SOLON Black 230/15

Monocrystalline solar modules.



- > Recognized SOLON quality
- > High-performance monocrystalline modules
- \rightarrow Efficiency of up to 14.6 %
- > Positive binning of power classes (0 to +4,99 Wp)
- > 0.16 in. (4 mm) solar glass and twin-wall frame profile for highest load capacity
- > 10 year product guarantee
- > 25 year, 5-stage performance guarantee
- > All-black design for attractive aesthetics



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Electrical specifications – typical (STC)

STC (Standard Test Conditions): 1,000 W/m 2 , 77 \pm 3.6°F (25 \pm 2°C), AM 1.5					
Capacity rating	P_{max}	240 Wp	235 Wp	230 Wp	225 Wp
Module efficiency		14.63%	14.33%	14.02%	13.72%
Rated voltage	V_{mpp}	29.62 V	29.41 V	29.20 V	29.00 V
Rated current	I _{mpp}	8.11 A	7.99 A	7.88 A	7.76 A
Open circuit voltage	V _{oc}	36.75 V	36.48 V	36.22 V	35.96 V
Short circuit current	I _{sc}	8.56 A	8.47 A	8.38 A	8.20 A
Series fuse rating	I _R	15 A	15 A	15 A	15 A
Maximum system voltage	V_{DC}	600 V	600 V	600 V	600 V

Measuring tolerance for P_{max} : $\pm 3 \%$

Reduction of module efficiency from 1,000 W/m 2 to 200 W/m 2 : <4%

Electrical specifications - typical (NOCT)

NOCT (Normal Operating Cell Temperature): 800 W/m², NOCT, AM 1.5

Capacity rating	P_{max}	172 Wp	169 Wp	165 Wp	161 Wp
Rated voltage	V_{mpp}	26.55 V	36.36 V	26.17 V	25.99 V
Rated current	I _{mpp}	6.48 A	6.39 A	6.30 A	6.21 A
Open circuit voltage	V _{oc}	33.22 V	32.97 V	32.74 V	32.50 V
Short circuit current	I _{sc}	6.91 A	6.84 A	6.77 A	6.69 A

Temperature coefficients (Tc)

Tc of open circuit voltage	-0.36 %/K
Tc of short circuit current	0.04 %/K
Tc of power	- 0.47 %/K

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

Mechanical specifications

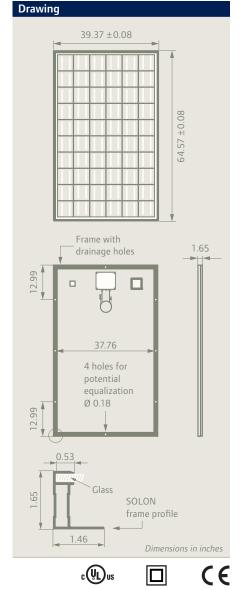
Dimensions (H x W x D)	64.57 x 39.37 x 1.65 in. (1,640 x 1,000 x 42 mm)
Weight	51.81 lbs (23.5 kg)
Junction box	1 Tyco junction box with bypass diodes
Cable	PV wire, length 39.37 in. (1,000 mm), 12 AWG (4 mm²), prefabricated with Tyco Solarlok connector
Front glass	Transparent tempered safety glass, 0.16 in. (4mm)
Solar cells	60 cells, monocrystalline, 6.14 x 6.14 in. (156 x 156 mm)
Cell encapsulation	EVA (Ethylene Vinyl Acetate)
Back side	Black composite film
Fire class	С
Frame	Black anodized aluminum frame with twin-wall profile and drainage holes

Permissible operating conditions

Temperature range	-40°F to + 185°F (-40°C to +85°C)
NOCT	118.4°F ± 3.6°F (48°C ± 2°C)
Maximum surface load capacity	Tested up to 5,400 Pa according to IEC 61215 (advanced test)
Resistance against hail	Maximum diameter of 1.1 in. (28 mm) with impact speed of 142.92 mph (230 km/h)

Guarantees and certifications

Product warranty	10 years 1)
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 ¹⁾
Approvals and certificates	UL and UL-C listed, CEC and FSEC registered



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