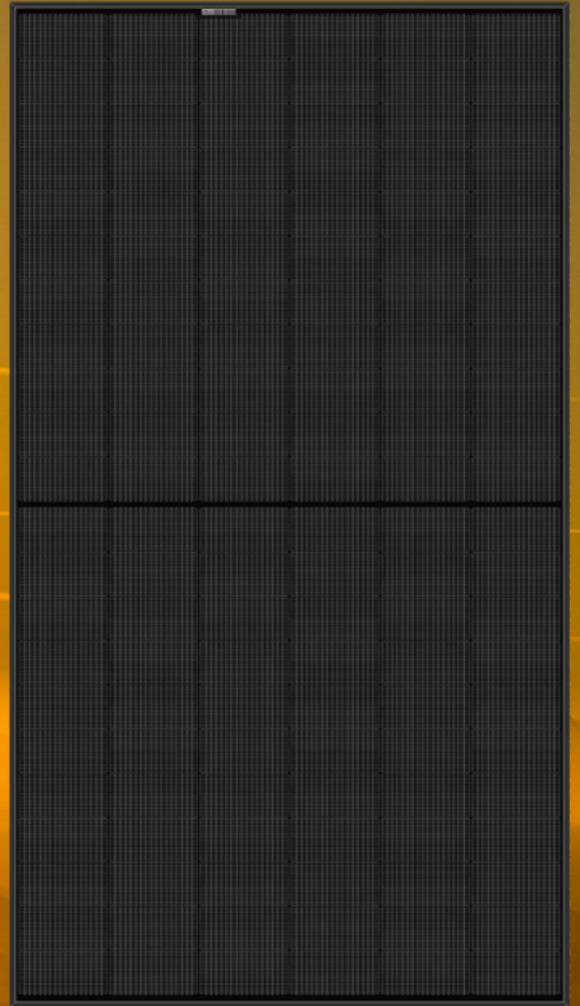


SOLAR'S MOST TRUSTED



# REC ALPHOX<sup>®</sup> PURE BLACK SERIES

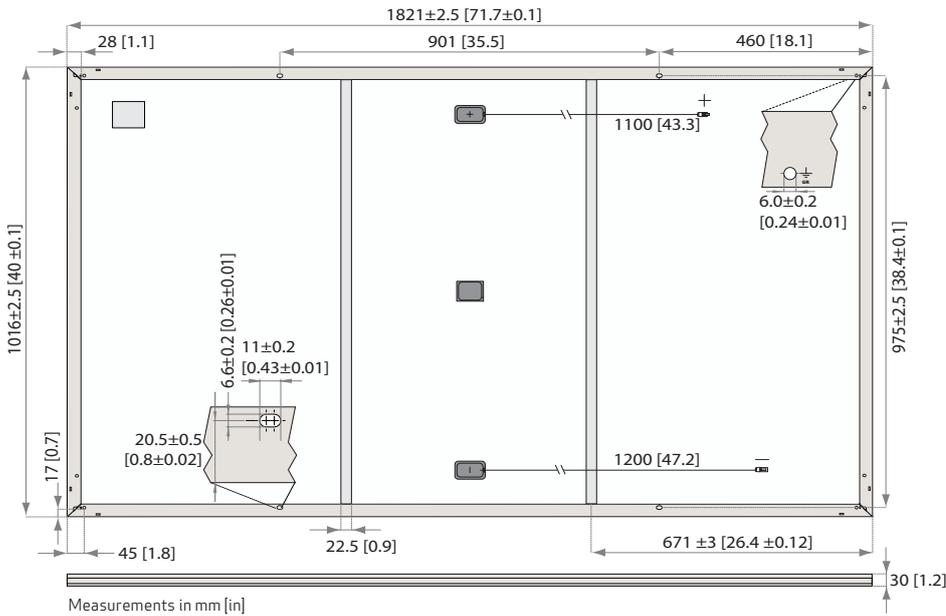
PRODUCT SPECIFICATIONS

405 WP  
219  $\frac{W}{M^2}$



ELIGIBLE





**CERTIFICATIONS**

IEC 61215:2016, IEC 61730:2016, UL 61730 (Pending)  
 ISO 14001:2004, ISO 9001:2015, OHSAS 18001:2007, IEC 62941



**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

**MAXIMUM RATINGS**

Operational temperature:	-40 ... +85°C
Maximum system voltage:	1000 V
Maximum test load (front):	+7000 Pa (713 kg/m <sup>2</sup> )*
Maximum test load (rear):	-4000 Pa (407 kg/m <sup>2</sup> )*
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)

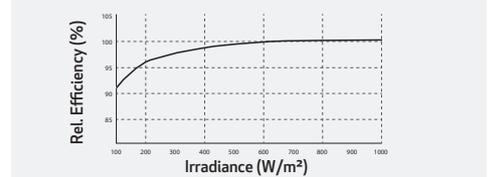
**TEMPERATURE RATINGS\***

Nominal Module Operating Temperature:	44°C (±2°C)
Temperature coefficient of P <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

**LOW LIGHT BEHAVIOUR**

Typical low irradiance performance of module at STC:



**GENERAL DATA**

Cell type:	132 half-cut REC heterojunction cells with lead-free, gapless technology 6 strings of 22 cells in series	Connectors:	Stäubli MC4 PV-KBT4/KST4 (4 mm <sup>2</sup> ) in accordance with IEC 62852 IP68 only when connected
Glass:	3.2 mm solar glass with anti-reflective surface treatment	Cable:	4 mm <sup>2</sup> solar cable, 1.1 m + 1.2 m in accordance with EN 50618
Backsheet:	Highly resistant polymer (black)	Dimensions:	1821 x 1016 x 30 mm
Frame:	Anodized aluminum (black)	Weight:	20.5 kg
Junction box:	3-part, 3 bypass diodes, lead-free IP67 rated, in accordance with IEC 62790	Origin:	Made in Singapore

**ELECTRICAL DATA**

Product Code\*: RECxxxAA Pure Black

	385	390	395	400	405
Power Output - P <sub>MAX</sub> (Wp)					
Watt Class Sorting - (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Nominal Power Voltage - V <sub>MPP</sub> (V)	41.2	41.5	41.8	42.1	42.4
Nominal Power Current - I <sub>MPP</sub> (A)	9.35	9.40	9.45	9.51	9.56
Open Circuit Voltage - V <sub>OC</sub> (V)	48.5	48.6	48.7	48.8	48.9
Short Circuit Current - I <sub>SC</sub> (A)	9.99	10.03	10.07	10.10	10.14
Power Density (W/m <sup>2</sup> )	208.1	210.8	213.5	216.2	219.0
Panel Efficiency (%)	20.8	21.1	21.3	21.6	21.9
Power Output - P <sub>MAX</sub> (Wp)	293	297	301	305	309
Nominal Power Voltage - V <sub>MPP</sub> (V)	38.8	39.1	39.4	39.7	40.0
Nominal Power Current - I <sub>MPP</sub> (A)	7.55	7.59	7.63	7.68	7.72
Open Circuit Voltage - V <sub>OC</sub> (V)	45.7	45.8	45.9	46.0	46.1
Short Circuit Current - I <sub>SC</sub> (A)	8.07	8.10	8.13	8.16	8.19

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

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.

