



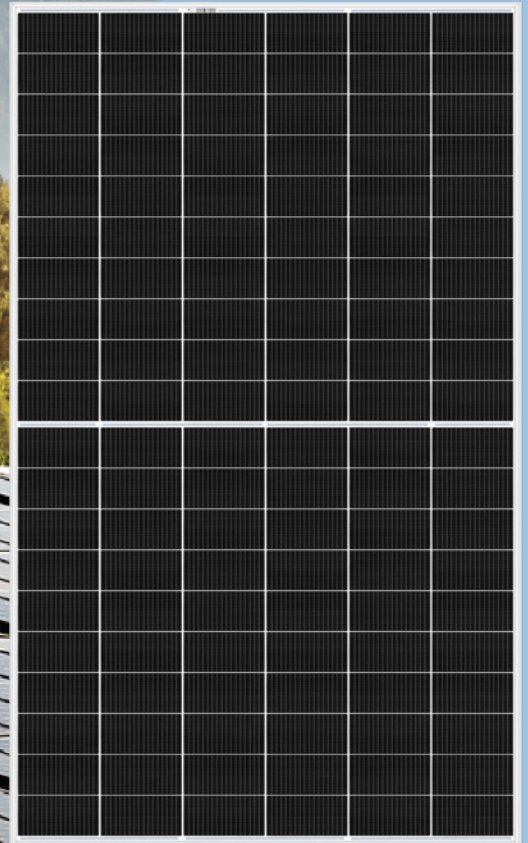
SOLAR'S MOST TRUSTED

REC ALPHA[®]
PRO MG SERIES
DATASHEET

640 W_P

22.5% EFFICIENCY

225 W/M²



EXPERIENCE



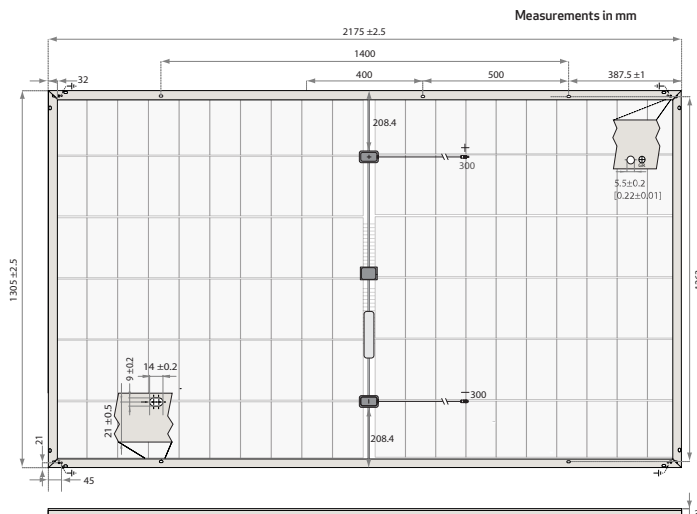
PERFORMANCE

REC ALPHA[®] PRO MG SERIES

DATASHEET



GENERAL DATA	
Cell Type	120 half-cut REC bifacial heterojunction cells
Bifaciality	>86%
Glass	Front: 2 mm solar glass with anti-reflective surface treatment Rear: 2 mm solar glass with white grid
Frame	Anodized aluminum (Silver)
Junction Box	3-part, 3 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790
Connectors	Jiaming Tianheyuan PV-JM608 in accordance with IEC 62852, IP68 only when connected
Cable	4 mm ² solar cable, 0.3 m + 0.3 m in accordance with EN50618
Dimensions	2175 x 1305 x 30 mm (2.84 m ²)
Weight	36.8 kg
Origin	Made in Singapore



ELECTRICAL DATA	Product Code*: RECxxxAA Pro MG																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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Power Output - P _{MAX} (W _p)	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Test Conditions	0/+10		0/+10		0/+10		0/+10		0/+10		0/+10		0/+10		0/+10		0/+10		0/+10		0/+10		0/+10		0/+10																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Watt Class Sorting - (W)	35.8	33.7	36.0	33.9	36.3	34.2	36.6	34.3	36.8	34.5	37.1	35.0	37.2	35.1	37.4	35.2	37.6	35.3	37.8	35.4	38.0	35.5	38.2	35.6	38.4	35.7	38.6	35.8	38.8	35.9	39.0	36.0	39.2	36.1	39.4	36.2	39.6	36.3	39.8	36.4	40.0	36.5	40.2	36.6	40.4	36.7	40.6	36.8	40.8	36.9	41.0	37.0	41.2	37.1	41.4	37.2	41.6	37.3	41.8	37.4	42.0	37.5	42.2	37.6	42.4	37.7	42.6	37.8	42.8	37.9	43.0	38.0	43.2	38.1	43.4	38.2	43.6	38.3	43.8	38.4	44.0	38.5	44.2	38.6	44.4	38.7	44.6	38.8	44.8	38.9	45.0	39.0	45.2	39.1	45.4	39.2	45.6	39.3	45.8	39.4	46.0	39.5	46.2	39.6	46.4	39.7	46.6	39.8	46.8	39.9	47.0	40.0	47.2	40.1	47.4	40.2	47.6	40.3	47.8	40.4	48.0	40.5	48.2	40.6	48.4	40.7	48.6	40.8	48.8	40.9	49.0	41.0	49.2	41.1	49.4	41.2	49.6	41.3	49.8	41.4	50.0	41.5	50.2	41.6	50.4	41.7	50.6	41.8	50.8	41.9	51.0	42.0	51.2	42.1	51.4	42.2	51.6	42.3	51.8	42.4	52.0	42.5	52.2	42.6	52.4	42.7	52.6	42.8	52.8	42.9	53.0	43.0	53.2	43.1	53.4	43.2	53.6	43.3	53.8	43.4	54.0	43.5	54.2	43.6	54.4	43.7	54.6	43.8	54.8	43.9	55.0	44.0	55.2	44.1	55.4	44.2	55.6	44.3	55.8	44.4	56.0	44.5	56.2	44.6	56.4	44.7	56.6	44.8	56.8	44.9	57.0	45.0	57.2	45.1	57.4	45.2	57.6	45.3	57.8	45.4	58.0	45.5	58.2	45.6	58.4	45.7	58.6	45.8	58.8	45.9	59.0	46.0	59.2	46.1	59.4	46.2	59.6	46.3	59.8	46.4	60.0	46.5	60.2	46.6	60.4	46.7	60.6	46.8	60.8	46.9	61.0	47.0	61.2	47.1	61.4	47.2	61.6	47.3	61.8	47.4	62.0	47.5	62.2	47.6	62.4	47.7	62.6	47.8	62.8	47.9	63.0	48.0	63.2	48.1	63.4	48.2	63.6	48.3	63.8	48.4	64.0	48.5	64.2	48.6	64.4	48.7	64.6	48.8	64.8	48.9	65.0	49.0	65.2	49.1	65.4	49.2	65.6	49.3	65.8	49.4	66.0	49.5	66.2	49.6	66.4	49.7	66.6	49.8	66.8	49.9	67.0	50.0	67.2	50.1	67.4	50.2	67.6	50.3	67.8	50.4	68.0	50.5	68.2	50.6	68.4	50.7	68.6	50.8	68.8	50.9	69.0	51.0	69.2	51.1	69.4	51.2	69.6	51.3	69.8	51.4	70.0	51.5	70.2	51.6	70.4	51.7	70.6	51.8	70.8	51.9	71.0	52.0	71.2	52.1	71.4	52.2	71.6	52.3	71.8	52.4	72.0	52.5	72.2	52.6	72.4	52.7	72.6	52.8	72.8	52.9	73.0	53.0	73.2	53.1	73.4	53.2	73.6	53.3	73.8	53.4	74.0	53.5	74.2	53.6	74.4	53.7	74.6	53.8	74.8	53.9	75.0	54.0	75.2	54.1	75.4	54.2	75.6	54.3	75.8	54.4	76.0	54.5	76.2	54.6	76.4	54.7	76.6	54.8	76.8	54.9	77.0	55.0	77.2	55.1	77.4	55.2	77.6	55.3	77.8	55.4	78.0	55.5	78.2	55.6	78.4	55.7	78.6	55.8	78.8	55.9	79.0	56.0	79.2	56.1	79.4	56.2	79.6	56.3	79.8	56.4	80.0	56.5	80.2	56.6	80.4	56.7	80.6	56.8	80.8	56.9	81.0	57.0	81.2	57.1	81.4	57.2	81.6	57.3	81.8	57.4	82.0	57.5	82.2	57.6	82.4	57.7	82.6	57.8	82.8	57.9	83.0	58.0	83.2	58.1	83.4	58.2	83.6	58.3	83.8	58.4	84.0	58.5	84.2	58.6	84.4	58.7	84.6	58.8	84.8	58.9	85.0	59.0	85.2	59.1	85.4	59.2	85.6	59.3	85.8	59.4	86.0	59.5	86.2	59.6	86.4	59.7	86.6	59.8	86.8	59.9	87.0	60.0	87.2	60.1	87.4	60.2	87.6	60.3	87.8	60.4	88.0	60.5	88.2	60.6	88.4	60.7	88.6	60.8	88.8	60.9	89.0	61.0	89.2	61.1	89.4	61.2	89.6	61.3	89.8	61.4	90.0	61.5	90.2	61.6	90.4	61.7	90.6	61.8	90.8	61.9	91.0	62.0	91.2	62.1	91.4	62.2	91.6	62.3	91.8	62.4	92.0	62.5	92.2	62.6	92.4	62.7	92.6	62.8	92.8	62.9	93.0	63.0	93.2	63.1	93.4	63.2	93.6	63.3	93.8	63.4	94.0	63.5	94.2	63.6	94.4	63.7	94.6	63.8	94.8	63.9	95.0	64.0	95.2	64.1	95.4	64.2	95.6	64.3	95.8	64.4	96.0	64.5	96.2	64.6	96.4	64.7	96.6	64.8	96.8	64.9	97.0	65.0	97.2	65.1	97.4	65.2	97.6	65.3	97.8	65.4	98.0	65.5	98.2	65.6	98.4	65.7	98.6	65.8	98.8	65.9	99.0	66.0	99.2	66.1	99.4	66.2	99.6	66.3	99.8	66.4	100.0
Nominal Power Voltage - V _{MPP} (V)	16.50	13.33	16.67	13.46	16.81	13.58	16.94	13.69	17.12	13.84	17.26	13.94	17.40	14.00	17.54	14.10	17.68	14.20	17.82	14.30	17.96	14.40	18.10	14.50																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Nominal Power Current - I _{MPP} (A)	44.1	41.6	44.2	41.7	44.4	41.9	44.6	41.8	44.7	41.9	44.9	42.3	45.0	42.4	45.2	42.5	45.4	42.6	45.6	42.7	45.8	42.8	46.0	42.9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Open Circuit Voltage - V _{OC} (V)	17.34	14.01	17.45	14.09	17.56	14.18	17.67	14.28	17.78	14.37	17.89	14.45	18.00	14.54	18.11	14.62	18.22	14.70	18.33	14.78	18.44	18.55	14.85	18.66	14.92																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Short Circuit Current - I _{SC} (A)	208	211	215	218	222	225	228	231	234	237	240	243	246	249	252	255	258	261	264	267	270	273	276	279																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Power Density (W/m ²)	20.8	21.1	21.5	21.8	22.2	22.5	22.8	23.1	23.4	23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1	26.4	26.7	27.0	27.3	27.6	27.9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Panel Efficiency (%)	20.8	21.1	21.5	21.8	22.2	22.5	22.8	23.1	23.4	23.7	24.0	24.3	24.6	24.9	25.2	25.5	25.8	26.1	26.4	26.7	27.0	27.3	27.6	27.9																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

BNPI						
BNPI P _{MPP} (+/- 3%) (W _p) STC	658	670	681	692	703	714
BNPI V _{OC} (+/- 3%) (V) STC	44.3	44.4	44.4	44.6	44.9	45.1
BNPI I _{SC} (+/- 3%) (A) STC	19.35	19.48	19.60	19.72	19.84	19.97

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 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. * Where xxx indicates the nominal power class (P_{MAX}) at STC above.

MAXIMUM RATINGS*	
Operational Temperature	-40 °C - 85 °C
System Voltage	1500 V
Maximum Test Load (front)	+5400 Pa (551 kg/m ²)
Maximum Test Load (rear)	-2400 Pa (245 kg/m ²)
Max Series Fuse Rating	35 A
Max Reverse Current	35 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% / °C
Temperature coefficient of V _{OC}	-0.23% / °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	528 (16 Pallets)
Panels per 13.6 m truck	594 (18 Pallets)

CERTIFICATIONS	
IEC 61215:2021; IEC61730:2016; UL61730	
ISO 11925-2	Ignitability (EN 13501-1 Class E)
IEC 62716	Ammonia Resistance (Optional)
IEC 61701	Salt Mist- SM6 (Optional)
IEC 61215:2016	Hailstone (35 mm)
UL 61730	Fire Type 29
ISO 14001; ISO9001; IEC45001; IEC62941	

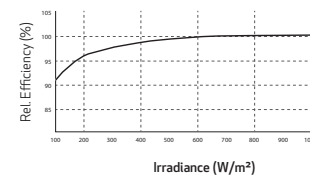


WARRANTY			
	Standard	REC ProTrust	
Installed by an REC Certified Professional	No	Yes	Yes
System Size	All	<25 kW	25-500 kW
Product Warranty (yrs)	20	30	30
Power Warranty (yrs)	30	30	30
Labor Warranty (yrs)	0	30	10
Power in Year 1	98%	98%	98%
Annual Degradation	0.25%	0.25%	0.25%
Power in Year 30	90.75%	90.75%	90.75%

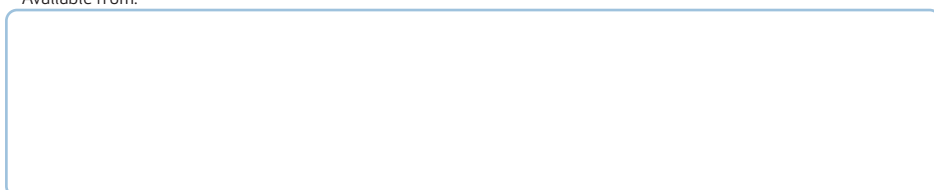
The REC ProTrust Warranty is only available on panels purchased through an REC Certified Solar Professional installer. Warranty conditions apply. See www.recgroup.com for more details

LOW LIGHT 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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Specifications subject to change without notice.