SOLAR'S MOST TRUSTED

REC

REC ALPHA® PRO MG

DATASHEET

590 - 640W
HETEROJUNCTION TECHNOLOGY

225 W/M²	POWER DENSITY
>90.75%	POWER IN YEAR 30
-0.24%/°C	TEMPERATURE COEFFICIENT OF P_{MAX}

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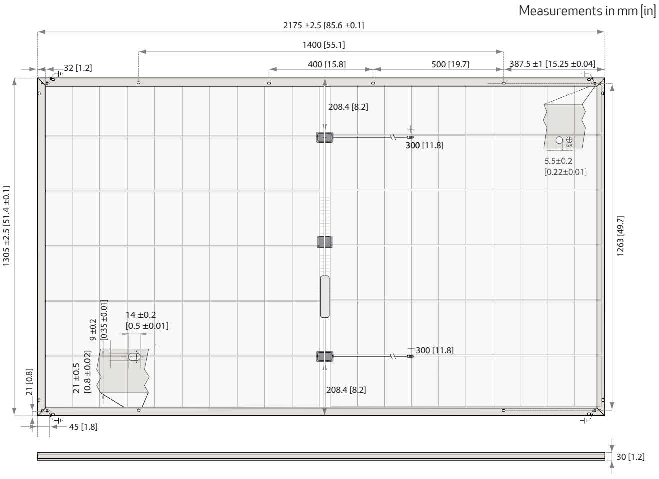
GENERAL DATA

Cell Type	120 half-cut REC bifacial heterojunction cells
Bifaciality	86.0% ± 5%
Glass	Front: 2.0 mm solar glass with anti-reflective surface treatment Rear: 2.0 mm solar glass with White grid
Frame	Anodized aluminum (Silver)
Junction Box	3-part, 3 bypass diodes, IP68 rated, in accordance with IEC 62790:2020
Connectors	Jiaming Tianheyuan PV-JM608 (4 mm²; JM608) in accordance with IEC 62852:2014, IP68 only when connected
Cable	4 mm² solar cable, 0.30 m + 0.30 m in accordance with EN50618:2014
Dimensions	2175 x 1305 x 30 mm (2.84 m²)
Weight	36.8 kg
Origin	Made in India

Measurements in mm [in]



PRODUCT CODE*: RECxxxAA Pro MG	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Power Output - P_{MAX} (WP)	590	450	600	457	610	464	620	469	630	477	640	487
Watt Class Sorting - (W)	0/+10		0/+10		0/+10		0/+10		0/+10		0/+10	
Nominal Power Voltage - V_{MPP} (V)	35.8	33.7	36.0	33.9	36.3	34.2	36.6	34.5	36.8	34.7	37.1	35.0
Nominal Power Current - I_{MPP} (A)	16.50	13.33	16.67	13.46	16.81	13.58	16.94	13.68	17.12	13.83	17.26	13.94
Open Circuit Voltage - V_{OC} (V)	44.1	41.6	44.2	41.7	44.4	41.8	44.6	42.0	44.7	42.1	44.9	42.3
Short Circuit Current - I_{SC} (A)	17.34	14.01	17.45	14.09	17.56	14.18	17.67	14.27	17.78	14.36	17.89	14.45
Power Density (W/m²)	208		211		215		218		222		225	
Panel Efficiency (%)	20.8		21.1		21.5		21.8		22.2		22.5	

Rear Side: BNPI/BSI — Bifaciality (P_{MAX}) 86% ± 5% Bifaciality ($_{VOC}$) 99% ± 1% Bifaciality ($_{ISC}$) 86% ± 5%

BNPI P_{MPP} (+/- 3%) (WP)	658	670	681	692	703	714
BNPI V_{OC} (+/- 3%) (V)	44.3	44.4	44.4	44.6	44.8	45.1
BNPI I_{SC} (+/- 3%) (A)	19.35	19.48	19.60	19.72	19.84	19.97
BSI I_{SC} (+/- 3%) (A)	21.81	21.95	22.09	22.23	22.37	22.51

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). BNPI (Bifacial NamePlate Irradiance) PMPP is determined when the module is subjected to BNPI irradiance, corresponding to 1000 W/m² on the module front and 135 W/m² on the module rear. Bifacial Stress Irradiance (BSI Isc) is determined when the module is subjected to irradiance, corresponding to 1000 W/m² on the module front and 300 W/m² on the module rear. * Where xxx indicates the nominal power class (P_{MAX}) at STC above.

CERTIFICATIONS

IEC 61215:2021;IEC 61730:2023;UL 61730

IEC 61730	Fire Class C (as per UL790)
ISO 11925-2	Ignitability (EN 13501-1 Class E)
IEC 62716	Ammonia Resistance (Optional)
IEC 61701	Salt Mist - SM6 (Optional)
IEC 61215:2021	Hailstone (35 mm)
UL 61730	Fire Type 29

Intertek

take e way
for an easy way

Take-e-way WEEE-compliant scheme

WARRANTY

Product Warranty (yrs)	20
Power Warranty (yrs)	30
Power in Year 1	98%
Annual Degradation	0.25%
Power in Year 30	90.75%

DELIVERY INFORMATION

Panels per Pallet	33
Panels per 40 ft GP/high cube container	528 (16 Pallets)
Panels per 13.6 m truck	594 (18 Pallets)

MODULE RATINGS

Module Operating Temperature [T98]§	70°C
Min Environmental Temperature	-40°C
Nominal Module Operating Temperature	44 ± 2°C
Max Hail Rating◻	35 mm @ 27.2 m/s
System Voltage	1500 V
Max Series Fuse Rating	35 A
Max Reverse Current	35 A

§ 98th percentile operating temperature
◻Based on third party testing

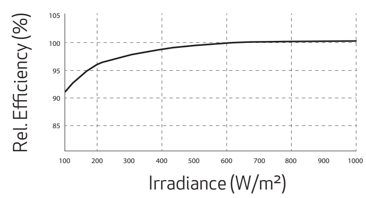
TEMPERATURE RATINGS*

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

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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Specific s subject to change without notice.
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