

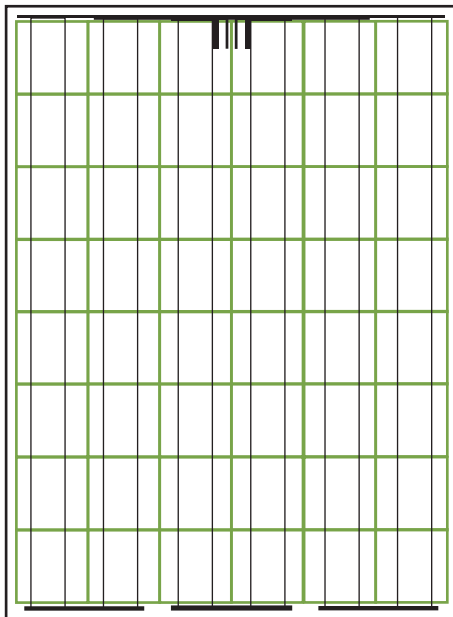


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change the world

**sundragon™ i190-48P**  
**Hazardous Grade C1D2**  
Poly-crystalline Solar Modules

Model Name **i190-48P**

*Hazardous Area Protection*  
Class 1 Division 2, Groups A, B, C, D  
Temperature Classification T4



**190W**

Invensun Sundragon Premium Solar Panels are designed to the standards required for extreme weather and heavy-duty applications. With the highest-quality construction, Invensun solar panels guarantees that, year-over-year, you will receive reliable power generation, allowing a greater return-on-investment.

- Microwave / radio repeater stations
- Railroad signals
- Sailboat charging systems
- Medical facilities in rural areas
- Cathodic protection systems
- Emergency communication systems
- Air monitoring
- Navigation lighthouses, and ocean buoys
- Wireless Data
- Aviation obstruction lights
- Emergency communication systems
- Telecom
- Security
- Desalination systems
- Recreational vehicles
- Water quality and environmental data monitoring systems
- Pumping systems for irrigation, rural water supplies and livestock watering

**Environmental Characteristics**

Mechanical Load	2400 Pa
Fire Rating	Class C
Operating Temperature	-40 to +85 °C

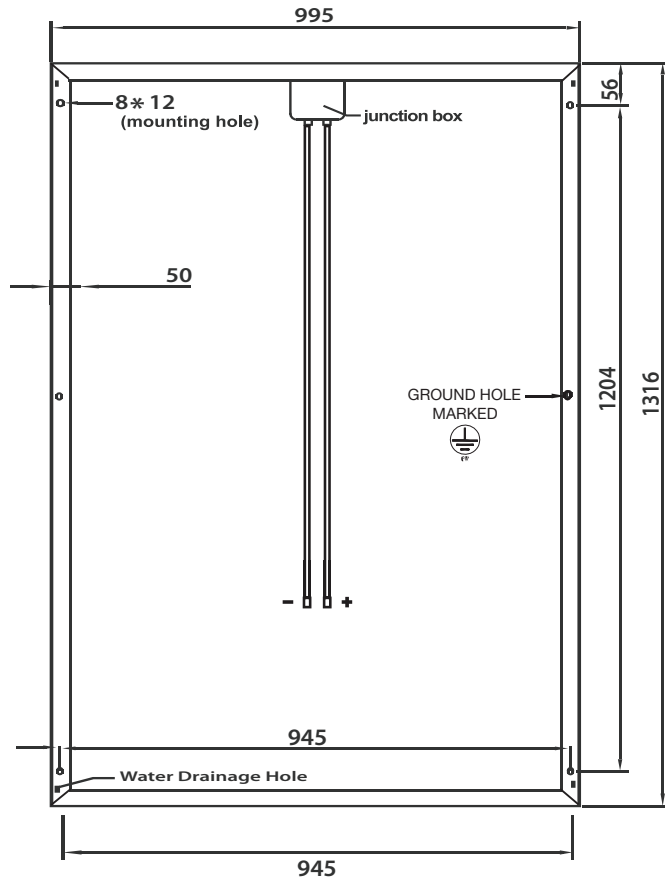
**Warranty**

Product Workmanship	5 years
10 Years	90% output
25 Years	80% output

ISO 9001 factory certification ensures that our manufacturing facilities use proven manufacturing and control processes.

# Hazardous Grade C1D2

## Poly-crystalline Solar Modules



# 190W

## Parameters

### Electrical Characteristics

Maximum Power at STC (Pmax)	190W
Optimum Operating Voltage (Vmp)	24.53V
Optimum Operating Current (Imp)	7.75A
Open Circuit Voltage (Voc)	29.47 V
Short Circuit Current (Isc)	8.32 A
Maximum System Voltage	DC 600V
Maximum Series Fuse Rating	15A
Power Tolerance	±5%

Nominal Operating Cell Temperature	46°C, ±2°C
Maximum Power (Pmax) Coefficient	-0.45%/°C, ±0.05
Short Circuit Current (Isc) Coefficient	-0.6%/°C, ±0.015
Open Circuit Current (Voc) Coefficient	-0.35%/°C, ±0.05

### Mechanical Characteristics

Solar Cell Type	Polycrystalline Silicon
Solar Cell Size	156mm x 156mm
Number of Solar Cells	48
Junction Box	IP-65 rated
Cables	12AWG (4mm <sup>2</sup> )
Connectors	N/A
Diode	3 bypass diodes
Front Glass	3.2mm tempered glass
Frame	Anodized Aluminum Alloy
Dimensions L x W x D	1316 x 995 x 50 mm
Weight	17.0kg



Standard Test Conditions (STC)

STC = 1000 W/M<sup>2</sup> irradiance, 25°C module temperature,

AM1.5 spectrum (Subject to simulator measurement uncertainty of ±3%)