



OGRE

energy

90 Watt Monocrystalline Solar Panel



OGRE solar modules are designed and built to achieve top quality performance, maximize energy production, and ensure long-lasting durability

MODELS & ORDER #: OGRE B90-J12 (05208)

- Chamfered frame creates improved rain and snow runoff
- Better performance in diffused sunlight and high temperatures
- Flash data (sun simulator) performed on every panel
- Potential induced degradation (PID) Free
- Effective hotspot-prevention processes ensure durability
- Excellent power tolerance: $\pm 3\%$ = more power
- Glass with anti-reflective coating
- Individual testing, quality assurance by permanent production control incl. EL-test
- Junction box is rain tight and has four 1/2" conduit or cable fitting knock-outs

Positive Classes: (-0/+3)

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

Built-in Durability

OGRE uses only premium cell material to ensure a long-lasting module. OGRE operates with strict control criteria to mandate a thermal picture of each cell before and after processing, to eliminate the possibility of hotspot formation.

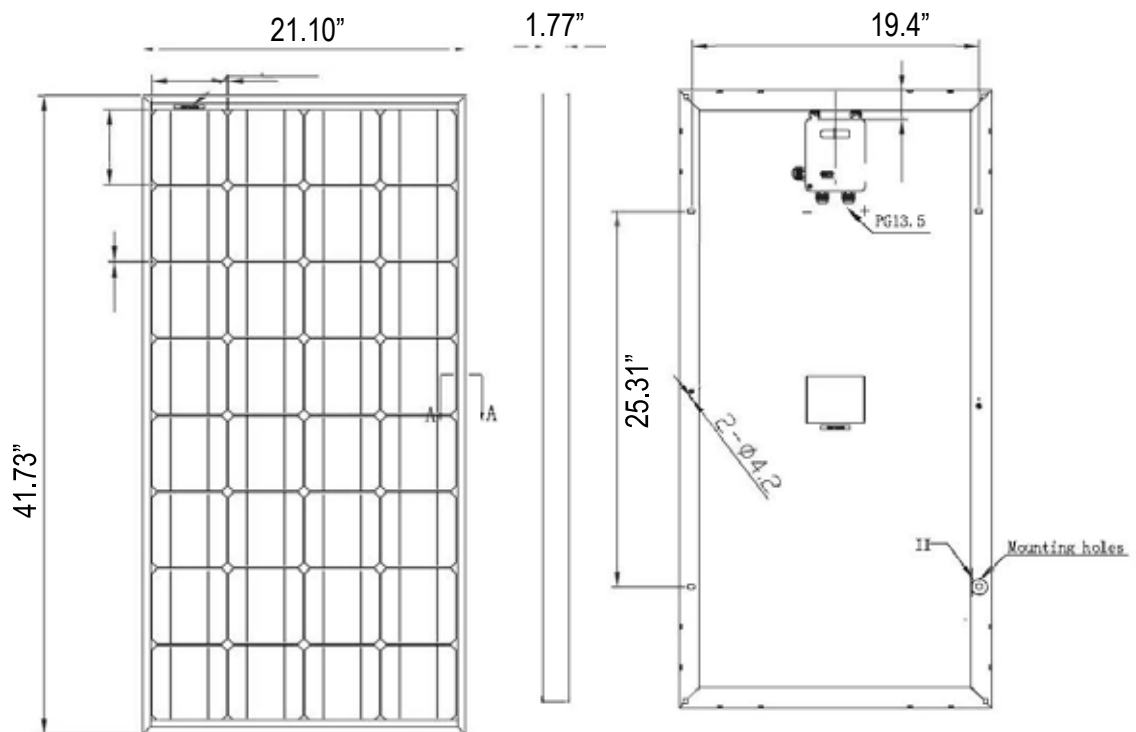
25-year Linear Performance Warranty

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.

FM Approvals:

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

90 WATT OGRE SOLAR PHYSICAL CHARACTERISTICS



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.



90 Watt Monocrystalline Solar Panel

OGRE 90 WATT PANEL: 12 VOLT SPECIFICATIONS

ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS

Max Power	90 Watts
Max Power Voltage	17.0 Vmp
Max Power Current	5.30 Imp
Open Circuit Voltage	20.4 Voc
Short Circuit Current (Isc)	5.92 A
Maximum System Voltage	600 V
Series Fuse Rating	15 A

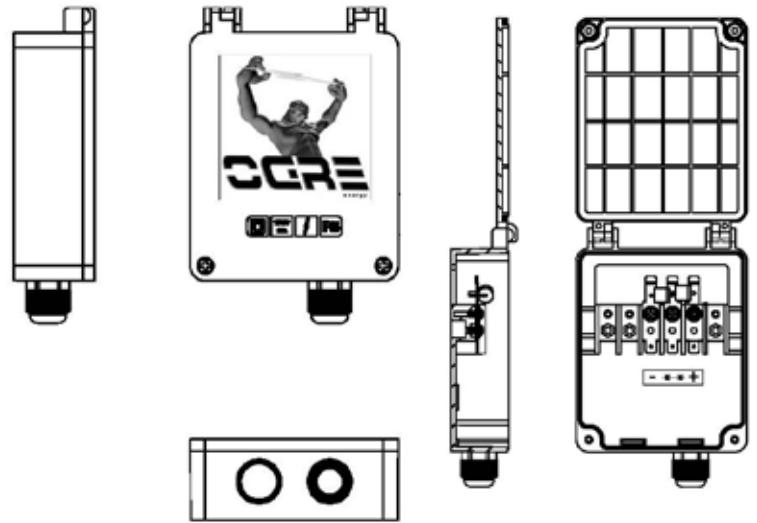
TEMPERATURE CO-EFFICIENTS

Power	-0.36%/K
Voltage	-0.36 %K
Current	+0.06%K
Cell Efficiency	19.20%
Number of Cells in Series	32
Cell Type BC	Mono
Number of Strings in Parallel	1
Max Power Tolerance	± 5%

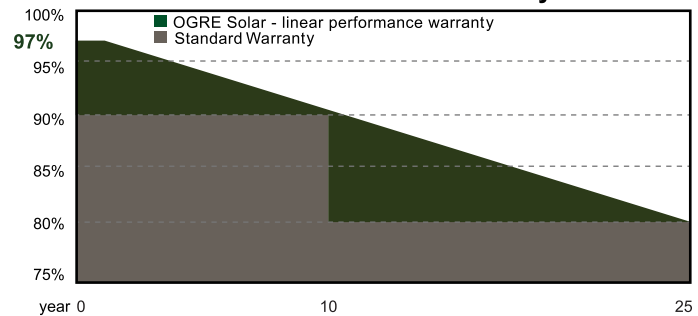
MECHANICAL

Weight	14.34 lbs
Dimension	41.73" x 21.10" in.
Thickness, with junction box	1.81" in.
Frame-aluminum	>10µm anodized

JUNCTION BOX



25-Year Linear Performance Warranty



STC-Standard Conditions, measurement conditions: intensity irradiation 1000 W/m², spectral distribution AM 1.5 temperature 25 ± 2°C, according to standard EN 60904-1
 NOCT-Normal operation Cell Temperature, measurement conditions: irradiation intensity 800 W/m², AM 1.5 temperature 20°C, wind speed 1m/s.
 Reduced efficiency with the decrease in the intensity of irradiation of 1000 W/m² and 200 W/m², temperature 25°C according to EN 60904-1
 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 Isc @ STC
 Measuring tolerance of Pmax @ STC ±5%, all other electric parameters ±10%
 Suring tolerance of Pmax @ STC ± 5% all other electric parameters ±10%



Subject to change without notice. December 2017

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.