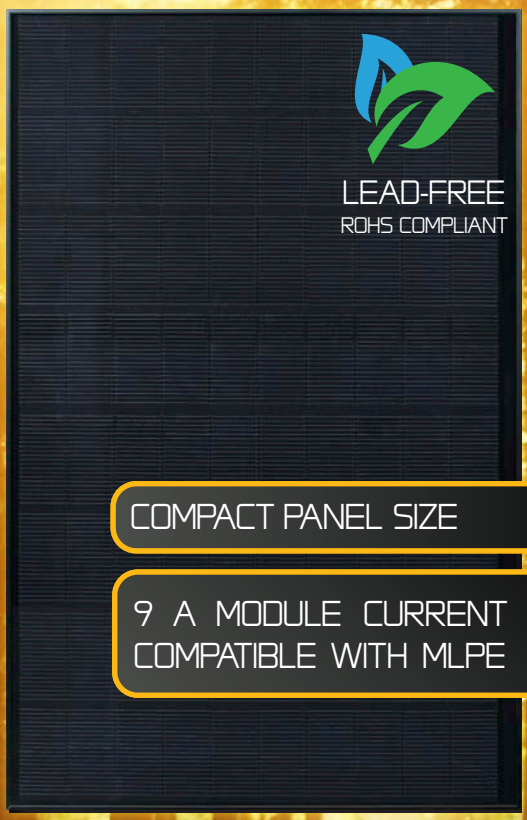
SOLAR'S MOST TRUSTED

REC

REC ALPHA® PURE-R SERIES

DATASHEET



LEAD-FREE
ROHS COMPLIANT

COMPACT PANEL SIZE

9 A MODULE CURRENT COMPATIBLE WITH MLPE

400 - 430W
HETEROJUNCTION TECHNOLOGY

223 W/M²	POWER DENSITY
> 92%	POWER IN YEAR 25
-0.24%/°C	TEMPERATURE COEFFICIENT OF P_{MAX}

PRODUCT · REC 25 YEAR ProTrust WARRANTY · PERFORMANCE · LABOR

ELIGIBLE

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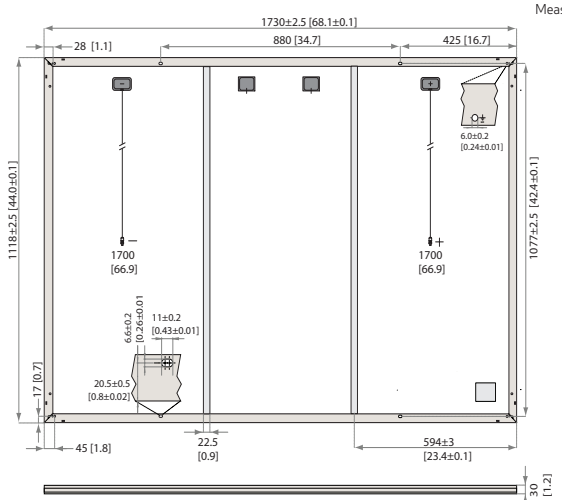
GENERAL DATA

Cell Type	80 half-cut bifacial REC heterojunction cells, with lead-free, gapless technology
Glass	3.2 mm 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 62790:2020
Connectors	Stäubli MC4 PV-KBT4/KST4 (4 mm²) in accordance with IEC 62852:2014, IP68 only when connected
Cable	4 mm² solar cable, 1.70 m + 1.70 m in accordance with EN50618:2014
Dimensions	1730 x 1118 x 30 mm (1.93 m²)
Weight	21.5 kg
Origin	Made in Singapore

Measurements in mm [in]



Specifications subject to change without notice.

ELECTRICAL DATA

PRODUCT CODE*: RECXXXAA PURE-R

STC				
Power Output - P_{MAX} (WP)	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/m²)	207	212	218	223
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

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

ISO 14001; ISO9001; IEC45001; IEC62941	
IEC 61215:2021;IEC 61730:2023;UL 61730	
ISO 11925-2	Ignitability (EN 13501-1 Class E)
IEC 62716	Ammonia Resistance
IEC 61701	Salt Mist (SM6)
IEC 61215:2016	Hailstone (35 mm)
UL 61730	Fire Type 2
IEC 62321	Lead-free acc. to RoHS EU 863/2015

Intertek

take-e-way
for an easy way

Take-e-way WEEE-compliant scheme

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%

REC ProTrust Warranty applies only for i) REC panels installed by an REC Certified Solar Professional, and ii) panels have been registered by the installer with REC. Subject to System Size and further conditions. See www.recgroup.com for details.

MODULE RATINGS

Module Operating Temperature [T98]§	70°C
Min. Environmental Temperature	-40°C
System Voltage	1000 V
Maximum Test Load (4 Point Mounting, Front)*	+7000 Pa (714 Kg/m²)
Maximum Test Load (4 Point Mounting, Rear)*	-4000 Pa (408 Kg/m²)
Maximum Test Load (6 Point Mounting, Front)**	+8000 Pa (816 Kg/m²)
Maximum Test Load (6 Point Mounting, Rear)**	-6000 Pa (612 Kg/m²)
Max Series Fuse Rating	25 A
Max Reverse Current	25 A

Design load = Test load / 1.5 (safety factor)
§ 98th percentile operating temperature
* IEC61730/UL61730 certified. Refer to installation manual.
** Internal testing. Refer to installation manual.

TEMPERATURE RATINGS*

Nominal Module Operating Temperature	44 ± 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

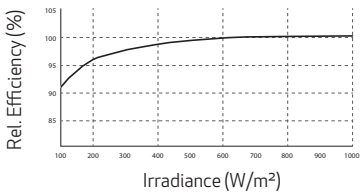
*The temperature coefficients stated are linear values

DELIVERY INFORMATION

Panels per Pallet	33
Panels per 40 ft GP/high cube container	858 (26 Pallets)
Panels per 13.6 m truck	924 (28 Pallets)

LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



Available from:

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.

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REC

REF: PM-DS-12-06-REV-4/BIEC EN 12.2024