

## solar module aleo S\_18

The aleo S\_18 solar module is characterized by the first-class processing of high-grade components. 60 multi-crystalline silicon cells (6 Inch+ | 156 mm x 156 mm) in each module ensure excellent performance, even with limited solar irradiation, while a tight output tolerance of +/- 3% and an absolute positive module classification meets the very 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 permeability, the glass also protects the solar cells from external weathering influences such as hail, snow and ice. A polyester-hybrid back-sheet guarantees good insulation and long service life.

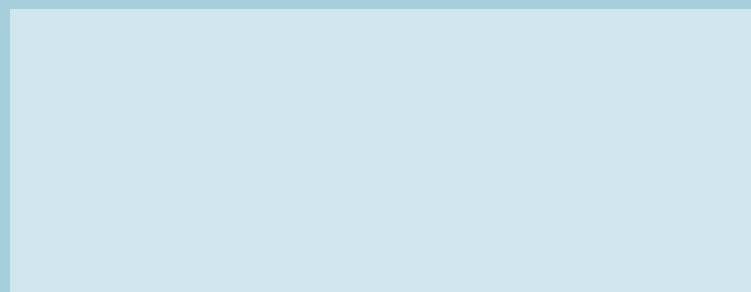
The junction box on the back is fitted with bypass diodes to prevent individual solar cells from overheating (hot-spot-effect). Several solar modules can easily be connected in series by means of a preassembled solar cable with connector.

aleo solar modules are certified according to the European and international IEC 61215:2005 standard and fulfill the criteria for protection class II. The limited power warranty is 90% at 10 years and 80% at 25 years of reported minimum output.

Output classes 210 W - 230 W



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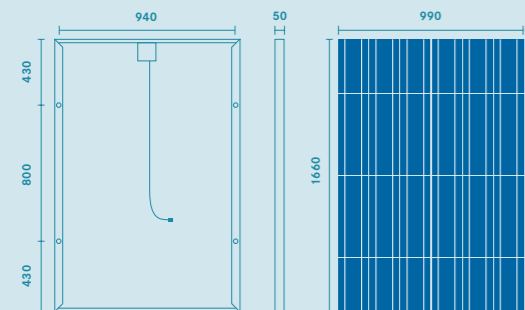
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aleo

## → solar module aleo s\_18 6-Inch+ cells

Specifications	output class 210 W	output class 215 W	output class 220 W	output class 225 W	output class 230 W
<b>Description</b>	aleo S_18   210	aleo S_18   215	aleo S_18   220	aleo S_18   225	aleo S_18   230
<b>Data at 1.000 W/m<sup>2</sup> (STC)*</b>					
<b>Rated output</b>	P <sub>MPP</sub> 210 W	P <sub>MPP</sub> 215 W	P <sub>MPP</sub> 220 W	P <sub>MPP</sub> 225 W	P <sub>MPP</sub> 230 W
<b>Rated voltage</b>	U <sub>MPP</sub> 28,4 V	U <sub>MPP</sub> 28,6 V	U <sub>MPP</sub> 28,8 V	U <sub>MPP</sub> 29,0 V	U <sub>MPP</sub> 29,2 V
<b>Short-circuit current</b>	I <sub>SC</sub> 8,00 A	I <sub>SC</sub> 8,11 A	I <sub>SC</sub> 8,22 A	I <sub>SC</sub> 8,33 A	I <sub>SC</sub> 8,44 A
<b>Open-circuit voltage</b>	U <sub>OC</sub> 36,2 V	U <sub>OC</sub> 36,3 V	U <sub>OC</sub> 36,4 V	U <sub>OC</sub> 36,5 V	U <sub>OC</sub> 36,6 V
<b>Max. system voltage</b>	1.000 V DC	1.000 V DC	1.000 V DC	1.000 V DC	1.000 V DC
<b>Data at 800 W/m<sup>2</sup> (NOCT)**</b>					
<b>Output</b>	P <sub>MPP</sub> 154 W	P <sub>MPP</sub> 158 W	P <sub>MPP</sub> 162 W	P <sub>MPP</sub> 166 W	P <sub>MPP</sub> 170 W
<b>Voltage</b>	U <sub>MPP</sub> 26,0 V	U <sub>MPP</sub> 26,3 V	U <sub>MPP</sub> 26,5 V	U <sub>MPP</sub> 26,8 V	U <sub>MPP</sub> 27,0 V
<b>Short-circuit current</b>	I <sub>SC</sub> 6,50 A	I <sub>SC</sub> 6,55 A	I <sub>SC</sub> 6,60 A	I <sub>SC</sub> 6,65 A	I <sub>SC</sub> 6,7 A
<b>Open-circuit voltage</b>	U <sub>OC</sub> 33,1 V	U <sub>OC</sub> 33,2 V	U <sub>OC</sub> 33,4 V	U <sub>OC</sub> 33,5 V	U <sub>OC</sub> 33,6 V
<b>Output tolerance</b>	+/- 3 %	+/- 3 %	+/- 3 %	+/- 3 %	+/- 3 %

### Dimensions



### General and thermal parameters

<b>Temperature coefficients</b>	$\alpha (I_{SC})$	+0,08 %/K
	$\beta (U_{OC})$	-0,33 %/K
<b>Certification</b>	IEC 61215:2005 and Schutzklasse II	
<b>Testing Institute</b>	VDE	
<b>Module dimensions</b>	1660 x 990 x 50 mm	
<b>Weight</b>	21 kg	

<b>Efficiency Reduction</b>	< 6 %
from 1.000 W/m <sup>2</sup> to 200 W/m <sup>2</sup>	
<b>Reverse current load</b>	I <sub>R</sub> 15 A
<b>NOCT</b>	47 °C

\* Electrical values under standard test conditions (STC): 1000W/m<sup>2</sup>; 25°C; AM 1,5  
 \*\* Electrical values under nominal operation cell temperature: 800 W/m<sup>2</sup>, NOCT, AM 1,5