

Output classes 150 W - 170 W



solar module aleo s_03

aleo

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→ solar module aleo s_03 5 inch mono

Specifications

Description

Data at 1,000 W/m² (STC)¹

Rated output

Rated current

Rated voltage

Short-circuit current

Open-circuit voltage

Area-to-power ratio

Efficiency³

Data at 800 W/m² (NOCT)²

Output

Current

Voltage

Short-circuit current

Open-circuit voltage

Efficiency³

Classification range (positive classification)

Measurement accuracy P_{MPP}

Max. system voltage

Permissible module load⁴

Output class 150 W

aleo S_03 | 150

P _{MPP}	150 W
I _{MPP}	4.35 A
U _{MPP}	34.5 V
I _{SC}	4.80 A
U _{OC}	42.9 V
A _p	8.53 m ² /kWp
η(eta)	11.7%

P _{MPP}	107 W
I _{MPP}	3.48 A
U _{MPP}	30.8 V
I _{SC}	4.03 A
U _{OC}	39.1 V
η(eta)	10.5%

	-0 W/+4.99 W
	-3%/+3%
	1,000 V DC
	5,400 Pa

Output class 155 W

aleo S_03 | 155

P _{MPP}	155 W
I _{MPP}	4.46 A
U _{MPP}	34.7 V
I _{SC}	4.91 A
U _{OC}	43.1 V
A _p	8.26 m ² /kWp
η(eta)	12.1%

P _{MPP}	111 W
I _{MPP}	3.56 A
U _{MPP}	31.1 V
I _{SC}	4.04 A
U _{OC}	39.4 V
η(eta)	10.8%

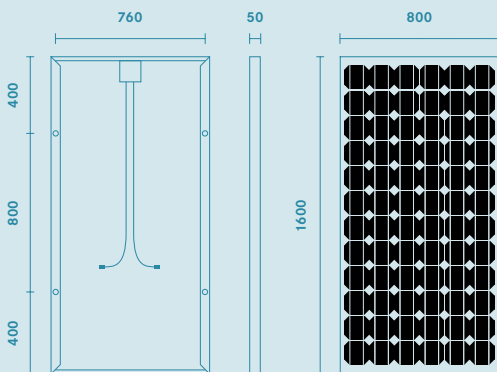
	-0 W/+4.99 W
	-3%/+3%
	1,000 V DC
	5,400 Pa

¹ Electrical values under standard test conditions (STC): 1,000 W/m²; 25°C; AM 1.5
² Electrical values under nominal operating cell temperature (NOCT): 800 W/m²; AM 1.5

³ For the module surface as a whole (1.28 m²)

⁴ In accordance with IEC 61215, 10.16 „Extended load test“, installation in accordance with the manual
 Datasheet tolerances, except for rated output: +/-10%

Dimensions [mm]



Additional information

Temperature coefficients

α (I_{SC})

β (U_{OC})

γ (P_{MPP})

Certification

IEC/EN 61215, IEC/EN 61730 and protection

Testing organization

VDE

Module dimensions

1600 x 800 x 50 mm

Weight

16 kg

Output class 160 W

aleo S_03 | 160

P_{MPP}	160 W
I_{MPP}	4.57 A
U_{MPP}	35.0 V
I_{SC}	5.03 A
U_{OC}	43.3 V
A_p	8.00 m ² /kWp
$\eta(\text{eta})$	12.5%

P_{MPP}	114 W
I_{MPP}	3.64 A
U_{MPP}	31.5 V
I_{SC}	4.05 A
U_{OC}	39.8 V
$\eta(\text{eta})$	11.2%

-0 W/+4.99 W
-3%/+3%
1,000 V DC
5,400 Pa

Output class 165 W

aleo S_03 | 165

P_{MPP}	165 W
I_{MPP}	4.69 A
U_{MPP}	35.2 V
I_{SC}	5.14 A
U_{OC}	43.5 V
A_p	7.76 m ² /kWp
$\eta(\text{eta})$	12.9%

P_{MPP}	118 W
I_{MPP}	3.72 A
U_{MPP}	31.8 V
I_{SC}	4.06 A
U_{OC}	40.1 V
$\eta(\text{eta})$	11.5%

-0 W/+4.99 W
-3%/+3%
1,000 V DC
5,400 Pa

Output class 170 W

aleo S_03 | 170

P_{MPP}	170 W
I_{MPP}	4.80 A
U_{MPP}	35.4 V
I_{SC}	5.25 A
U_{OC}	43.8 V
A_p	7.53 m ² /kWp
$\eta(\text{eta})$	13.3%

P_{MPP}	122 W
I_{MPP}	3.79 A
U_{MPP}	32.1 V
I_{SC}	4.07 A
U_{OC}	40.5 V
$\eta(\text{eta})$	11.9%

-0 W/+4.99 W
-3%/+3%
1,000 V DC
5,400 Pa

+0.03%/K
-0.35%/K
-0.48%/K

class II

Reduction in efficiency
From 1,000 W/m² to 200 W/m²

< 7%

Reverse current load

I_R 8 A

NOCT

47°C

Power guarantee

10 years: 90%, 25 years: 80%

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solar module aleo s_03

The aleo S_03 solar module is characterized by the state-of-the-art processing of high grade components. 72 monocrystalline silicon cells (5 inch | 125 mm x 125 mm) in each module ensure excellent performance, even with limited solar irradiation. A tight output tolerance of -3%/+3% and purely positive module classification (-0 W/+4.99 W) fulfil the highest standards.

The solar cells are embedded in EVA (ethylene-vinyl acetate), which is resistant to UV radiation. The frame consists of a torsionally rigid, corrosion-resistant aluminium alloy, giving the module stability and allowing it to be mounted in a variety of configurations.

The front panel of the module consists of thermally prestressed solar glass. As well as guaranteeing high light transmittance, the glass also protects the solar cells from external weathering influences such as hail, snow and ice. A polymer backsheets guarantees good insulation and long service life.

The junction box on the back is fitted with bypass diodes to prevent individual solar cells from overheating (hot-spot effect). Several solar modules can easily be connected in series by means of two pre-fitted 1.1 m solar cables with solar plugs.

aleo solar modules are certified according to the European and international IEC/EN 61215 and IEC/EN 61730 standards and fulfil the criteria for protection class II. The power guarantee is at least 90% up to 10 years, and at least 80% up to 25 years, subject to the terms and conditions of the limited warranty.

Please contact your qualified aleo dealer:

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