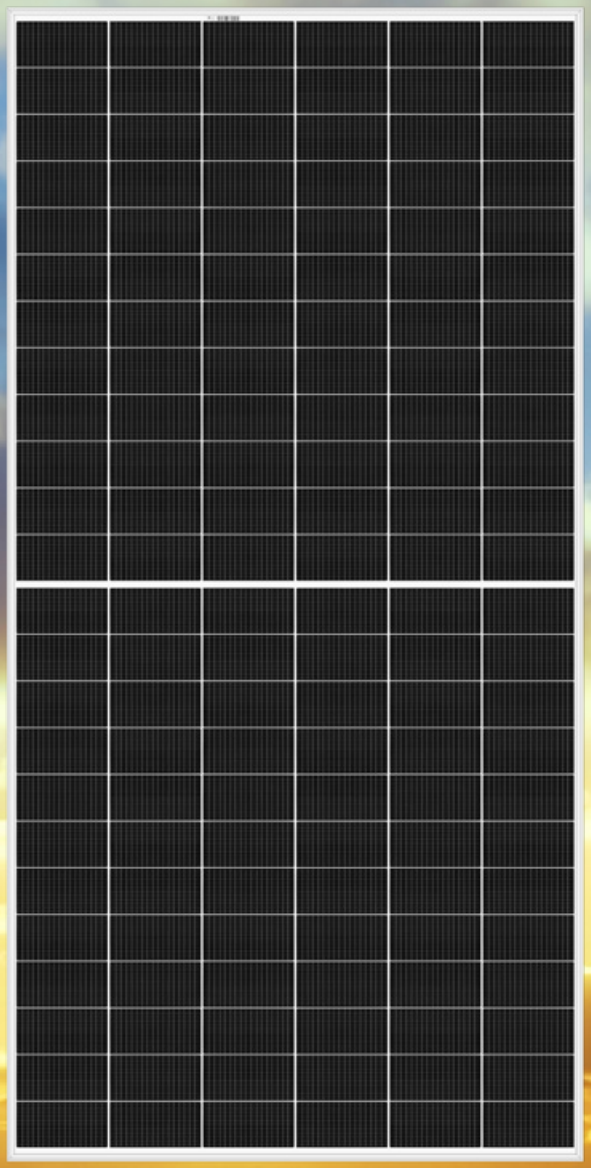
SOLAR'S MOST TRUSTED

REC

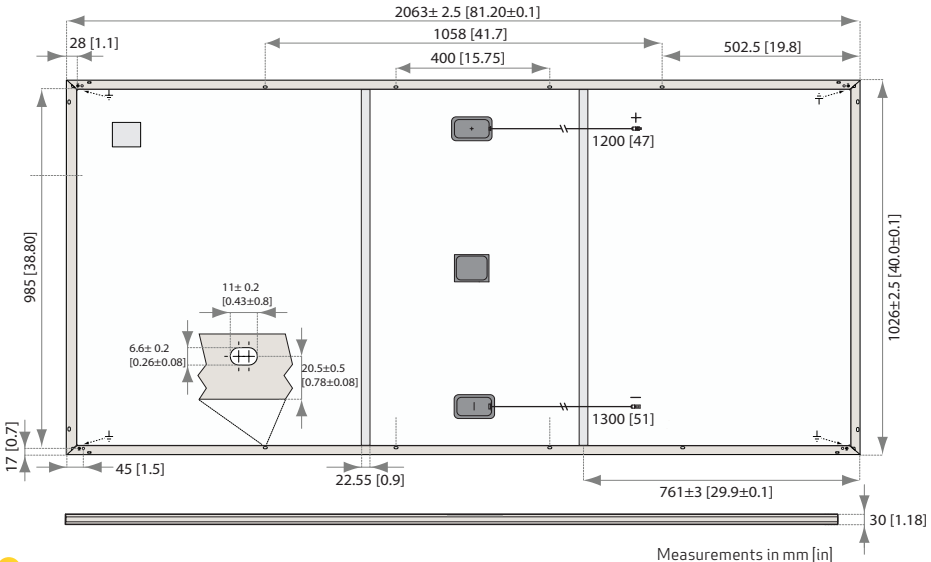


REC ALPHα 72 SERIES

450 WP POWER

EXPERIENCE α PERFORMANCE

REC ALPHA 72 SERIES
PRODUCT DATASHEET



Measurements in mm [in]

GENERAL DATA

Cell type:	144 half-cut cells with REC heterojunction cell technology 6 strings of 24 cells in series	Connectors:	Stäubli MC4 Evo 2 PV-KBT4-EVO-2/PV-KST4-EVO-2 (4 mm²) in accordance with IEC 62852 IP68 only when connected
Glass:	0.13 in (3.2 mm) solar glass with anti-reflection surface treatment	Cable:	12 AWG (4 mm²) PV wire, 47 + 51 in (1.2+1.3 m) in accordance with EN 50618
Backsheet:	Highly resistant polymeric construction	Dimensions:	81.2 x 40 x 1.2 in (2063 x 1026 x 30 mm) 22.7 sq ft (2,12 m²)
Frame:	Anodized aluminum	Weight:	52 lbs (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

STC	Nominal Power - P_{MAX} (Wp)	430	435	440	445	450
	Watt Class Sorting - (W)	-0/+5	-0/+5	-0/+5	-0/+5	-0/+5
	Nominal Power Voltage - V_{MPP} (V)	45.1	45.4	45.7	46.0	46.3
	Nominal Power Current - I_{MPP} (A)	9.54	9.59	9.63	9.68	9.72
	Open Circuit Voltage - V_{OC} (V)	52.7	52.9	53.0	53.2	53.2
	Short Circuit Current - I_{SC} (A)	10.25	10.27	10.31	10.38	10.43
	Power Density (W/sq ft)	18.95	19.16	19.38	19.60	19.82
	Panel Efficiency (%)	20.4	20.6	20.8	21.0	21.3
NMOT	Nominal Power - P_{MAX} (Wp)	327	331	335	339	342
	Nominal Power Voltage - V_{MPP} (V)	42.5	42.7	43.1	43.3	43.6
	Nominal Power Current - I_{MPP} (A)	7.71	7.75	7.78	7.82	7.85
	Open Circuit Voltage - V_{OC} (V)	49.7	49.8	49.9	50.1	50.1
	Short Circuit Current - I_{SC} (A)	8.28	8.29	8.33	8.38	8.42

Values at standard test conditions (STC: air mass AM 1.5, irradiance 10.75 W/sq ft (1000 W/m²), temperature 77°F (25°C), based on a production spread with a tolerance of P_{MAX}, V_{OC} & I_{SC} ±3% within one watt class.
Nominal module operating temperature (NMOT: air mass AM 1.5, irradiance 800 W/m², temperature 68°F (20°C), windspeed 3.3 ft/s (1 m/s).*
Where xxx indicates the nominal power class (P_{MAX}) at STC above.

CERTIFICATIONS

IEC 61215:2016, IEC 61730:2016, UL 1703, UL 61730	
IEC 62804	PID
IEC 61701	Salt Mist
IEC 62716	Ammonia Resistance
UL 1703	Fire Type Class 2
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 Maximum test load (+):	3600 Pa (75.2 lbs/sq ft)* 5400 Pa (112.8 lbs/sq ft)*
Design load (-): wind Maximum test load (-):	1600 Pa (33.4 lbs/sq ft)* 2400 Pa (50.1 lbs/sq ft)*
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

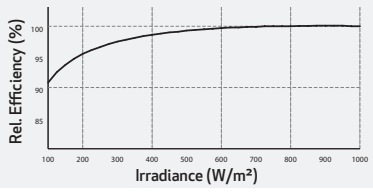
TEMPERATURE RATINGS*

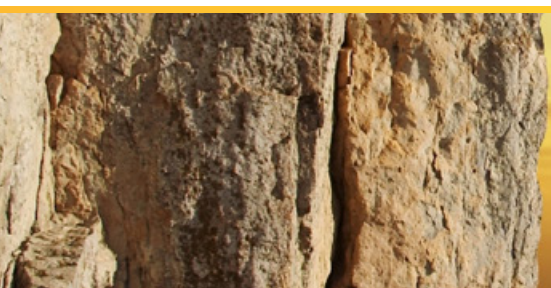
Nominal Module Operating Temperature:	44°C (±2°C)
Temperature coefficient of P_{MAX}:	-0.26 %/°C
Temperature coefficient of V_{OC}:	-0.24 %/°C
Temperature coefficient of I_{SC}:	0.04 %/°C

*The temperature coefficients stated are linear values

LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:





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.

REC
www.recgroup.com

Specifications subject to change without notice.

Ref: PM-DS-12-03-Rev- D 02.20