

SOLAR'S MOST TRUSTED



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**solar**  
award  
  
2022  
WINNER

# REC ALPHA<sup>®</sup> PURE SERIES

PRODUCT SPECIFICATIONS

COMPACT PANEL SIZE

405 WP  
20.3  $\frac{W}{FT^2}$   
21.9% EFFICIENCY



  
LEAD-FREE  
ROHS COMPLIANT

EXPERIENCE  
  
PERFORMANCE

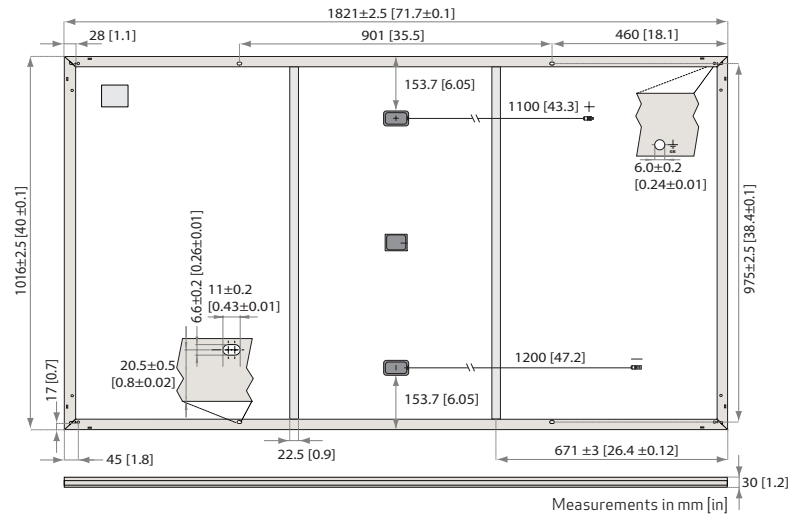
# REC ALPHA PURE SERIES

## PRODUCT SPECIFICATIONS



### GENERAL DATA

|               |  |
|---------------|--|
| Cell type:    | 132 half-cut REC heterojunction bifacial cells with lead-free, gapless technology, 6 strings of 22 cells in series |
| Glass:        | 0.13in(3.2mm)solar glass with anti-reflective surface treatment in accordance with EN 12150                        |
| Backsheet:    | Highly resistant polymer (black)   |
| Frame:        | Anodized aluminum (black)  |
| Junction box: | 3-part, 3 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790  |
| Connectors:   | Stäubli MC4 PV-KBT4/KST4 (4 mm <sup>2</sup> ) in accordance with IEC 62852, IP68 only when connected               |
| Cable:        | 12 AWG (4 mm <sup>2</sup> ) PV wire, 43+ 47 in (1.1+ 1.2 m) in accordance with EN 50618                            |
| Dimensions:   | 71.7 x 40 x 1.2 in (19.91 ft <sup>2</sup> ) / 1821 x 1016 x 30 mm (1.85 m <sup>2</sup> )                           |
| Weight:       | 45 lbs (20.5 kg)   |
| Origin:       | Made in Singapore  |



### ELECTRICAL DATA

### Product Code\*: RECxxxAA Pure

|  |       |       |       |       |       |
|--|-------|-------|-------|-------|-------|
| Power Output - P <sub>MAX</sub> (Wp)         | 390   | 395   | 400   | 405   | 410   |
| Watt Class Sorting - (W)                     | 0/+5  | 0/+5  | 0/+5  | 0/+5  | 0/+5  |
| Nominal Power Voltage - V <sub>MPP</sub> (V) | 40.6  | 41.0  | 41.4  | 41.8  | 42.2  |
| Nominal Power Current - I <sub>MPP</sub> (A) | 9.61  | 9.64  | 9.67  | 9.69  | 9.72  |
| Open Circuit Voltage - V <sub>OC</sub> (V)   | 48.4  | 48.6  | 48.8  | 49.1  | 49.4  |
| Short Circuit Current - I <sub>SC</sub> (A)  | 10.38 | 10.39 | 10.40 | 10.41 | 10.42 |
| Power Density (W/ft <sup>2</sup> )           | 19.6  | 19.8  | 20.1  | 20.3  | 20.6  |
| Panel Efficiency (%)                         | 21.1  | 21.4  | 21.6  | 21.9  | 22.2  |
| Power Output - P <sub>MAX</sub> (Wp)         | 297   | 301   | 305   | 308   | 312   |
| Nominal Power Voltage - V <sub>MPP</sub> (V) | 38.3  | 38.6  | 39.0  | 39.4  | 39.8  |
| Nominal Power Current - I <sub>MPP</sub> (A) | 7.77  | 7.79  | 7.82  | 7.83  | 7.85  |
| Open Circuit Voltage - V <sub>OC</sub> (V)   | 45.6  | 45.8  | 46.0  | 46.3  | 46.6  |
| Short Circuit Current - I <sub>SC</sub> (A)  | 8.38  | 8.39  | 8.40  | 8.41  | 8.42  |

Values at standard test conditions (STC: air mass AM1.5, irradiance 10.75 W/sq ft (1000 W/m<sup>2</sup>), temperature 77°F (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 AM1.5, irradiance 800 W/m<sup>2</sup>, temperature 68°F (20°C), windspeed 3.3 ft/s (1 m/s). \*Where xxx indicates the nominal power class (P<sub>MAX</sub>) at STC above.

### MAXIMUM RATINGS

|                            |  |
|----------------------------|--|
| Operational temperature:   | -40 ... +185°F                         |
| Maximum system voltage:    | 1000 V                                 |
| Maximum test load (front): | + 7000 Pa (146 lbs/ft <sup>2</sup> )*  |
| Maximum test load (rear):  | - 4000 Pa (83.5 lbs/ft <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)

### WARRANTY

|  | Standard | RECProTrust      |
|--|----------|------------------|
| Installed by an REC Certified Solar Professional | No       | Yes              |
| System Size                                      | All      | ≤25 kW 25-500 kW |
| Product Warranty (yrs)                           | 20       | 25               |
| Power Warranty (yrs)                             | 25       | 25               |
| Labor Warranty (yrs)                             | 0        | 25               |
| Power in Year 1                                  | 98%      | 98%              |
| Annual Degradation                               | 0.25%    | 0.25%            |
| Power in Year 25                                 | 92%      | 92%              |

The RECProTrust Warranty is only available on panels purchased through an REC Certified Solar Professional installer. Warranty conditions apply. See [www.recgroup.com](http://www.recgroup.com) for more details.

### CERTIFICATIONS

|   |                                    |
|---|------------------------------------|
| IEC 61215:2016, IEC 61730:2016, UL 61730  |                                    |
| IEC 62804                                 | PID                                |
| IEC 61701                                 | Salt Mist                          |
| IEC 62716                                 | Ammonia Resistance                 |
| UL 61730                                  | Fire Type 2                        |
| IEC 62782                                 | Dynamic Mechanical Load            |
| IEC 61215-2:2016                          | Hailstone (35mm)                   |
| IEC 62321                                 | Lead-free acc. to RoHS EU 863/2015 |
| ISO 14001, ISO 9001, IEC 45001, IEC 62941 |                                    |



### TEMPERATURE RATINGS\*

|   |             |
|---|-------------|
| Nominal Module Operating Temperature:         | 44°C (±2°C) |
| Temperature coefficient of P <sub>MAX</sub> : | -0.24 %/°K  |
| Temperature coefficient of V <sub>OC</sub> :  | -0.24 %/°K  |
| Temperature coefficient of I <sub>SC</sub> :  | 0.04 %/°K   |

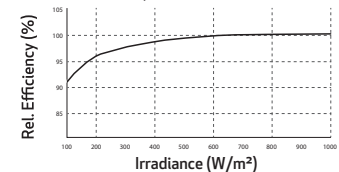
\*The temperature coefficients stated are linear values

### DELIVERY INFORMATION

|  |                  |
|--|------------------|
| Panels per pallet:                       | 33               |
| Panels per 40 ft GP/high cube container: | 792 (24 pallets) |
| Panels per 53 ft truck:                  | 891 (27 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.

REC Solar PTE. LTD.  
20 Tuas South Ave. 14  
Singapore 637312  
[post@recgroup.com](mailto:post@recgroup.com)

