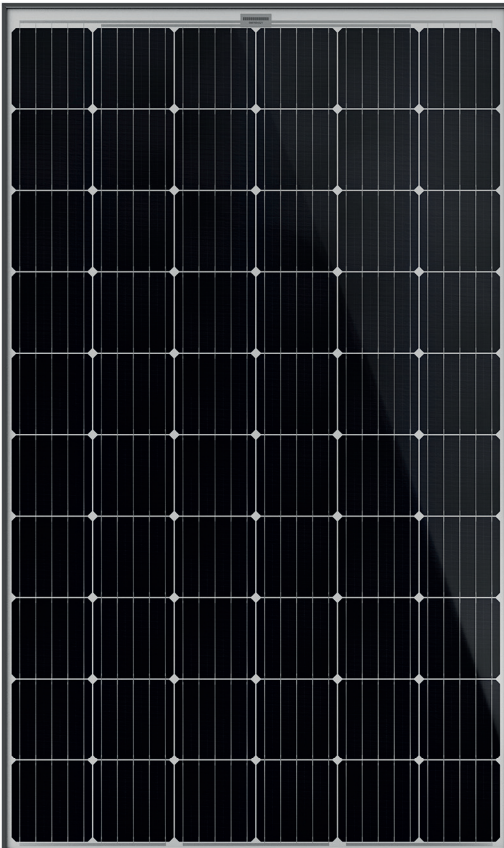


X59

310 - 320W



QUALITY SIGNED AND SEALED



8000 Pa PRESSURE LOAD

25 YEAR PRODUCT GUARANTEE

**98% OF NOMINAL POWER GUARANTEED
IN THE FIRST TWO YEARS**



25 YEARS PRODUCT GUARANTEE



CRAFTED WITH PASSION



**25 YEARS LINEAR
PERFORMANCE WARRANTY**



CONSTANTLY HIGH CELL QUALITY
through strict quality examinations
by high-resolution electroluminescence
measurements.
100% of diodes are tested.



- MADE IN GERMANY -

aleo solar module X59 HE

ELECTRICAL DATA (STC)		X59L310	X59L315	X59L320	BASIC MODULE DATA	
Rated power	P_{MPP} [W]	310	315	320	Length x width x height	[mm] 1660 x 990 x 42
Rated voltage	V_{MPP} [V]	32.7	33.0	33.2	Weight	[kg] 19
Rated current	I_{MPP} [A]	9.47	9.56	9.64	Number of cells	60
Open-circuit voltage	V_{OC} [V]	39.8	40.0	40.2	Cell size	[mm] 156.75 x 156.75
Short-circuit current	I_{SC} [A]	9.98	10.06	10.14	Cell material	Monocrystalline Si, PERC
Efficiency	η [%]	18.9	19.2	19.5	Number of bus bars	5

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

ELECTRICAL DATA (NMOT)		X59L310	X59L315	X59L320
Power	P_{MPP} [W]	229	233	237
Voltage	V_{MPP} [V]	30.3	30.6	30.8
Current	I_{MPP} [A]	7.55	7.62	7.69
Open-circuit voltage	V_{OC} [V]	37.2	37.4	37.6
Short-circuit current	I_{SC} [A]	8.04	8.10	8.17
Efficiency	η [%]	17.4	17.7	18.0

Electrical values measured under nominal module operating temperature: 800 W/m²; 20°C; AM 1.5; wind 1 m/s; Module temperature NMOT : 44.5°C

ELECTRICAL DATA (LOW IRRADIANCE)		X59L310	X59L315	X59L320
Power	P_{MPP} [W]	60	61	62

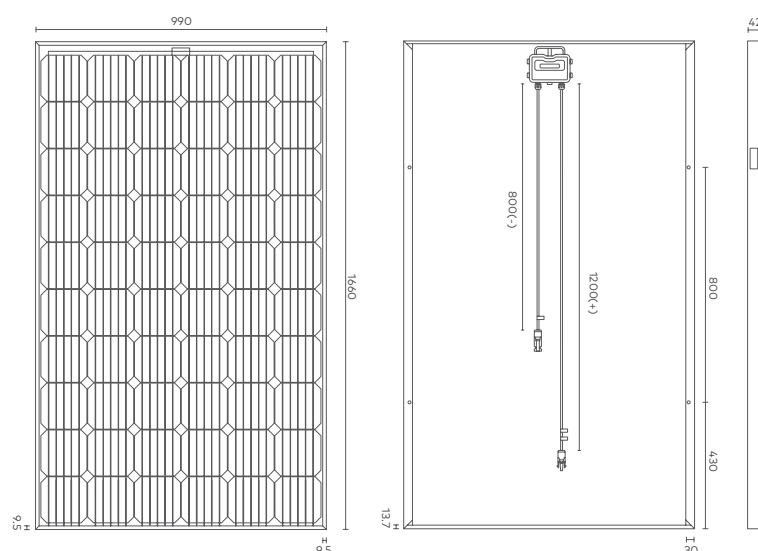
Electrical values measured under: 200 W/m²; 25°C; AM 1.5

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 (PV-KST4-EVO)	
Bypass diodes		3	

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

DIMENSIONS [mm]



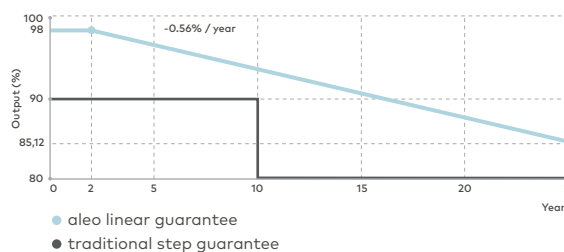
CERTIFICATIONS AND WARRANTY	
Product Guarantee	25 years
Power Guarantee	25 years – Linear
Fire Resistance	Class C
Protection Against Electric Shock	II
Certifications	IEC 61215:2016, IEC 61730:2016 MCS 010; MCS 005

LOADS		
Max. module pressure load (Testload)	[Pa]	8000 ¹
Max. module pressure load (Designload) ²	[Pa]	5333 ¹
Max. module suction load (Testload)	[Pa]	2400 ¹
Max. module suction load (Designload) ²	[Pa]	1600 ¹
Max. system voltage	[V _{DC}]	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

Tolerance of P_{MPP} under STC -3/+3% |
 Tolerance of other electrical values -10/+10%
 Efficiency relating to gross module area

PERFORMANCE GUARANTEE



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