SOLAR'S MOST TRUSTED

REC

REC ALPHα BLACK SERIES

375 WP POWER

PRODUCT
REC 25 YEAR PROTRUST WARRANTY
PERFORMANCE
LABOR

ELIGIBLE

EXPERIENCE

α

PERFORMANCE

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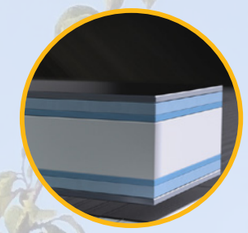
REC ALPHA BLACK SERIES > FACTSHEET

GROUND-BREAKING TECHNOLOGY FOR MAXIMIZING POWER DENSITY

OVER 20% MORE POWER MAKES THE MOST OF ROOFTOP SPACE

The REC Alpha Black Series is a revolutionary hybrid solar panel which unites the leading cell technology to create the world's most powerful and reliable 60-cell panel:

- High power density maximizes energy generation from limited spaces - up to 214 W/m²
- The most advanced cell structure for highest efficiency performance
- Over 20% more power than conventional panels
- More savings from your roof

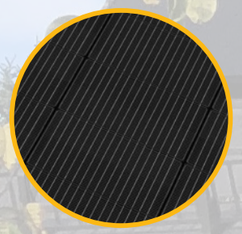


Heterojunction cells

- Combine the best of crystalline and thin-film technologies
- Most 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

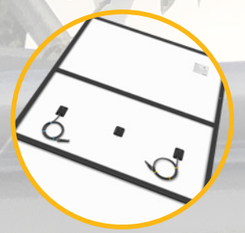


Unique Advanced Cell Connections

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

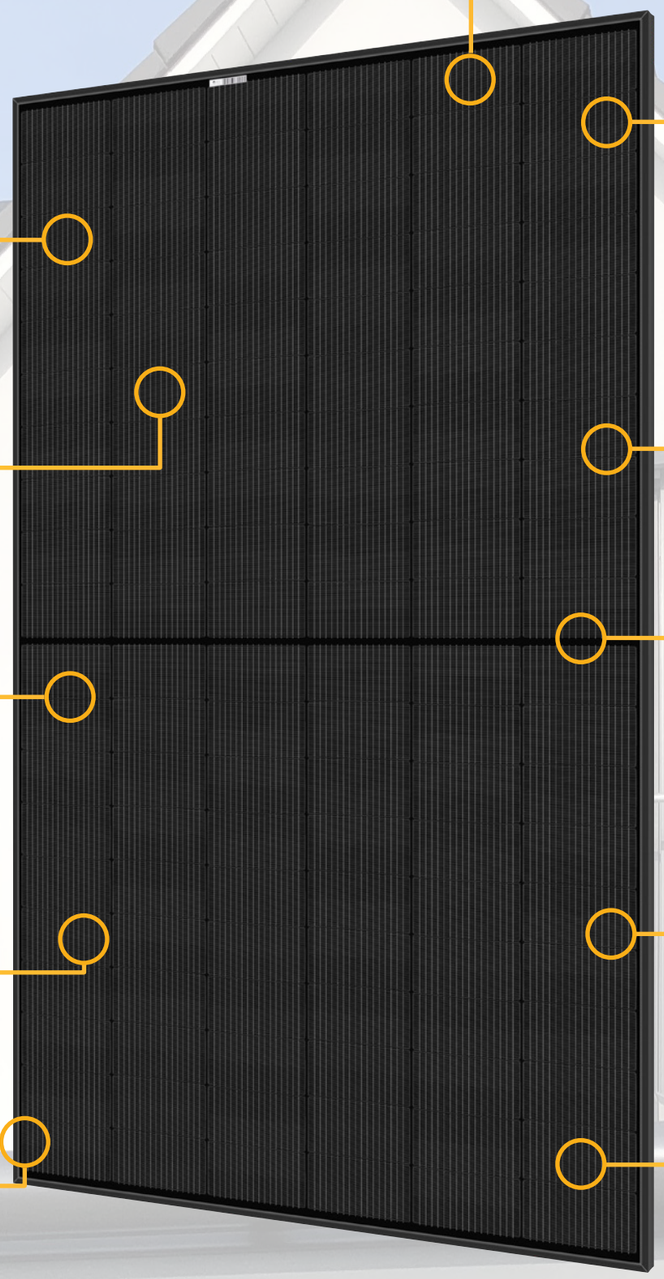
Higher light transmission

- 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

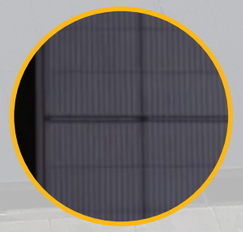
- Full-black design for a seamless appearance on your roof
- Practically-invisible connections for the best choice for your home

Highest power density of 214 W/m²

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

Higher efficiency at the hottest times

- 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

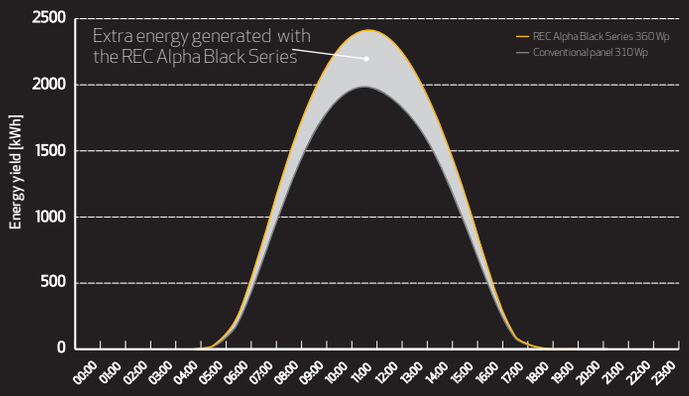
Industry-leading quality

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

GREATER ANNUAL YIELDS FROM DAWN TO DUSK

The REC Alpha Black Series packs in more energy generation than ever before. With no LID, a leading temperature coefficient and the highest 60-cell power density, it is ideal for the best energy yields and making the most of available rooftop space.

Average Daily Energy Production Comparison Over One Year



Calculations based on simulation results for full calendar year, based on an 8 kWp system in Palm Springs, CA, USA. Peak REC Alpha Black Series energy yield difference at midday: +21%, with an overall greater annual yield of 17%. Performance may vary dependent on location.

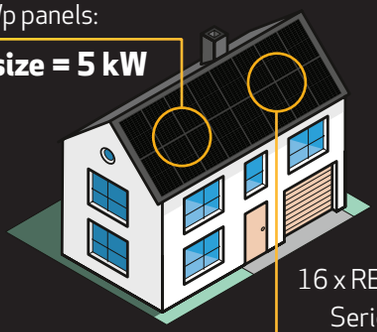
+20% MORE
WITH THE REC ALPHA BLACK SERIES!

MAXIMIZE SYSTEM POWER FOR MAXIMUM SAVINGS

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

16 x conventional 310 Wp panels:

System size = 5 kW



16 x REC Alpha Black Series 375 Wp:

System size = 6 kW

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

15% MORE WARRANTED POWER AFTER 25 YEARS

The lowest claims rate in the industry justifies leading warranty terms. REC's 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*

*Conditions apply. See www.recgroup.com/protrust for more details

MAKE MAJOR REDUCTIONS TO YOUR CO_2 FOOTPRINT

A 6 kW REC Alpha Black Series installation creates over 7,200 kWh of clean energy per year, cutting the CO_2 emissions of a home by 4.3 metric tons per year*, the equivalent of:

84 trees planted and grown over 10 years

CO_2 sequestered by **6 acres** of forest per year

Charging a phone **650,000** times

20,000 km in a family car

Saves **2,530 kg** of coal burnt for power

1.8 tons of waste recycled instead of entering landfill

*Values may vary dependent on location

REC
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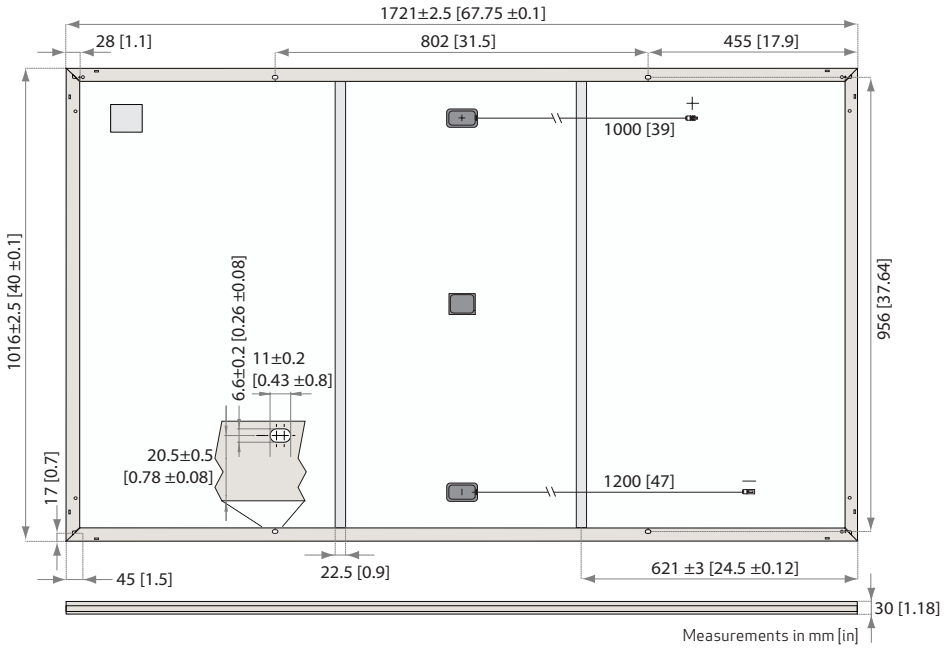
PRODUCT DATASHEET

REC ALPHA BLACK SERIES > PRODUCT DATASHEET



GENERAL DATA

Cell type:	120 half-cut cells with REC heterojunction cell technology 6 strings of 20 cells in series	Connectors:	Stäubli MC4 PV-KBT4/KST4 (4 mm²) 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 (black)	Dimensions:	1721 x 1016 x 30 mm (1.75 m²)
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

ELECTRICAL DATA

Product Code*: RECxxxAA Black

STC					
Power Output - P_{MAX} (Wp)	355	360	365	370	375
Watt Class Sorting - (W)	-0/+5	-0/+5	-0/+5	-0/+5	-0/+5
Nominal Power Voltage - V_{MPP} (V)	36.4	36.7	37.1	37.4	37.8
Nominal Power Current - I_{MPP} (A)	9.77	9.82	9.85	9.9	9.94
Open Circuit Voltage - V_{OC} (V)	43.6	43.9	44	44.1	44.2
Short Circuit Current - I_{SC} (A)	10.47	10.49	10.52	10.55	10.58
Power Density (W/m²)	202.9	205.71	208.57	211.42	214.28
Panel Efficiency (%)	20.3	20.6	20.9	21.2	21.4
NMOT					
Power Output - P_{MAX} (Wp)	271	274	278	282	286
Nominal Power Voltage - V_{MPP} (V)	34.3	34.6	35.0	35.2	35.6
Nominal Power Current - I_{MPP} (A)	7.89	7.93	7.96	8.00	8.03
Open Circuit Voltage - V_{OC} (V)	41.1	41.4	41.5	41.6	41.6
Short Circuit Current - I_{SC} (A)	8.46	8.47	8.50	8.52	8.55

Values at standard test conditions (STC: air mass AM 1.5, irradiance 1000 W/m², temperature 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 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 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, IEC 62941

take-e-way WEEE-compliant recycling scheme

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:	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
* See installation manual for mounting instructions

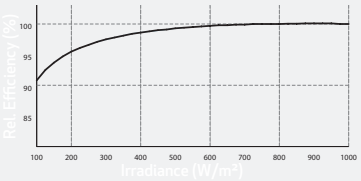
TEMPERATURE RATINGS*

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:



Specifications subject to change without notice.

Ref: PM-DDMMYY-Rev-GLO-EN 03.20

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, innovation and an industry-leading warranty, REC offers photovoltaic modules with leading high quality backed by the lowest known warranty claims rate in the industry. Founded in Norway in 1996, REC employs 2,000 people and produces 1.8 GW of solar panels annually. 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.