

Output classes 165 W - 185 W



Stiftung
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test



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Tested:
13 solar modules
Issue 5/2006

solar module aleo s_16

aleo

aleo

→ solar module aleo S_16 6 inch+ poly

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

Measurement accuracy P_{MPP}

Max. system voltage

Permissible module load⁴

Output class 165 W

aleo S_16 | 165

P _{MPP}	165 W
I _{MPP}	7.11 A
U _{MPP}	23.2 V
I _{SC}	7.69 A
U _{OC}	29.6 V
A _p	8.35 m ² /kWp
η(eta)	12.0%

P _{MPP}	117 W
I _{MPP}	5.71 A
U _{MPP}	20.6 V
I _{SC}	6.26 A
U _{OC}	26.8 V
η(eta)	10.7%

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

Output class 170 W

aleo S_16 | 170

P _{MPP}	170 W
I _{MPP}	7.26 A
U _{MPP}	23.4 V
I _{SC}	7.82 A
U _{OC}	29.8 V
A _p	8.10 m ² /kWp
η(eta)	12.3%

P _{MPP}	121 W
I _{MPP}	5.83 A
U _{MPP}	20.8 V
I _{SC}	6.35 A
U _{OC}	27.1 V
η(eta)	11.0%

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

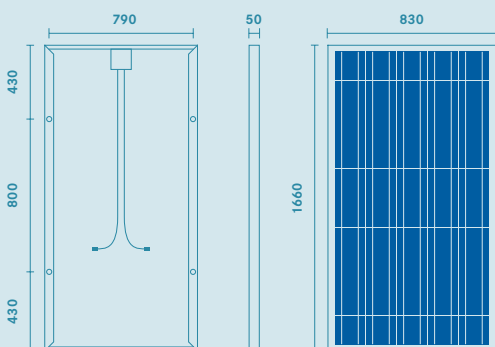
¹ Electrical values under standard test conditions (STC): 1,000 W/m²; 25°C; AM 1.5

² Electrical values under nominal operating cell temperature (NOCT): 800 W/m²; AM 1.5

³ For the module surface as a whole (1.3778 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

1660 x 830 x 50 mm

Weight

17 kg

Output class 175 W

aleo S_16 | 175

P_{MPP}	175 W
I_{MPP}	7.41 A
U_{MPP}	23.6 V
I_{SC}	7.95 A
U_{OC}	30.0 V
A_p	7.87 m ² /kWp
$\eta(\text{eta})$	12.7%

P_{MPP}	125 W
I_{MPP}	5.94 A
U_{MPP}	21.0 V
I_{SC}	6.43 A
U_{OC}	27.3 V
$\eta(\text{eta})$	11.3%

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

Output class 180 W

aleo S_16 | 180

P_{MPP}	180 W
I_{MPP}	7.55 A
U_{MPP}	23.8 V
I_{SC}	8.07 A
U_{OC}	30.2 V
A_p	7.65 m ² /kWp
$\eta(\text{eta})$	13.1%

P_{MPP}	128 W
I_{MPP}	6.06 A
U_{MPP}	21.2 V
I_{SC}	6.52 A
U_{OC}	27.5 V
$\eta(\text{eta})$	11.6%

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

Output class 185 W

aleo S_16 | 185

P_{MPP}	185 W
I_{MPP}	7.70 A
U_{MPP}	24.0 V
I_{SC}	8.20 A
U_{OC}	30.4 V
A_p	7.45 m ² /kWp
$\eta(\text{eta})$	13.4%

P_{MPP}	132 W
I_{MPP}	6.17 A
U_{MPP}	21.3 V
I_{SC}	6.60 A
U_{OC}	27.8 V
$\eta(\text{eta})$	11.9%

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

+0.04%/K
-0.34%/K
-0.48%/K

class II

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

< 6%

Reverse current load

I_R 15 A

NOCT

48°C

Power guarantee

10 years: 90%, 25 years: 80%

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VDE Prüfinstitut



solar module aleo S_16

The aleo S_16 solar module is characterized by the state-of-the-art processing of high grade components. 50 polycrystalline silicon cells (6 inch+ | 156 mm x 156 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 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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