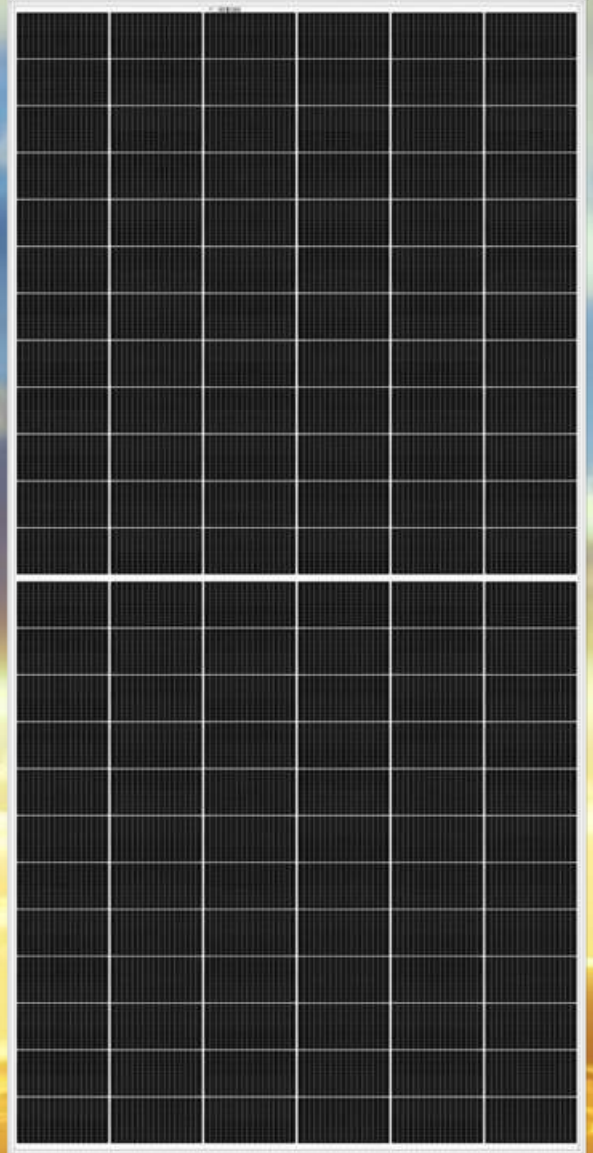


SOLAR'S MOST TRUSTED



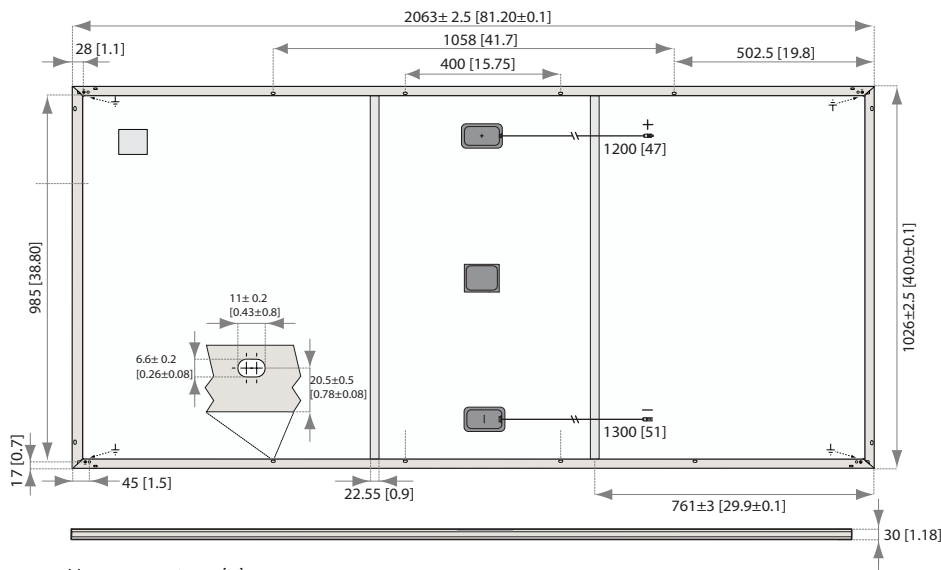
# REC ALPHA 72 SERIES

450  
WP  
POWER

EXPERIENCE  
**α**  
PERFORMANCE

# REC ALPHA 72 SERIES

## PRODUCT DATASHEET



### CERTIFICATIONS

IEC 61215:2016, IEC 61730:2016, UL 1703, UL 61730	
IEC 62804	PID
IEC 61701	Salt Mist
IEC 62716	Ammonia Resistance
ISO 11925-2	Ignitability (Class E)
IEC 62782	Dynamic Mechanical Load
IEC 61215-2:2016	Hailstone (35mm)
AS4040.2 NCC 2016	Cyclic Wind Load
ISO 14001:2004, ISO 9001:2015, OHSAS 18001:2007	



### WARRANTY\*

	Standard	REC ProTrust	
Installed by an REC Certified Solar Professional	No	Yes	Yes
System Size	All	≤25 kW	25-500 kW
Product Warranty (yrs)	20	25	25
Power Warranty (yrs)	25	25	25
Labor Warranty (yrs)	0	25	10
Power in Year 1	98%	98%	98%
Annual Degradation	0.25%	0.25%	0.25%
Power in Year 25	92%	92%	92%

See warranty documents for details. Conditions apply.

### MAXIMUM RATINGS

Operational temperature:	-40 ... +85°C
Maximum system voltage:	1500 V
Design load (+): snow	3600 Pa (367 kg/m <sup>2</sup> )*
Maximum test load (+):	5400 Pa (550 kg/m <sup>2</sup> )*
Design load (-): wind	1600 Pa (163 kg/m <sup>2</sup> )*
Maximum test load (-):	2400 Pa (245 kg/m <sup>2</sup> )*
Max series fuse rating:	25 A
Max reverse current:	25 A

\* Calculated using a safety factor of 1.5  
\* See installation manual for mounting instructions

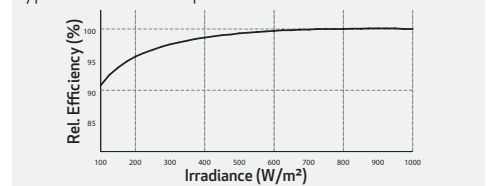
### TEMPERATURE RATINGS\*

Nominal Module Operating Temperature:	44°C (±2°C)
Temperature coefficient of P <sub>MAX</sub> :	-0.26 %/°C
Temperature coefficient of V <sub>OC</sub> :	-0.24 %/°C
Temperature coefficient of I <sub>SC</sub> :	0.04 %/°C

\*The temperature coefficients stated are linear values

### LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



### GENERAL DATA

Cell type:	144 half-cut cells with REC heterojunction cell technology 6 strings of 24 cells in series	Connectors:	Stäubli MC4 Evo2 PV-KBT4-EVO-2/PV-KST4-EVO-2 (4mm <sup>2</sup> ) in accordance with IEC 62852 IP68 only when connected
Glass:	3.2 mm solar glass with anti-reflection surface treatment	Cable:	4 mm <sup>2</sup> solar cable, 1.2 m + 1.3 m in accordance with EN 50618
Backsheet:	Highly resistant polymeric construction	Dimensions:	2063 x 1026 x 30 mm (2.12 m <sup>2</sup> )
Frame:	Anodized aluminum	Weight:	23.5 kg
Junction box:	3-part, 3 bypass diodes, IP67 rated in accordance with IEC 62790	Origin:	Made in Singapore

### ELECTRICAL DATA

Product Code\*: RECxxxAA 72

	430	435	440	445	450
Nominal Power - P <sub>MAX</sub> (Wp)	430	435	440	445	450
Watt Class Sorting - (W)	-0/+5	-0/+5	-0/+5	-0/+5	-0/+5
Nominal Power Voltage - V <sub>MPP</sub> (V)	45.1	45.4	45.7	46.0	46.3
Nominal Power Current - I <sub>MPP</sub> (A)	9.54	9.59	9.63	9.68	9.72
Open Circuit Voltage - V <sub>OC</sub> (V)	52.7	52.9	53.0	53.2	53.2
Short Circuit Current - I <sub>SC</sub> (A)	10.25	10.27	10.31	10.38	10.43
Power Density (W/m <sup>2</sup> )	203.79	206.16	208.53	210.90	213.27
Panel Efficiency (%)	20.4	20.6	20.8	21.0	21.3
Nominal Power - P <sub>MAX</sub> (Wp)	327	331	335	339	342
Nominal Power Voltage - V <sub>MPP</sub> (V)	42.5	42.7	43.1	43.3	43.6
Nominal Power Current - I <sub>MPP</sub> (A)	7.71	7.75	7.78	7.82	7.85
Open Circuit Voltage - V <sub>OC</sub> (V)	49.7	49.8	49.9	50.1	50.1
Short Circuit Current - I <sub>SC</sub> (A)	8.28	8.29	8.33	8.38	8.42

Values at standard test conditions (STC: air mass AM1.5, irradiance 1000 W/m<sup>2</sup>, temperature 25°C), based on a production spread with a tolerance of P<sub>MAX</sub>, V<sub>OC</sub> & I<sub>SC</sub> ±3% within one watt class.

Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m<sup>2</sup>, temperature 20°C, windspeed 1 m/s).

\*Where xxx indicates the nominal power class (P<sub>MAX</sub>) at STC above.

Founded in Norway in 1996, REC is a leading vertically integrated solar energy company. Through integrated manufacturing from silicon to wafers, cells, high-quality panels and extending to solar solutions, REC provides the world with a reliable source of clean energy. REC's renowned product quality is supported by the lowest warranty claims rate in the industry. REC is a Bluestar Elkem company with headquarters in Norway and operational headquarters in Singapore. REC employs around 2,000 people worldwide, producing 1.5 GW of solar panels annually.

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