

SOLON 220/16

Crystalline PV Module for all Applications

- High efficient monocrystalline and multicrystalline cell technology
- Wide product output range
- Positive sorting of power classes (0 to +4.99Wp)
- Certified salt mist resistance
- Performance stability without PID losses
- 10-year product warranty
- 5-level performance guarantee for 25 years
- Performance warranty backed by Munich Re Insurance



Made in UAE

SOLON 

SOLON 220/16 Black / Blue · EN



SOLON Quality for all project

SOLON Blue 220/16 and SOLON Black 220/16 are our standard products for all photovoltaic projects whether on residential rooftops or large industrial rooftops or ground mounted power plants. They combine quality and reliability at a fair price. With efficiency of over 16.8%, SOLON modules have the highest performance stability and longevity. All the modules are tested and comply with the most stringent safety standards.

Maximum Efficiency

- › 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 16.8%
- › No negative grounding required

Highest Stability and Longevity

- › Comprehensive lifespan tests, including outdoor and climate chamber tests
- › 34 mm anodized aluminum frame with twin-wall profile
- › Drain holes for outstanding weather-resistance
- › Corrosion-proof components
- › Stable energy generation with minimum deterioration

Superior Quality

- › All system components meet stringent SOLON quality criteria
- › Rigorous process and material monitoring
- › Outstanding workmanship
- › Continuous auditing using internal and external tests
- › SOLON modules are subjected to significantly enhanced durations in climate chamber test as compared with the test durations of IEC standards.

Reliability Safety and Certifications

- › Comprehensive SOLON warranties
- › High mechanical resistance: tested to 5,400 Pa (540 kg/m²)
- › Meets all International safety regulations
- › ISO, TUV & JET certified facility

PV Corporate Cover¹⁾

- › SOLON modules are insured by Munich Re PV Corporate Cover which guarantees the promised performance of SOLON modules for 25 years
- › SOLON's PV Corporate Cover - SOLON's Customer/Project Owner can avail PV Option Cover from Munich Re. This is an insurance solution that provides investment protection and superior bankability over the entire project life.

SOLON Advantages:

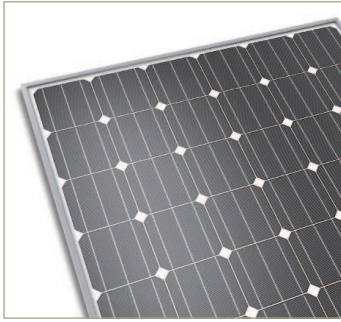
- › 10-year product warranty²⁾
- › 5-level performance guarantee for 25 years²⁾
- › Historical failure rate is less than 0.01%

¹⁾ Terms, Conditions and Jurisdictions apply.

²⁾ According to the SOLON Product and Performance Guarantee.

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

Power rating	P _{max}	275 Wp	270 Wp	265 Wp	260 Wp	255 Wp	250 Wp	245 Wp
Module efficiency		16.77 %	16.46 %	16.16 %	15.85 %	15.55 %	15.24 %	14.94 %
Rated voltage	V _{mpp}	31.0 V	30.9 V	30.7 V	30.5 V	30.2 V	30.0 V	29.8 V
Rated current	I _{mpp}	8.88 A	8.74 A	8.64 A	8.52 A	8.45 A	8.34 A	8.22 A
Open circuit voltage	V _{OC}	39.2 V	38.5 V	38.1 V	37.8 V	37.5 V	37.3 V	37.0 V
Short circuit current	I _{SC}	9.25 A	9.17 A	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	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	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}	199 Wp	194 Wp	191 Wp	186 Wp	183 Wp	179 Wp	175 Wp
Rated voltage	V _{mpp}	27.8 V	27.6 V	27.6 V	27.3 V	27.1 V	26.9 V	26.8 V
Rated current	I _{mpp}	7.16 A	7.03 A	6.92 A	6.83 A	6.76 A	6.66 A	6.57 A
Open circuit voltage	V _{OC}	35.8 V	34.9 V	34.4 V	34.2 V	33.9 V	33.8 V	33.7 V
Short circuit current	I _{SC}	7.48 A	7.37 A	7.27 A	7.20 A	7.13 A	7.08 A	7.01 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

Power rating	P _{max}	275 Wp	270 Wp	265 Wp	260 Wp	255 Wp	250 Wp	245 Wp
Module efficiency		16.77 %	16.46 %	16.16 %	15.85 %	15.55 %	15.24 %	14.94 %
Rated voltage	V _{mpp}	31.4 V	31.1 V	30.9 V	30.7 V	30.5 V	30.3 V	30.1 V
Rated current	I _{mpp}	8.76 A	8.69 A	8.58 A	8.47 A	8.36 A	8.25 A	8.14 A
Open circuit voltage	V _{OC}	38.7 V	38.4 V	38.0 V	37.7 V	37.5 V	37.4 V	37.2 V
Short circuit current	I _{SC}	9.20 A	9.15 A	9.10 A	8.95 A	8.83 A	8.71 A	8.59 A
Maximum reverse current I _R		20 A	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	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}	200 Wp	196 Wp	192 Wp	189 Wp	186 Wp	182 Wp	178 Wp
Rated voltage	V _{mpp}	28.6 V	28.3 V	28.1 V	27.9 V	27.8 V	27.6 V	27.4 V
Rated current	I _{mpp}	6.99 A	6.92 A	6.85 A	6.78 A	6.69 A	6.60 A	6.51 A
Open circuit voltage	V _{OC}	35.5 V	35.1 V	34.7 V	34.3 V	34.2 V	34.1 V	34.0 V
Short circuit current	I _{SC}	7.36 A	7.33 A	7.30 A	7.27 A	7.17 A	7.07 A	6.97 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)

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	18.2kg
Junction box	1 box with 3 bypass diodes (IP67)
Cable	Solar cable, length 1,500 mm, 4 mm ² , prefabricated with MC4-combinable plug (IP67)
Application class	Class A at IEC 61730
Front glass	Transparent toughened solar 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 drain holes

Permissible operating conditions

Temperature range	-40°C to +85°C
Maximum surface load	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

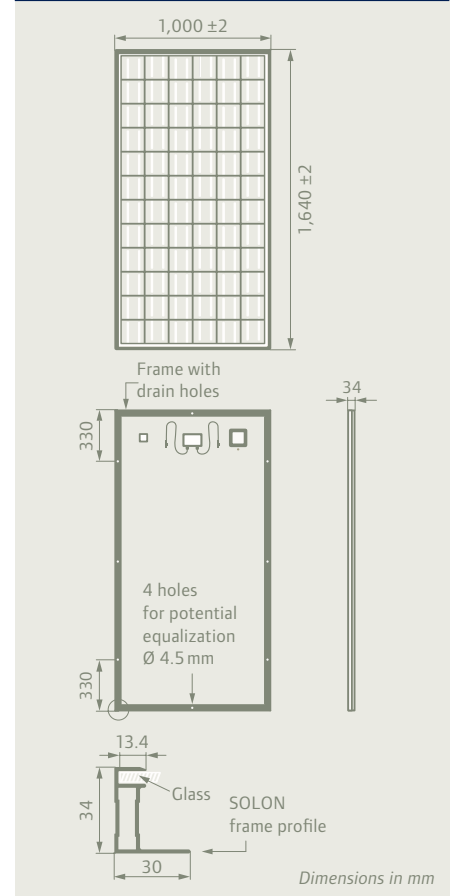
Guarantees and certifications

Product guarantee	10 years ²⁾
Performance guarantee	Guaranteed output of 95% for 5 years, 90% for 10 years, 87% for 15 years, 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



CEC Approved



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