

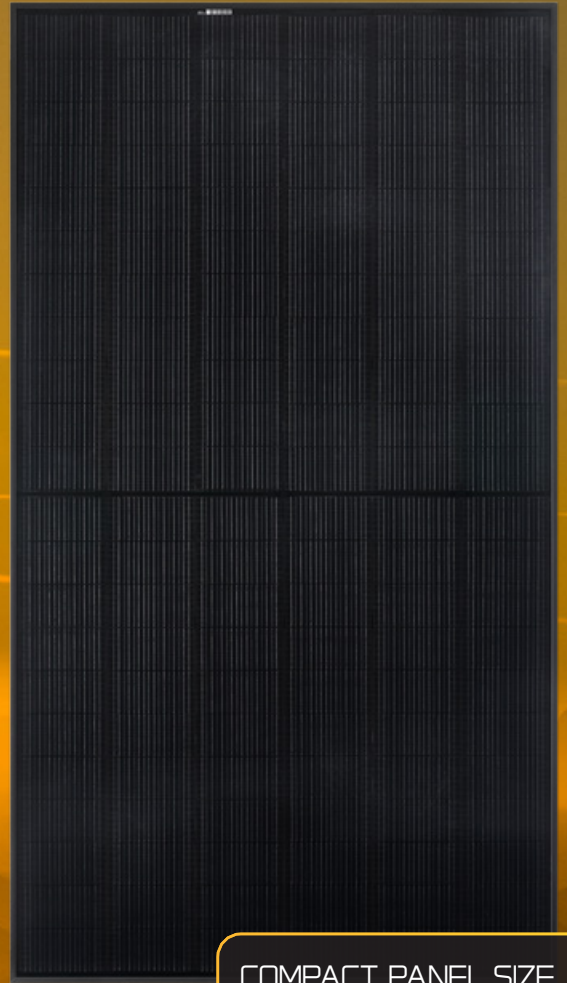
SOLATURN

High Performance Solar Panels

SOLAR'S MOST TRUSTED

REC ALPHA[®] PURE SERIES

PRODUCT SPECIFICATIONS



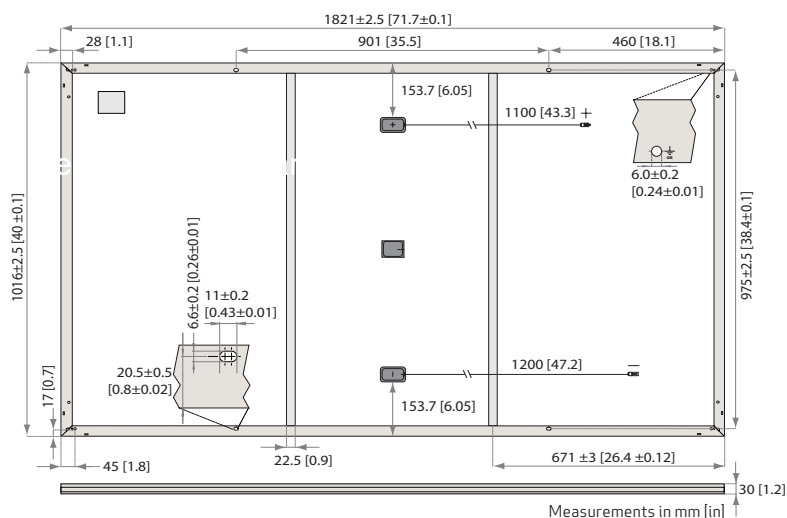
COMPACT PANEL SIZE

410 WP
222 $\frac{W}{M^2}$



GENERAL DATA

Cell type:	132 half-cut REC heterojunction cells with lead-free, gapless technology, 6 strings of 22 cells in series
Glass:	3.2 mm solar glass with anti-reflective surface treatment in accordance with EN 12150
Backsheet:	Highly resistant polymer (black)
Frame:	Anodized aluminum (black)
Junction box:	3-part, 3 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790
Connectors:	Stäubli MC4 PV-KBT4/KST4 (4 mm ²) in accordance with IEC 62852, IP68 only when connected
Cable:	4 mm ² solar cable, 1.1 m + 1.2 m in accordance with EN 50618
Dimensions:	1821 x 1016 x 30 mm (1.85 m ²)
Weight:	20.5 kg
Origin:	Made in Singapore



ELECTRICAL DATA

Product Code*: RECxxxAA Pure

Power Output - P _{MAX} (Wp)	390	395	400	405	410
Watt Class Sorting - (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Nominal Power Voltage - V _{MPP} (V)	40.6	41.0	41.4	41.8	42.2
Nominal Power Current - I _{MPP} (A)	9.61	9.64	9.67	9.69	9.72
Open Circuit Voltage - V _{OC} (V)	48.4	48.6	48.8	49.1	49.4
Short Circuit Current - I _{SC} (A)	10.38	10.39	10.40	10.41	10.42
Power Density (W/m ²)	211	214	216	219	222
Panel Efficiency (%)	21.1	21.4	21.6	21.9	22.2
Power Output - P _{MAX} (Wp)	297	301	305	308	312
Nominal Power Voltage - V _{MPP} (V)	38.3	38.6	39.0	39.4	39.8
Nominal Power Current - I _{MPP} (A)	7.77	7.79	7.82	7.83	7.85
Open Circuit Voltage - V _{OC} (V)	45.6	45.8	46.0	46.3	46.6
Short Circuit Current - I _{SC} (A)	8.38	8.39	8.40	8.41	8.42

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.

MAXIMUM RATINGS

Operational temperature:	-40 ... +85°C
Maximum system voltage:	1000 V
Maximum test load (front):	+ 7000 Pa (713 kg/m ²)*
Maximum test load (rear):	- 4000 Pa (407 kg/m ²)*
Max series fuse rating:	25 A
Max reverse current:	25 A

* See installation manual for mounting instructions.
Design load = Test load / 1.5 (safety factor)

WARRANTY

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

The REC ProTrust Warranty is only available on panels purchased through an REC Certified Solar Professional installer. Warranty conditions apply. See www.recgroup.com for more details.

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)
IEC 62782	Dynamic Mechanical Load
IEC 61215-2:2016	Hailstone (35mm)
IEC 62321	Lead-free acc. to RoHS EU 863/2015
ISO 14001, ISO 9001, IEC 45001, IEC 62941	



TEMPERATURE RATINGS*

Nominal Module Operating Temperature:	44°C (±2°C)
Temperature coefficient of P _{MAX} :	-0.24 %/°C
Temperature coefficient of V _{OC} :	-0.24 %/°C
Temperature coefficient of I _{SC} :	0.04 %/°C

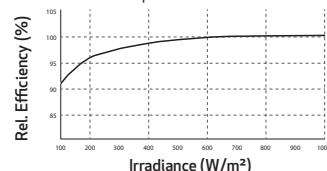
*The temperature coefficients stated are linear values

DELIVERY INFORMATION

Panels per pallet:	33
Panels per 40 ft GP/high cube container:	792 (24 pallets)
Panels per 13.6 m truck:	924 (28 pallets)
Panels per 53 ft truck:	891 (27 pallets)

LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



Declare.
Living Building
Challenge Compliant

The REC Alpha Pure Series unites leading cell technologies in a hybrid design to create a revolutionary, powerful and reliable solar panel:

- High power density maximizes energy generation from limited spaces - up to 20.3 W/ft²
- Advanced cell structure for high efficiency performance
- More power than conventional panels
- More savings from your roof



Heterojunction cells

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

N-type technology = more power

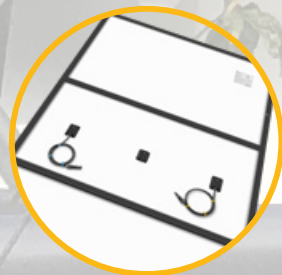
- No LID protects panel from initial power loss
- You get the power you pay for

Unique Advanced Cell Connections

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

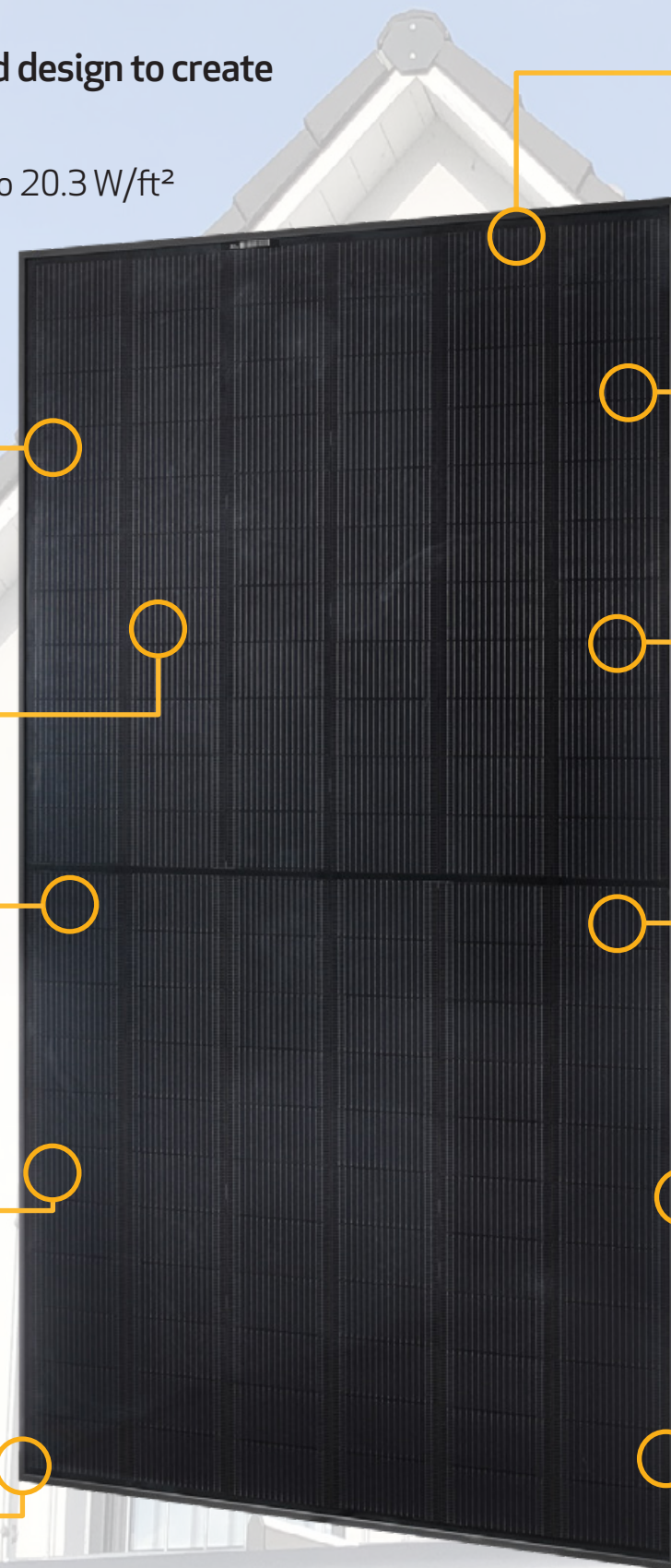
Higher light transmission

- Special anti-reflective glass increases light transmission for higher power
- Inherently bifacial cells can produce energy from both sides of the panel



Guaranteed better durability

- Super-strong frame withstands up to 146 lbs/sq ft
- Better protection against harsh weather
- Improves cell life for long-lasting high power



No busbars for an improved look

- Practically-invisible connections for the best choice for your home
- Black backsheet for an elegant look on your roof



High power density of 20.3W/ft²

- High power density 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

- Lead-free (RoHS compliant)
- Energy-efficient manufacturing processes minimize carbon footprint

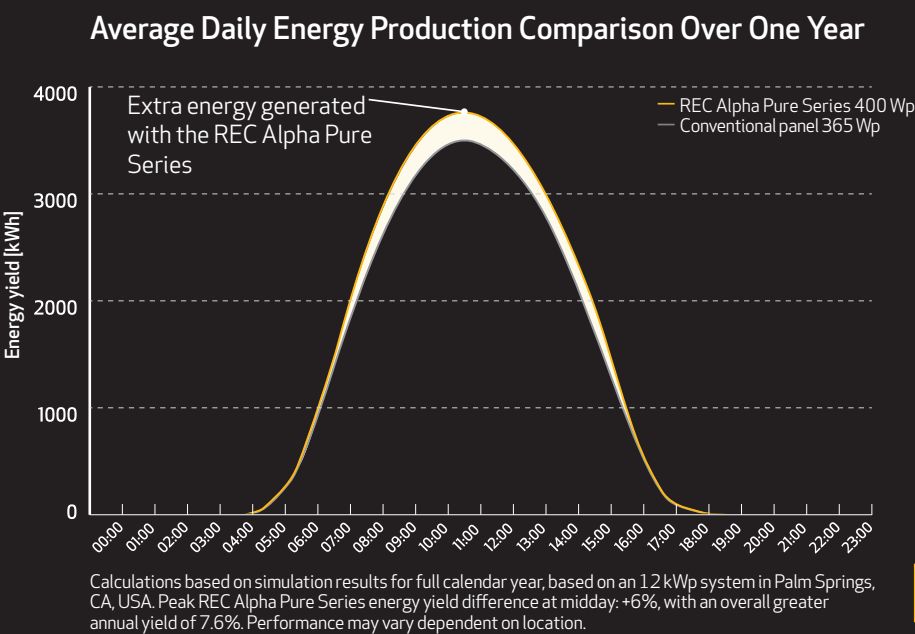


Exceptional quality

- 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 YIELDS FROM DAWN TO DUSK

The REC Alpha Pure 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.



**+10%
MORE
POWER
WITH THE
REC ALPHA PURE!**

MAXIMIZE SYSTEM POWER FOR MAXIMUM SAVINGS

Optimum use of rooftop space is key to a good solar installation; allows you to pack in as much power generation as possible, generating 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.



Exclusively offered by REC Certified Solar Professionals, the REC ProTrust Warranty gives 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 Pure Series installation generates over 7,200 kWh of clean energy per year, cutting the CO₂ emissions of a home by 4.7 tons per year*, equivalent to:

84 trees planted and grown over 10 years

CO₂ sequestered by
6 acres of forest per year

1.8 tons of waste recycled instead of entering landfill



12,500 miles in a family car

Charging a phone
650,000 times

2.5 tons of coal burnt for power

*Values may vary dependent on location