



# REC ALPHA PURE-R SERIES PRODUCT SPECIFICATIONS



COMPACT PANEL SIZE

9 A PANEL CURRENT  
COMPATIBLE WITH MLPE

410w - 430w  
223  $\frac{W}{M^2}$



ELIGIBLE



LEAD FREE  
ROHS COMPLIANT

EXPERIENCE



PERFORMANCE



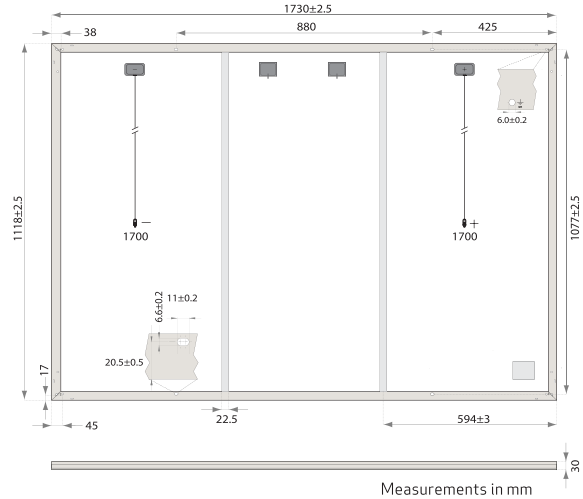
# REC ALPHA PURE-R SERIES

## PRODUCT SPECIFICATIONS



### GENERAL DATA

Cell type:	80 half-cut REC heterojunction cells with lead-free, gapless technology
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:	4-part, 4 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790
Connectors:	Stäubli MC4 PV-KBT4/KST4 (4 mm <sup>2</sup> ) in accordance with IEC 62852, IP68 only when connected
Cable:	4 mm <sup>2</sup> solar cable, 1.7 + 1.7 m in accordance with EN 50618
Dimensions:	1730 x 1118 x 30 mm (1.93 m <sup>2</sup> )
Weight:	21.5 kg
Origin:	Made in Singapore



### ELECTRICAL DATA

### Product Code\*: RECxxxAA Pure-R

Power Output - P <sub>MAX</sub> (Wp)	410	420	430
Watt Class Sorting - (W)	0/+10	0/+10	0/+10
Nominal Power Voltage - V <sub>MPP</sub> (V)	49.4	50.0	50.5
Nominal Power Current - I <sub>MPP</sub> (A)	8.30	8.40	8.52
Open Circuit Voltage - V <sub>OC</sub> (V)	59.2	59.4	59.7
Short Circuit Current - I <sub>SC</sub> (A)	8.81	8.89	8.97
Power Density (W/m <sup>2</sup> )	212	218	223W
Panel Efficiency (%)	21.2	21.8	22.3

STC

Power Output - P <sub>MAX</sub> (Wp)	312	320	327
Nominal Power Voltage - V <sub>MPP</sub> (V)	46.6	47.1	47.6
Nominal Power Current - I <sub>MPP</sub> (A)	6.70	6.78	6.88
Open Circuit Voltage - V <sub>OC</sub> (V)	55.8	56.0	56.3
Short Circuit Current - I <sub>SC</sub> (A)	7.12	7.18	7.24

NMOT

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.

### MAXIMUM RATINGS

Operational temperature:	-40 ... +85°C
System voltage:	1000 V
Test load (front):	+ 7000 Pa (713 kg/m <sup>2</sup> )*
Test load (rear):	- 4000 Pa (407 kg/m <sup>2</sup> )*
Series fuse rating:	25 A
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	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

### CERTIFICATIONS (PENDING)

IEC 61215:2016, IEC 61730:2016, UL 61730	
IEC 62804	PID
IEC 61701	Salt Mist
IEC 62716	Ammonia Resistance
ISO 11925-2	Ignitability (EN 13501-1 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 <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

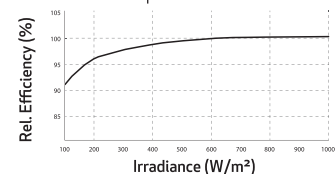
\* The temperature coefficients stated are linear values

### DELIVERY INFORMATION

Panels per pallet:	33
Panels per 40 ft GP/high cube container:	858 (26 pallets)

### LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



Founded in 1996, REC Group is an international pioneering solar energy company dedicated to empowering consumers with clean, affordable solar power. As Solar's Most Trusted, REC is committed to high quality, innovation, and a low carbon footprint in the solar materials and solar panels it manufactures. Headquartered in Norway with operational headquarters in Singapore, REC also has regional hubs in North America, Europe, and Asia-Pacific.



www.recgroup.com