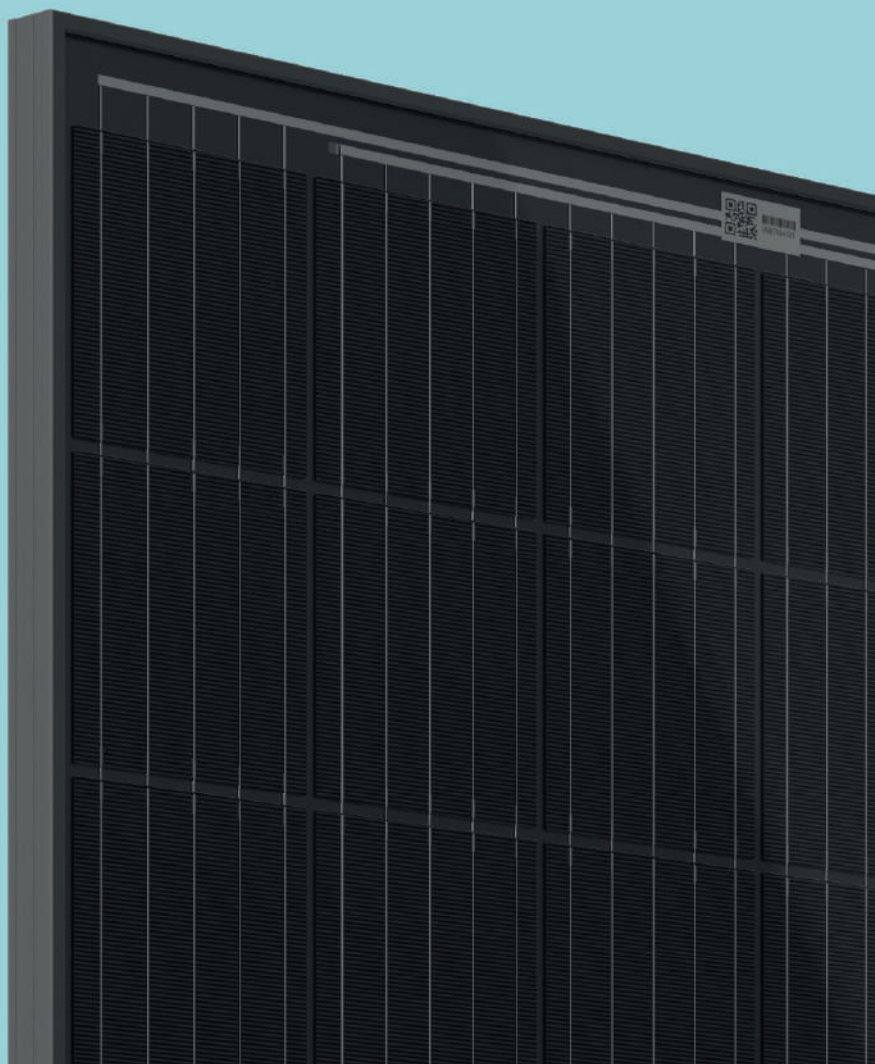


X83 Premium

320 - 330 W

 Made in
GERMANY



GERMAN ENGINEERING AND MANUFACTURING

Incorporated in 2001, aleo is recognized as one of the most trustworthy manufacturers of solar panels. We produce all our products in our certified production plant in Prenzlau, Germany.

THE BEST GUARANTEE PACKAGE

 25 Years Product Guarantee  25 Years linear Performance Guarantee

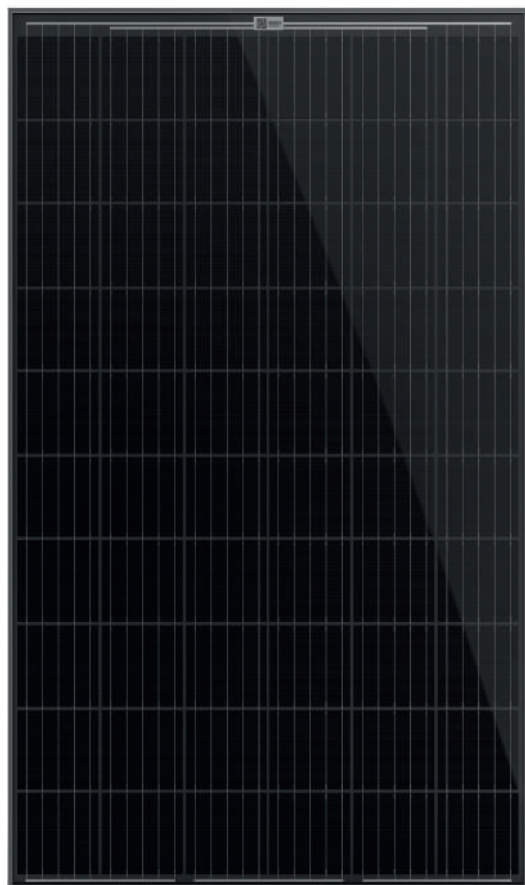
98% of nominal power guaranteed in the first two years

OUR QUALITY IS CERTIFIED

This module is certified according to the latest international standards: **IEC 61215:2016** and **IEC 61730:2016**.

Additionally, this module obtained the following certificates:

- + Snail Trail Free
- + Salt mist corrosion resistance
- + Ammonia corrosion resistance
- + Sand and dust resistance
- + PID resistance
- + LeTID resistance
- + Hail resistance class 4
- + Pressure load: 8000 Pa - suction load: 5400 Pa
- + Dynamic mechanical load test



aleo solar module X83 Premium

ELECTRICAL DATA (STC)		X83L320	X83L325	X83L330	BASIC MODULE DATA	
Rated power	P_{MPP} [W]	320	325	330	Length x width x height	[mm] 1716 x 1023 x 42
Rated voltage	V_{MPP} [V]	32.6	32.8	33.1	Weight	[kg] 19.5
Rated current	I_{MPP} [A]	9.81	9.90	9.97	Number of cells	60
Open-circuit voltage	V_{OC} [V]	40.3	40.5	40.6	Cell size	[mm] 158.75 x 158.75
Short-circuit current	I_{SC} [A]	10.32	10.40	10.49	Cell material	Monocrystalline Si, PERC
Efficiency	η [%]	18.2	18.5	18.8	Number of bus bars	5

Electrical values measured under standard test conditions (STC): 1000 W/m²; 25°C; AM 1.5

ELECTRICAL DATA (NMOT)		X83L320	X83L325	X83L330
Power	P_{MPP} [W]	236	240	244
Voltage	V_{MPP} [V]	30.2	30.4	30.7
Current	I_{MPP} [A]	7.82	7.90	7.95
Open-circuit voltage	V_{OC} [V]	37.7	37.9	38.0
Short-circuit current	I_{SC} [A]	8.31	8.38	8.45
Efficiency	η [%]	16.8	17.1	17.4

Electrical values measured under nominal module operating temperature: 800 W/m²; 20°C; AM 1.5; wind 1 m/s; Module temperature NMOT : 45.5°C

ELECTRICAL DATA (LOW IRRADIANCE)		X83L320	X83L325	X83L330
Power	P_{MPP} [W]	62	63	64

Electrical values measured under: 200 W/m²; 25°C; AM 1.5

TEMPERATURE COEFFICIENTS			
Temperature coefficient I_{SC}	$\alpha (I_{SC})$	[%/K]	+0.05
Temperature coefficient V_{OC}	$\beta (V_{OC})$	[%/K]	-0.29
Temperature coefficient P_{MPP}	$\gamma (P_{MPP})$	[%/K]	-0.40

BASIC DATA JUNCTION BOX	
Length x width x height	[mm] 148 x 123 x 27
IP class	IP67
Cable length	[mm] 1200 (+), 800 (-)
Connectors	Genuine MC4
Bypass diodes	3

CLASSIFICATION	X83L320	X83L325	X83L330
Classification range (positive classification)	[W] 0/+4.99	0/+4.99	0/+2.99

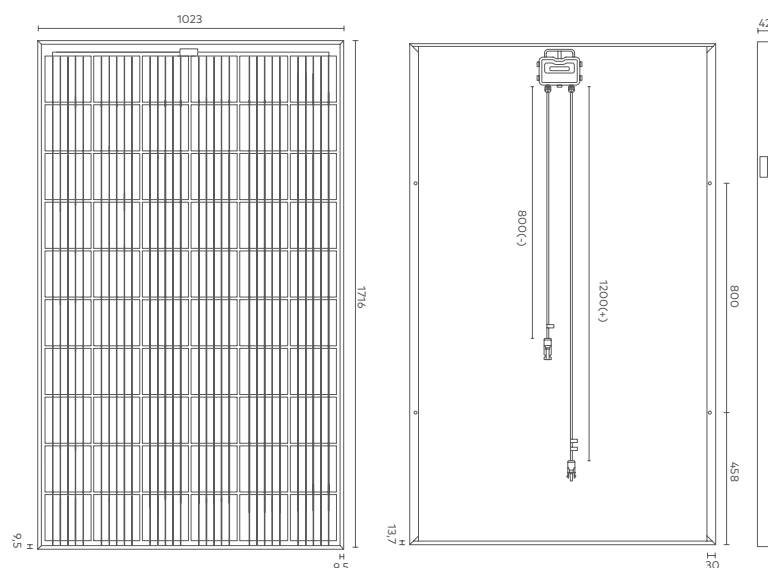
CERTIFICATIONS	
Fire Resistance	Class C
Protection Against Electric Shock	II
IEC 61215:2016, IEC 61730:2016	
IEC 62716 – Ammonia Resistance	
IEC 61701 – Salt mist Resistance	
IEC 62804 – PID Resistance	
LeTID Resistance	
IEC/TS 62782:2016 - Dynamic mechanical load testing	
IEC 60068-2-68:1994 - Sand and Dust test	

Hail resistance class 4 (40 mm hail stones)	
Snail trail free (AgNP Test)	

LOADS		
Max. module pressure load (Testload)	[Pa]	8000 ¹
Max. module pressure load (Designload) ²	[Pa]	5333 ¹
Max. module suction load (Testload)	[Pa]	5400 ¹
Max. module suction load (Designload) ²	[Pa]	3600 ¹
Max. system voltage	[V _{oc}]	1000
Reverse current load	I_R [A]	20

Mechanical load acc. to IEC/EN 61215:2016
¹ Please observe the mounting conditions in the installation manual
² Testload/ Safety factor 1.5 = Designload
 Measurement tolerance of P_{MPP} under STC -3/+3% |
 Accuracy of other electrical values -10/+10%
 Efficiency relating to gross module area

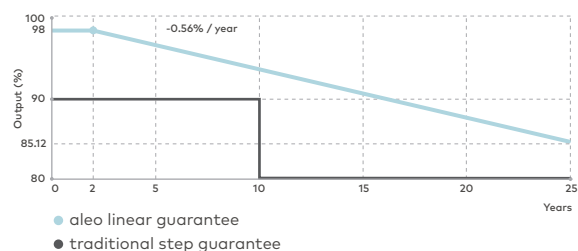
DIMENSIONS [mm]



GUARANTEES

Product Guarantee	25 years
Power Guarantee	25 years – Linear

PERFORMANCE GUARANTEE



PLEASE CONTACT YOUR AUTHORISED ALEO DEALER



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