





# REC ALPHX SERIES



380 WP POWER









# GROUND-BREAKING TECHNOLOGY FOR MAXIMIZING POWER DENSITY

# OVER 20% MORE POWER MAKES THE MOST OF ROOFTOP SPACE

REC ALPHA SERIES > FACTSHEE

The REC Alpha Series is a revolutionary hybrid solar panel which unites the leading cell technologies to create a powerful and reliable 60-cell panel:

- High power density maximizes energy generation from limited spaces up to 217 W/m<sup>2</sup>
- The most advanced cell structure for high efficiency performance
- Over 20% more power than conventional panels
- More savings from your roof



## Heterojunction cells

- Combine the best of crystalline and thin-film technologies
- Highly efficient cell architecture for high performance

## N-type technology = more power

- No LID protects panel from initial power loss
- You get the power you pay for



## **Unique Advanced Cell Connections**

- Eliminates invasive soldering process for better build quality
- Reduces thermal stress on the cells for long-term durability
- Great aesthetics

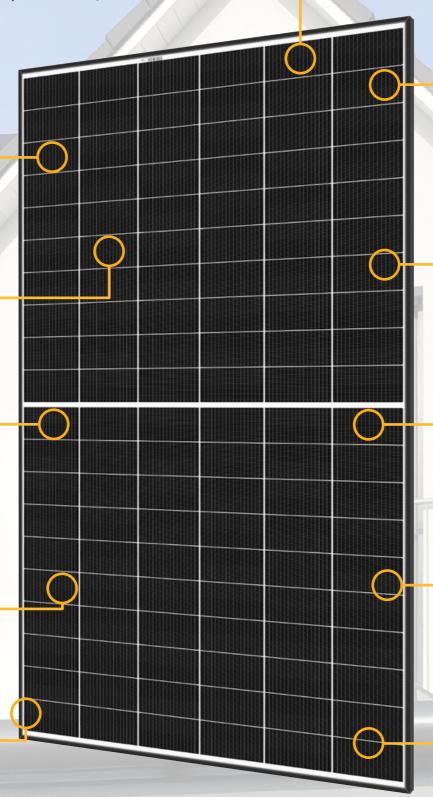
### Higher light transmission

• Special anti-reflective glass increases light transmission for higher power



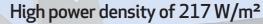
## Guaranteed better durability

- Super-strong frame withstands up to 7000 Pa
- Better protection against harsh weather
- Improves cell life for long-lasting high power

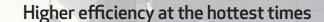


### Stunning appearance

- Uniform look fits seamlessly on your roof
- Practically-invisible connections for the best choice for your home



- High power density on a 60-cell panel
- Pack in more power in limited or restricted spaces
- Generate more clean energy



- Leading temperature coefficient for more production when the sun shines strongest
- Better performance in hot climates



## REC's iconic Twin Design

- Reduces internal resistance for more power and reliability
- Improved output when shaded

# **Environmentally-friendly**

- Colossal 81% reduced lead content, only 0.02% by weight
- Energy-efficient manufacturing processes minimize carbon footprint

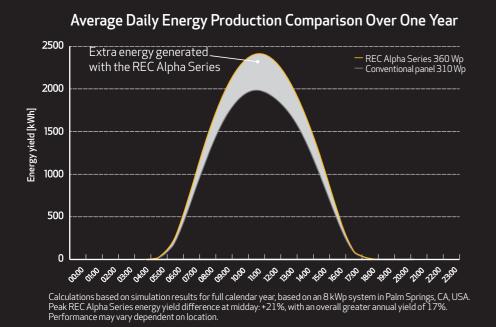


## **Exceptional quality**

- Made in REC's state of the art, energy efficient facility in Singapore
- Highly automated production improves efficiency and reliability
- Consistently one of the lowest warranty claims rate in solar

# GREATER ANNUAL YIELDS FROM DAWN TO DUSK

The REC Alpha Series packs in more energy than ever before. With no LID, a leading temperature coefficient and its high power density, it is ideal for increasing energy yields and making the most of available rooftop space.



+20% MORE **WITH THE REC ALPHA!** 

# MAXIMIZE SYSTEM POWER FOR MAXIMUM SAVINGS

Optimum use of rooftop space is key to a good solar installation. The REC Alpha Series allows you to pack in as much power generation as possible, generating more energy and more savings on your bills.



The comparison is clear: even in a regular residential installation, the REC Alpha Series offers  $1\,\mathrm{kW}\,\mathrm{more}$  power than conventional panels for more energy and more savings.

# 15% MORE WARRANTED POWER AFTER 25 YEARS

REC's consistently low claims rate justifies outstanding warranty terms. Our warranty offering reflects this leadership and supports our premium product quality.



Exclusive to REC Certified Solar Professionals, the REC ProTrust Warranty offers enhanced product and labor coverage\*, ensuring peace of mind and a lifetime of high power generation:

- 25 years performance warranty
- 25 years product warranty
- Up to 25 year labor warranty\*

# MAKE MAJOR REDUCTIONS TO YOUR CO2 FOOTPRINT

A 6 kW REC Alpha Series installation creates over 7,200 kWh of clean energy per year, cutting the CO<sub>2</sub> emissions of a home by 4.3 tons per year\*, or the equivalent of:



of waste recycled



 $20.000\,\mathrm{km}$ in a family car

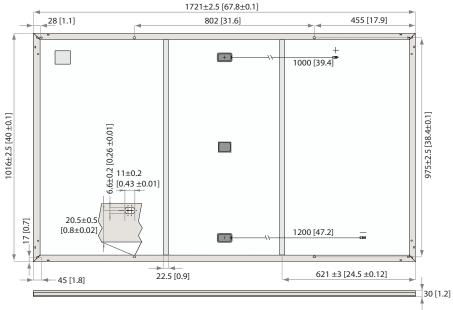
Charging a phone 650,000 times

of coal burnt for powe

Values may vary dependent on location

# PRODUCT DATASHEET

REC ALPHA SERIES > PRODUCT I



Measurements in mm [in]

#### **GENERAL DATA**

Cell type:	120 half-cut cells with REC heterojunction cell technology 6 strings of 20 cells in series	Connectors:	Stäubli MC4PV-KBT4/KST4 (4mm²) in accordance with IEC 62852 IP68 only when connected
Glass:	3.2 mm solar glass with anti-reflection surface treatment	Cable:	4 mm² solar cable, 1.0 m + 1.2 m in accordance with EN 50618
Backsheet:	Highly resistant polymeric construction	Dimensions:	1721 x 1016 x 30 mm
Frame:	Anodized aluminum (black)	Weight:	19.5 kg
Junction box:	3-part, 3 bypass diodes, IP67 rated in accordance with IEC 62790	Origin:	Made in Singapore

2	ELECTRICAL DATA		Product Co	de*: RECxxx	κAA	
	Power Output - P <sub>MAX</sub> (Wp)	360	365	370	375	380
	Watt Class Sorting - (W)	-0/+5	-0/+5	-0/+5	-0/+5	-0/+5
	Nominal Power Voltage - V <sub>MPP</sub> (V)	36.7	37.1	37.4	37.8	38.1
2	Nominal Power Current - I <sub>MPP</sub> (A)	9.82	9.85	9.90	9.94	9.98
ST	Open Circuit Voltage - V <sub>oc</sub> (V)	43.9	44.0	44.1	44.2	44.3
	Short Circuit Current - I <sub>SC</sub> (A)	10.49	10.52	10.55	10.58	10.61
	Power Density (W/m²)	205.9	208.8	211.6	214.5	217.3
	Panel Efficiency (%)	20.6	20.9	21.2	21.4	21.7
	Power Output - P <sub>MAX</sub> (Wp)	274	278	282	286	289
_	Nominal Power Voltage - V <sub>MPP</sub> (V)	34.6	35.0	35.2	35.6	35.9
NMOT	Nominal Power Current - I <sub>MPP</sub> (A)	7.93	7.96	8.00	8.03	8.06
_	Open Circuit Voltage - V <sub>oc</sub> (V)	41.4	41.5	41.6	41.6	41.7
	Short Circuit Current - I <sub>sc</sub> (A)	8.47	8.50	8.52	8.55	8.57

 $Values at standard test conditions (STC: air mass AM 1.5, irradiance 1000 W/m^2, temperature 25^{\circ}C), based on a production spread with the production of the production of$ a tolerance of  $P_{MAX}$ ,  $V_{OC}$  &  $I_{SC}$   $\pm 3\%$  within one watt class. Nominal module operating temperature (NMOT: air mass AM 1.5, irradiance 800 W/m², temperature 20°C, windspeed 1 m/s). \*Where xxx indicates the nominal power class ( $P_{MAX}$ ) at STC above.

#### CERTIFICATIONS

IEC 61215:2016, IEC 61730:2016, UL 61730		
IEC 62804	PID	
IEC 61701	Salt Mist	
IEC 62716	Ammonia Resistance	
ISO 11925-2	Ignitability (Class E)	
UNI 8457/9174	Ignitability (Class 1)	
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, IEC 62941











#### WARRANTY'

	Standard	REC F	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:	1000 V
Design load (+): snow Maximum test load (+):	4666 Pa (475 kg/m²)⁺ 7000 Pa (713 kg/m²)*
Design load (-): wind Maximum test load (-):	2666 Pa (272 kg/m²)† 4000 Pa (407 kg/m²)*
Max series fuse rating:	25 A
Max reverse current:	25 A

\*Calculated using a safety factor of 1.5  $^{\circ} See \, in stallation \, manual \, for \, \overset{\smile}{mounting} \, in structions$ 

#### TEMPERATURE RATINGS\*

12. 11 210 110 1111100	
Nominal Module Operating Temperature:	44°C (±2°C)
Temperature coefficient of $P_{\text{MAX}}$ :	-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



REC Group is an international pioneering solar energy company dedicated to empowering consumers with clean, affordable solar power in order to facilitate global energy transitions. Committed to quality and innovation, REC offers photovoltaic modules with leading high quality, backed by an exceptional lowwarranty claims rate of less than 100 ppm. Founded in Norway in 1996, REC employs 2,000 people and has an annual solar panel capacity of 1.8 GW. With over 10 GW installed worldwide, REC is empowering more than 16 million people with clean solar energy. REC Group is a Bluestar Elkem company with headquarters in Norway, operational headquarters in Singapore, and regional bases in North America, Europe, and Asia-Pacific.

