRODUCT
MCS
IEC GLOBAL CERTIFICATION

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For more information on SOLON products please visit **www.solon.com.**