SOLAR'S MOST TRUSTED

REC

REC ALPHα® PURE-R SERIES

DATASHEET



COMPACT PANEL SIZE

9 A MODULE CURRENT
COMPATIBLE WITH MLPE

430 Wp

20.7 W/FT²

PRODUCT · REC 25 YEAR ProTrust WARRANTY · PERFORMANCE · LABOR

ELIGIBLE

LEAD-FREE
ROHS COMPLIANT

EXPERIENCE α PERFORMANCE

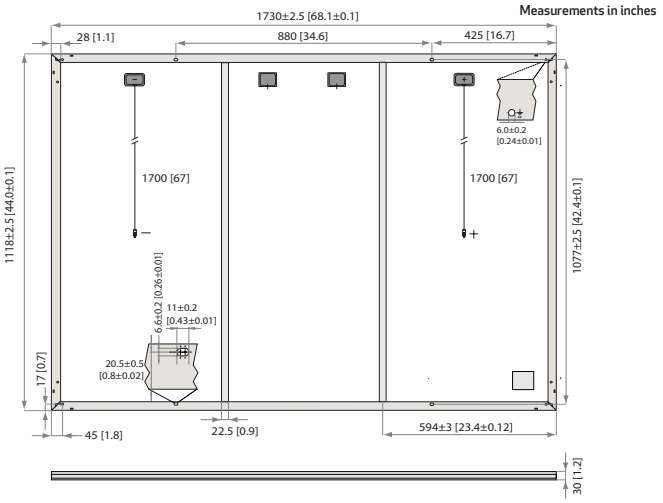
REC ALPHα® PURE-R SERIES

DATASHEET

SOLAR'S MOST TRUSTED

GENERAL DATA

Cell Type	80 half-cut bifacial REC heterojunction cells, with lead-free technology
Glass	0.13 in solar glass with anti-reflective surface treatment in accordance with EN12150
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 (12AWG) in accordance with IEC 62852, IP68 only when connected
Cable	12 AWG solar cable, 66.9 in + 66.9 in in accordance with EN50618
Dimensions	68.1 x 44 x 1.2 in (20.8 ft²)
Weight	47.4 lb
Origin	Made in Singapore



ELECTRICAL DATA

PRODUCT CODE*: RECxxxAA Pure-R

	400	410	420	430
STC				
Power Output - P_{max} (W_P)	400	410	420	430
Watt Class Sorting - (W)	0/+10	0/+10	0/+10	0/+10
Nominal Power Voltage - V_{MPP}(V)	48.8	49.4	50.0	50.5
Nominal Power Current - I_{MPP}(A)	8.20	8.30	8.40	8.52
Open Circuit Voltage - V_{OC} (V)	58.9	59.2	59.4	59.7
Short Circuit Current - I_{SC} (A)	8.80	8.84	8.88	8.91
Power Density (W/ft²)	19.2	19.7	20.2	20.7
Panel Efficiency (%)	20.7	21.2	21.8	22.3
NMOT				
Power Output - P_{max} (W_P)	305	312	320	327
Nominal Power Voltage - V_{MPP} (V)	46.0	46.6	47.1	47.6
Nominal Power Current - I_{MPP} (A)	6.64	6.70	6.80	6.88
Open Circuit Voltage - V_{OC} (V)	55.5	55.8	56.0	56.3
Short Circuit Current - I_{SC} (A)	8.10	7.16	7.20	7.24

Values at standard test conditions (STC: air mass AM 1.5, irradiance 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.

MAXIMUM RATINGS

Operational Temperature	-40 °F - 185 °F
System Voltage	1000 V
Maximum Test Load (front)	+7000 Pa (1571.5 lb/ft²)
Maximum Test Load (rear)	-4000 Pa (897 lb/ft²)
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)

TEMPERATURE RATINGS*

Nominal Module Operating Temperature	44 °C ± 2°C
Temperature coefficient of P_{max}	-0.24% /K
Temperature coefficient of V_{OC}	-0.24% /K
Temperature coefficient of I_{SC}	0.04% /K

*The temperature coefficients stated are linear values

DELIVERY INFORMATION

Panels per Pallet	33
Panels per 40 ft GP/high cube container	856 (26 Pallets)

CERTIFICATIONS

IEC 61215:2021; IEC61730:2016; UL61730	
IEC 62804	PID
IEC 62782	Dynamic Mechanical Load
ISO 11925-2	Ignitability (EN 13501-1 Class E)
IEC 62716	Ammonia Resistance
IEC 61701	Salt Mist
IEC 61215:2016	Hailstone (35mm)
UL 61730	Fire Type 2
IEC 62321	Lead-free acc. to RoHS EU 863/2015
ISO 14001; ISO9001; IEC45001; IEC62941	

Lead-Free

Take-e-way WEEE-compliant scheme

Living building challenge compliant

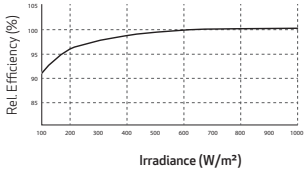
WARRANTY

	Standard	REC ProTrust	
Installed by an REC Certified 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%

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

LOW LIGHT BEHAVIOR

Typical low irradiance performance of module at STC:



Available from:

Specifications subject to change without notice.

Ref: PM-DS-12-06-Rev-4 2.2024

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.

REC Solar PTE. LTD.
20 Tuas South Ave. 14
Singapore 637312
post@recgroup.com
www.recgroup.com