



OGRE

energy

110 WATT SOLAR PANEL



OGRE Solar is engineered for applications that require maximum power, reliability, and durability. OGRE is field-proven in remote locations and harsh environments across the U.S.

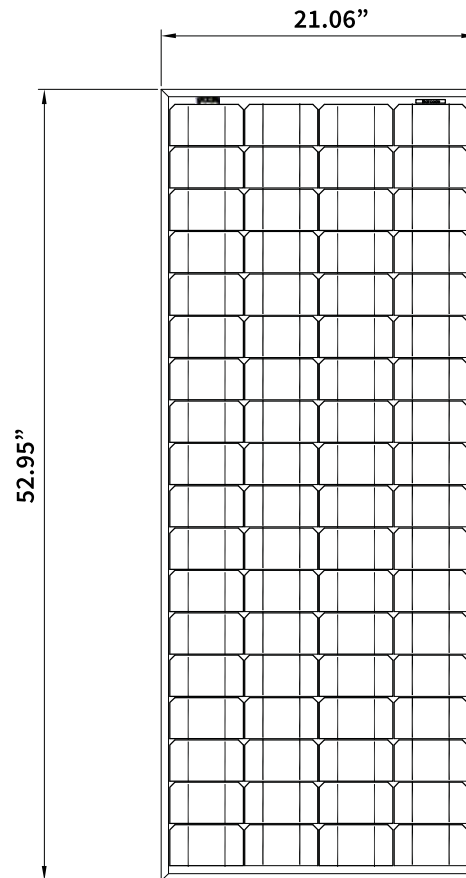
- Flash data (sun simulator) & EL test is performed on every panel, ensuring quality
- Potential induced degradation (PID) Free= better performance in diffused sunlight & high temperatures
- Excellent power tolerance: $\pm 3\%$ = more power
- Anti-reflective coating on glass increases the absorption of sunlight
- Heavy gauge anodized aluminum frame resists wind torque and is chamfered for better rain/snow runoff
- Junction box is approved for hazardous locations & is rain tight and includes 1/2" conduit knock-outs

110 WATT SPECIFICATIONS

OGRE B110-J12 (#06529) OGRE B110-J24 (#06530)

| | | |
|------------------------------|-----------------|----------------|
| Max Power | 110 Watts | |
| | 12 Volt | 24 Volt |
| Max Power Voltage | 16.1V | 32.2V |
| Max Power Current | 6.84A | 3.42A |
| Open Circuit Voltage | 19.4V | 38.7V |
| Short Circuit Current (Isc) | 7.66A | 3.83A |
| Maximum System Voltage | 600V | |
| Series Fuse Rating | 15A | |
| MECHANICAL | | |
| Weight | 23.81 lbs | |
| Dimension | 52.95" x 21.06" | |
| Thickness, with junction box | 1.81" in. | |
| Anodized aluminum frame | >10 μ m | |

ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS



25-YEAR LINEAR PERFORMANCE WARRANTY

OGRE's warranty covers for power loss less than 3% in the first year and only 0.35% degradation per year thereafter. 12-year product warranty.

BUILT-IN DURABILITY

OGRE uses premium cell materials to ensure a long lasting module. Our strict control criteria mandates a thermal picture of each cell before and after processing which eliminates the possibility of hotspot formation.

FM APPROVAL

Class 1, Division 2, Groups A, B, C, D
Hazardous Locations Type IP65
T3C@Ta=-40°C to +85°C
Manf. in ISO 9001 certified factory



TO ORDER: 800.898.2899 AUTOMATION-X.COM

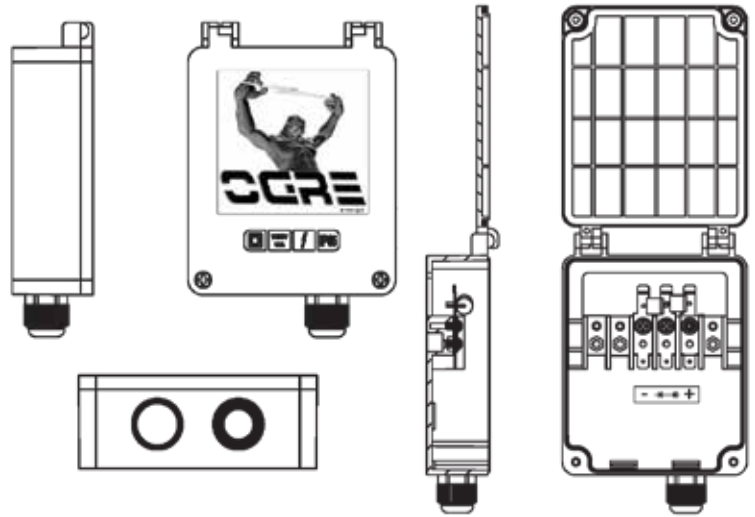
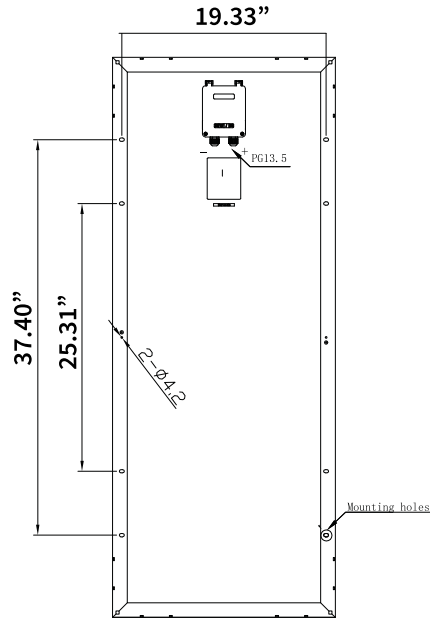
SALES@AUTOMATION-X.COM

OGRE solar panels undergo strict in-house and independent testing, guaranteeing the highest level of quality, which we stand behind. These panels are field-proven to be the best for off-grid applications across the U.S.



110 WATT SOLAR PANEL

PANEL PHYSICAL SPECIFICATIONS & JUNCTION BOX

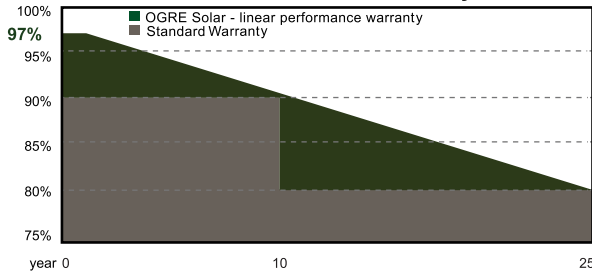


TEMPERATURE CO-EFFICIENTS & CELL SPECS

| | |
|-------------------------------|----------|
| Power | -0.36%/K |
| Voltage | -0.36%/K |
| Current | +0.06%/K |
| Cell Efficiency | 18.40% |
| Number of Cells in Series | 72 |
| Cell Type BC | Mono |
| Number of Strings in Parallel | 1 |
| Max Power Tolerance | ± 5% |

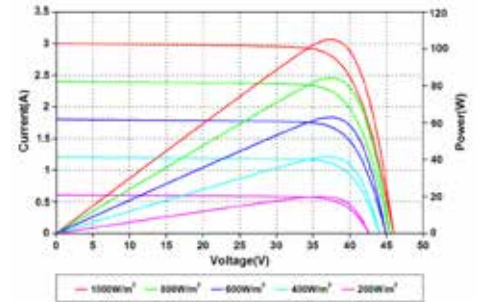
ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS

25-Year Linear Performance Warranty

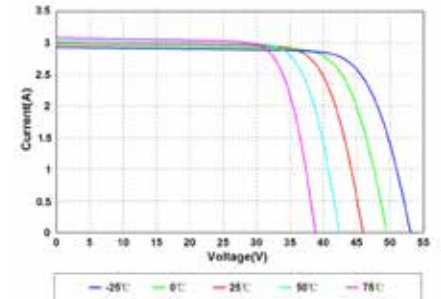


Standard test conditions (STC), measurement conditions: intensity irradiation 1000 W/m², spectral distribution AM 1.5, temperature 25.2°C, according to standard EN normal cell operation temperature, measurement conditions: irradiation of 800 W/m² AM temperature 20°C, wind speed 1m/s. Reduced efficiency with the decrease in the intensity of irradiation of 1000W/m² and 200W/m², temperature 25°C according EN 60 904-1. Reverse current power rating: Operation of the modules with an external power source is only permitted with a string fuse, with a release current of <2 x I_{sc} @ STC" measuring tolerance of P_{max}@STC ±5%, all other electric

I-V CURVES



Current-Voltage Curves at Different Irradiances



Current-Voltage Curves at Different Temperatures



POSITIVE CLASSES: (-0/+3)

All OGRE modules are positively classed. This means that the OGRE module is up to 3 Watt Capacity (Wp) above its rated power-you are guaranteed up

Subject to change without notice. April 2018

TO ORDER: 800.898.2899 AUTOMATION-X.COM

SALES@AUTOMATION-X.COM

OGRE solar panels undergo strict in-house and independent testing, guaranteeing the highest level of quality, which we stand behind. These panels are field-proven to be the best for off-grid applications across the U.S.