

# SOLON 220/16

*Crystalline PV Module for all  
Scopes of Application.*



- › Highly efficient monocrystalline and polycrystalline cell technology
- › Gothaer photovoltaic insurance included
- › Positive sorting of power classes (0 to +4.99 Wp)
- › 10-year product warranty and 5-level performance guarantee
- › Certified ammonia resistance
- › Performance stability without PID losses



# *SOLON Quality for all Projects.*

SOLON Blue 220/16 and SOLON Black 220/16 are standard solutions for all photovoltaic projects – whether on detached houses or large industrial rooftops. They combine quality and reliability at a fair price. With efficiency of over 16 %, “Made by SOLON” quality and free-of-charge module recycling, each project is a success. It’s as simple as that.

## **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 and climate chamber storage
- › 34 mm anodized aluminum frame with twin-wall profile
- › Drainage holes for outstanding weather-resistance
- › 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/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>
- › Gothaer 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>Applicable in the European Union.

# SOLON 220/16

## SOLON Black 220/16 (monocrystalline)



### 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 <sub>max</sub>	265 Wp <sup>1)</sup>	260 Wp	255 Wp	250 Wp	245 Wp	240 Wp
Module efficiency		16.16 %	15.85 %	15.55 %	15.24 %	14.94 %	14.63 %
Rated voltage	V <sub>mpp</sub>	30.7 V	30.5 V	30.2 V	30.0 V	29.8 V	29.6 V
Rated current	I <sub>mpp</sub>	8.67 A	8.57 A	8.45 A	8.34 A	8.22 A	8.11 A
Open circuit voltage	V <sub>OC</sub>	38.1 V	37.8 V	37.5 V	37.3 V	37.0 V	36.8 V
Short circuit current	I <sub>SC</sub>	9.01 A	8.92 A	8.83 A	8.74 A	8.65 A	8.56 A
Maximum reverse current	I <sub>R</sub>	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<sub>max</sub>: ±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 <sub>max</sub>	190 Wp	186 Wp	183 Wp	179 Wp	176 Wp	172 Wp
Rated voltage	V <sub>mpp</sub>	27.5 V	27.3 V	27.1 V	26.9 V	26.7 V	26.6 V
Rated current	I <sub>mpp</sub>	6.92 A	6.83 A	6.75 A	6.66 A	6.57 A	6.48 A
Open circuit voltage	V <sub>OC</sub>	34.4 V	34.2 V	33.9 V	33.7 V	33.5 V	33.2 V
Short circuit current	I <sub>SC</sub>	7.27 A	7.20 A	7.13 A	7.06 A	6.98 A	6.91 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<sub>max</sub> (STC) and NOCT)

## SOLON Blue 220/16 (polycrystalline)



### 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 <sub>max</sub>	255 Wp <sup>1)</sup>	250 Wp	245 Wp	240 Wp	235 Wp	230 Wp
Module efficiency		15.55 %	15.24 %	14.94 %	14.63 %	14.33 %	14.02 %
Rated voltage	V <sub>mpp</sub>	30.5 V	30.3 V	30.1 V	29.9 V	29.8 V	29.6 V
Rated current	I <sub>mpp</sub>	8.40 A	8.28 A	8.16 A	8.03 A	7.90 A	7.78 A
Open circuit voltage	V <sub>OC</sub>	37.5 V	37.4 V	37.2 V	37.0 V	36.9 V	36.7 V
Short circuit current	I <sub>SC</sub>	8.83 A	8.71 A	8.59 A	8.47 A	8.36 A	8.24 A
Maximum reverse current	I <sub>R</sub>	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<sub>max</sub>: ±3 %

Reduction of module efficiency from 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup>: <5 %

### Electrical data – typical (NOCT)

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

Power rating	P <sub>max</sub>	186 Wp	182 Wp	178 Wp	175 Wp	171 Wp	167 Wp
Rated voltage	V <sub>mpp</sub>	27.8 V	27.6 V	27.4 V	27.3 A	27.1 V	26.9 V
Rated current	I <sub>mpp</sub>	6.69 A	6.60 A	6.51 A	6.41 A	6.32 A	6.22 A
Open circuit voltage	V <sub>OC</sub>	34.3 V	34.1 V	34.0 V	33.8 V	33.7 V	33.5 V
Short circuit current	I <sub>SC</sub>	7.17 A	7.07 A	6.97 A	6.88 A	6.79 A	6.69 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<sub>max</sub> (STC) and NOCT)

<sup>1)</sup> 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	18.2 kg
Junction box	1 junction box with 3 bypass diodes (IP65)
Cable	Solar cable, length 1,000 mm, 4 mm <sup>2</sup> , prefabricated with MC4-combinable plug (IP67)
Application class	Application class A (according to IEC 61730)
Front glass	Transparent toughened safety glass, 3.2 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 <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>2)</sup>
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.

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

## Drawing

