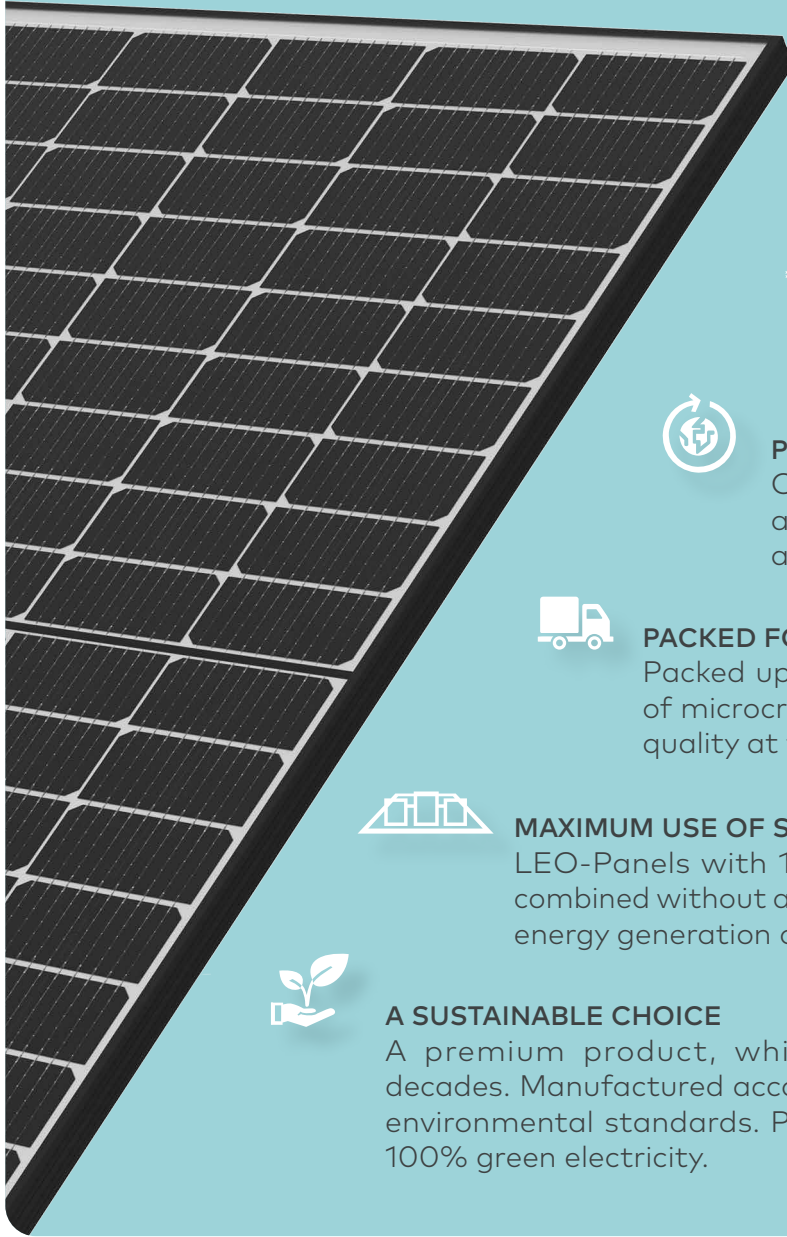


LEO 400-415 W

Premium PV Panel

The durable one.
For a green planet.



GENERATE MORE POWER

Shows an extremely high resistance to degradation phenomena (PID & LeTID).



EXTREMELY WEATHER RESISTANT

Certified to withstand 8100 Pa Snowload & 3600 Pa Windload & 40 mm Hailstones (Hail-Class 4).



POWERFUL IN ALL ENVIRONMENTS

Certified to perform in coastal areas (salt-mist), deserts (dust) and farmland (ammonia).



PACKED FOR SAFE TRANSPORT

Packed upright, avoiding the emergence of microcracks and thus ensuring factory quality at the place of delivery.



MAXIMUM USE OF SPACE

LEO-Panels with 108 & 96 cells can be combined without add-ons. For maximum energy generation on the roof.



A SUSTAINABLE CHOICE

A premium product, which lasts for decades. Manufactured according to rigid environmental standards. Produced with 100% green electricity.

MADE IN GERMANY!

Right here. In Prenzlau. In our production facility.
Here we manufacture under the aspects of quality & durability since 2001.

FULL SERENITY



25 Years linear
Power Guarantee



25 Years
Product Warranty

100% cost recovery of guarantee claims.

Under the terms and conditions of the respective guarantee certificate.

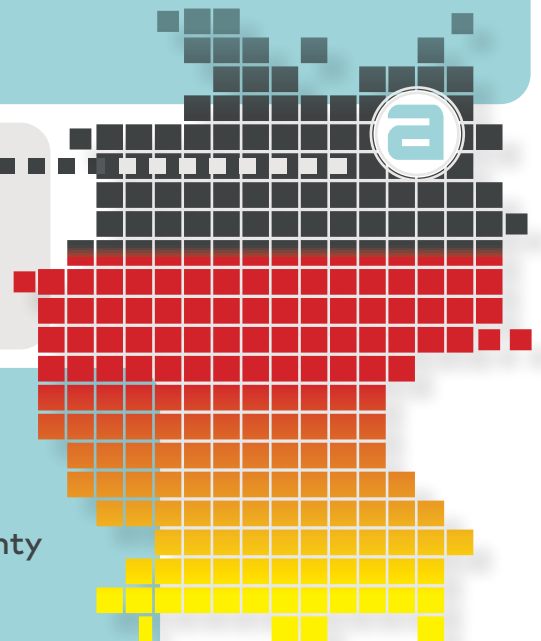
QUALITY UNDER HAND AND SEAL



Design optimized with

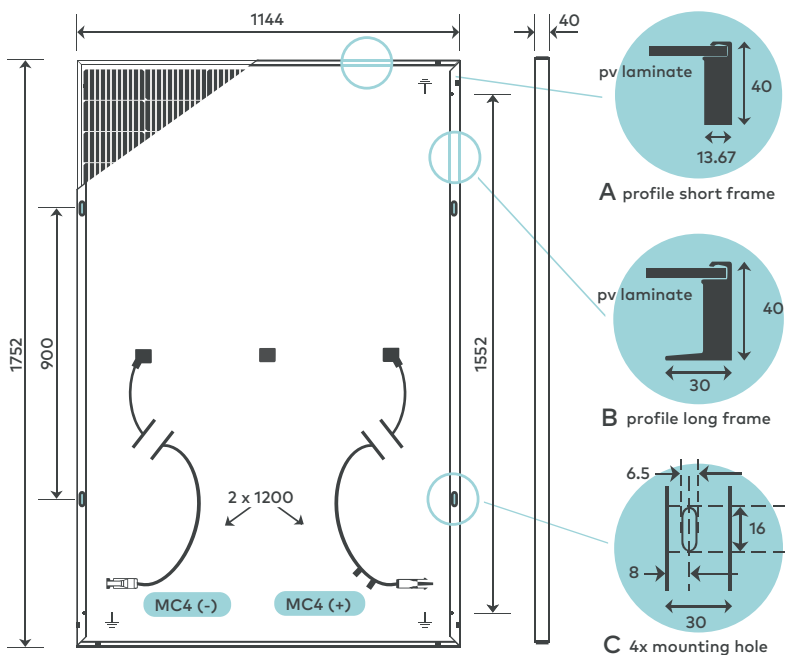
SmartCalc.Module

aleo
www.aleo-solar.com



aleo solar panel LEO 400-415 W Premium

DIMENSIONS [mm]



BASIC MODULE DATA

Length x width x height	[mm]	1752 x 1144 x 40
Weight	[kg]	22
Number of cells		108
Cell size	[mm]	182 x 91
Cell material		Monocrystalline Si, PERC
Number of Busbars		10
Front sheet		3.2 mm Solar glass (TSG) with anti-reflective coating
Back sheet		Polymer sheet, white
Frame material		Al alloy, black

BASIC DATA JUNCTION BOX

3 parts junction box acc. to IEC 62790	[mm]	left & right: 62 x 58 x 14 middle: 49 x 55 x 14
Bypass diodes		3 (one per box)
IP class		IP68
Cable	[mm]	1200 (+), 1200 (-) acc. to EN 50618
Connectors		genuine MC4 acc. to EN 62852

ELECTRICAL DATA (STC)

		L64S400	L64S405	L64S410	L64S415
Rated power	P_{MPP} [W]	400	405	410	415
Rated voltage	V_{MPP} [V]	31.14	31.34	31.53	31.72
Rated current	I_{MPP} [A]	12.84	12.92	13.00	13.08
Open-circuit voltage	V_{OC} [V]	37.08	37.20	37.32	37.44
Short-circuit current	I_{SC} [A]	13.46	13.55	13.63	13.71
Efficiency	η [%]	20.0	20.2	20.5	20.7

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

ELECTRICAL DATA (LOW IRRADIANCE)

		L64S400	L64S405	L64S410	L64S415
Power	P_{MPP} [W]	77	78	79	80

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

Measurement tolerance of P_{MPP} under STC -3/+3 %

Accuracy of other electrical values -10/+10 %

Efficiency relating to gross module area

CLASSIFICATION

Classification range (positive classification) [W] 0/+4.99

CERTIFICATIONS

Fire Resistance Class C (IEC 61730), E (EN 13501-1), B2 (DIN 4102-1), 1 (UNI 9177)

Protection Against Electric Shock II

IEC 61215:2021, IEC 61730:2016 including:

- IEC 62804 – PID Resistance

- IEC/TS 62782:2016 - Dynamic mechanical load testing

IEC 62716 – Ammonia Resistance

LeTID Resistance

IEC 61701 – Salt mist Resistance

IEC 60068-2-68:1994 - Sand- and Dust test

Hail resistance class 4 (40 mm hailstones)

Snail trail free (AgNP Test)

System Certifications acc. to DIN EN ISO 9001:2015, 14001:2015, 50001:2018 and DIN ISO 45001:2018

LOADS

Max. module pressure load (Testload)	[Pa]	8100 ¹
Max. module pressure load (Designload) ²	[Pa]	5400 ¹
Max. module suction load (Testload)	[Pa]	3600 ¹
Max. module suction load (Designload) ²	[Pa]	2400 ¹
Max. system voltage	[V _{oc}]	1000
Reverse current load	I_r [A]	25

Mechanical load acc. to IEC/EN 61215:2021

¹ Please observe the mounting conditions in the installation manual

² Testload/Safety factor 1.5 = Designload

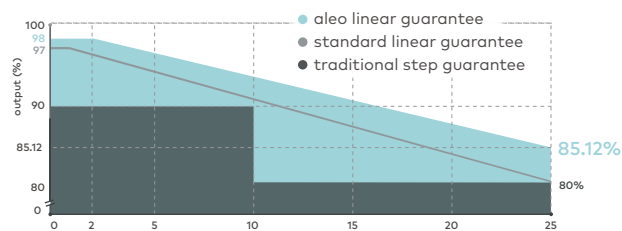
TEMPERATURE COEFFICIENTS

Temperature coefficient I_{SC}	$\alpha (I_{SC})$	[%/K]	+0.03
Temperature coefficient V_{OC}	$\beta (V_{OC})$	[%/K]	-0.26
Temperature coefficient P_{MPP}	$\gamma (P_{MPP})$	[%/K]	-0.34

GUARANTEES

Product Guarantee	25 years
Power Guarantee	25 years – linear

PERFORMANCE GUARANTEE



PLEASE CONTACT YOUR AUTHORISED ALEO DEALER

ALEO SOLAR GMBH

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GERMANY

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