

# LEO Black 385-400 W

Premium PV Panel

The durable one.  
For a green planet.



## ELEGANT BLACK ROOF

Thanks to covered cross-connectors and improved cell connector optics, LEO Black is darker and looks more homogeneous.



## 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).



## 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



Years linear  
**Power Guarantee**



Years  
**Product Warranty**

100% cost recovery of guarantee claims.  
Under the terms and conditions of the respective guarantee certificate.

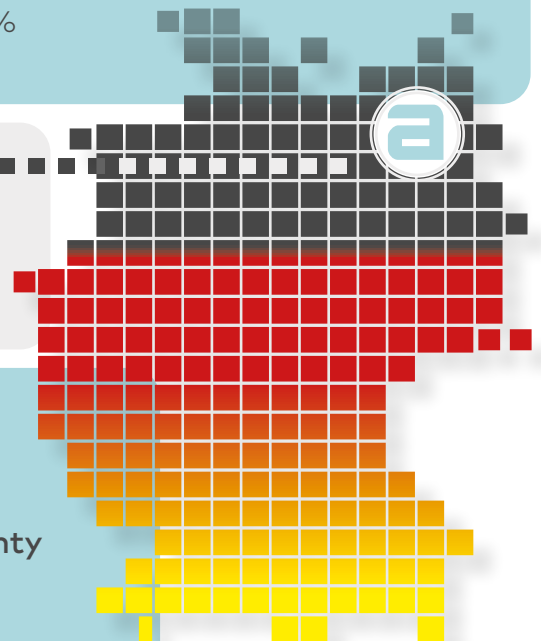
QUALITY UNDER HAND AND SEAL



Design optimized with

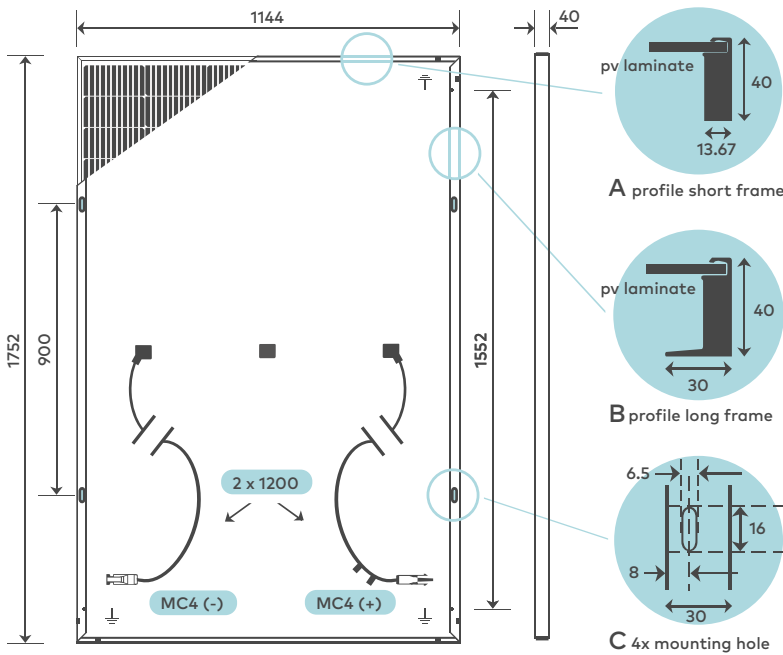
SmartCalc.Module

**aleo**  
www.aleo-solar.com



# aleo solar panel LEO Black 385-400 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, black
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)		L84S385	L84S390	L84S395	L84S400
Rated power	$P_{MPP}$ [W]	385	390	395	400
Rated voltage	$V_{MPP}$ [V]	31.21	31.40	31.60	31.79
Rated current	$I_{MPP}$ [A]	12.34	12.42	12.50	12.58
Open-circuit voltage	$V_{OC}$ [V]	37.05	37.17	37.29	37.41
Short-circuit current	$I_{SC}$ [A]	12.94	13.02	13.10	13.18
Efficiency	$\eta$ [%]	19.2	19.5	19.7	20.0

Electrical values measured under standard test conditions (STC): 1000 W/m<sup>2</sup>; 25 °C; AM 1.5

ELECTRICAL DATA (LOW IRRADIANCE)		L84S380	L84S385	L84S390	L84S395
Power	$P_{MPP}$ [W]	73	74	75	76

Electrical values measured under: 200 W/m<sup>2</sup>; 25 °C; AM 1.5  
Measurement tolerance of  $P_{MPP}$  under STC -3/+3 %  
Accuracy of other electrical values -10/+10 %  
Efficiency related 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)

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 <sup>1</sup>
Max. module pressure load (Designload) <sup>2</sup>	[Pa]	5400 <sup>1</sup>
Max. module suction load (Testload)	[Pa]	3600 <sup>1</sup>
Max. module suction load (Designload) <sup>2</sup>	[Pa]	2400 <sup>1</sup>
Max. system voltage	[V <sub>oc</sub> ]	1000
Reverse current load	$I_R$ [A]	25

Mechanical load acc. to IEC/EN 61215:2021

<sup>1</sup> Please observe the mounting conditions in the installation manual  
<sup>2</sup> Testload/Safety factor 1.5 = Designload

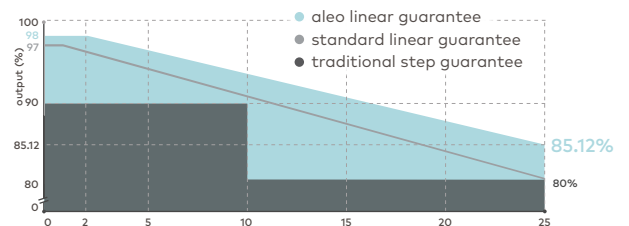
## TEMPERATURE COEFFICIENTS

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

Marius-Eriksen-Straße 1  
17291 PRENZLAU  
GERMANY

## CONTACT

+49 3984-8328-0  
info@aleo-solar.com  
www.aleo-solar.com

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# aleo