SOLON 220/16 Black / Blue · EN

SOLON 220/16

Versatile Crystalline PV Modules.

- Highly efficient monocrystalline and polycrystalline cell technology
- Positive sorting of power classes (0 to +4.99 Wp)
- 10-year product warranty and 5-level performance guarantee
- Attractive pricing for fast system payback
- Certified ammonia resistance
- Performance stability without PID losses

Made in Germany

SOLON

The SOLON Industry Standard.

Thanks to our experience as a manufacturer of solar power system solutions and as a general contractor for power plant construction, we know exactly what makes a successful project: good quality and reliable service at fair prices. And that is exactly what the SOLON 220/16 – SOLON's industry standard – provides. With over 15 % efficiency, tested "Made in Germany" quality, free module recycling, and a direct point of contact at SOLON for service, every project becomes a success. It is that simple.

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 15.2 %

Highest Stability and Longevity.

- Comprehensive lifespan tests, including outdoor tests and climate chamber storage
- 34 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

Highest Quality.

- All system components meet stringent SOLON quality criteria
- Rigorous process and material monitoring
- Continuous auditing using internal and external tests

Safety Included.

- High mechanical durability: tested to 5,400 Pa (540 kg/m²)
- Comprehensive SOLON warranties

SOLON Advantages:

- 10-year product warranty [1)]
- 5-level performance guarantee for 25 years [1)]
- SOLON solar insurance for rooftop installations 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)] Applicable in the European Union and Switzerland.

SOLON 220/16

SOLON Black 220/16

(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

Capacity rating	P_{max}	250 Wp [1)]	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	V_{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	V_{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	20 A	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	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

Capacity rating	P_{max}	179 Wp	176 Wp	172 Wp	169 Wp	165 Wp	161 Wp
Rated voltage	V_{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	V_{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

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 220/16

(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

Capacity rating	P_{max}	250 Wp [1)]	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	V_{mpp}	30.30 V	30.12 V	29.94 V	29.76 V	29.58 V	29.40 V
Rated current	I_{mpp}	8.28 A	8.16 A	8.03 A	7.90 A	7.78 A	7.65 A
Open circuit voltage	V_{OC}	37.38 V	37.20 V	37.03 V	36.86 V	36.69 V	36.52 V
Short circuit current	I_{SC}	8.71 A	8.59 A	8.47 A	8.36 A	8.24 A	8.12 A
Maximum reverse current	I_R	20 A	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	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

Capacity rating	P_{max}	182 Wp	178 Wp	175 Wp	171 Wp	167 Wp	164 Wp
Rated voltage	V_{mpp}	27.57 V	27.41 V	27.25 A	27.08 V	26.92 V	26.75 V
Rated current	I_{mpp}	6.60 A	6.51 A	6.41 A	6.32 A	6.22 A	6.12 A
Open circuit voltage	V_{OC}	34.13 V	33.97 V	33.81 V	33.66 V	33.50 V	33.35 V
Short circuit current	I_{SC}	7.07 A	6.97 A	6.88 A	6.79 A	6.69 A	6.59 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 220/16

SOLON Black 220/16 and SOLON Blue 220/16.

Mechanical specifications

Dimensions (H x W x D)	1,640 x 1,000 x 34 mm
Weight	22 kg
Junction box	1 junction box with 3 bypass diodes
Cable	Solar cable, length 1,000 mm, 4 mm², 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 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
Resistance against hail	Maximum diameter of 25 mm with impact speed of 83 km/h

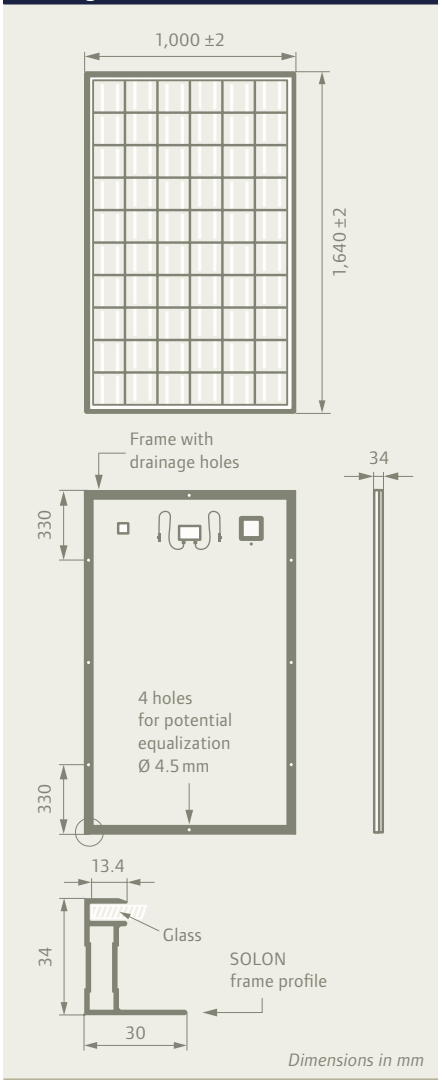
Guarantees and certifications

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)

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

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

Drawing



Dimensions in mm

- **Qualified, IEC 61215**
- **Saftey tested, IEC 61730**
- **Ammonia resistance tested**
- **Periodic Inspection**

APPROVED PRODUCT

SOLON SE
Am Studio 16
12489 Berlin · Germany

Phone +49 30 81879-0
Fax +49 30 81879-9999
E-Mail components@solon.com

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