

# Photovoltaic Solar Module

Photovoltaic solar modules convert sunlight into electricity. These modules are designed for system stability with a power generation efficiency attenuation that shall not exceed 20% over 25 years.



## Product Overview

### High-Efficiency Solar Power

This advanced monocrystalline photovoltaic module is engineered for high-yield energy conversion in residential, commercial, and utility-scale projects. Designed for durability and stability, it features a robust frame and advanced cell technology that ensures consistent power generation even under varied environmental conditions. With an impressive 19.8% conversion efficiency, it provides a reliable, maintenance-free solution for long-term sustainable energy integration.

## Technical Specifications

### Performance Metrics

|                            |  |                                       |                                  |
|----------------------------|--|---------------------------------------|----------------------------------|
| <b>400 W</b><br>Peak Power | <b>42.29 V</b><br>Best Working Voltage | <b>9.46 A</b><br>Best Working Current | <b>19.8 %</b><br>Conversion Rate |
|----------------------------|--|---------------------------------------|----------------------------------|

### Voltage & Current Ratings

| Parameter                  | Value     |
|----------------------------|-----------|
| Open Circuit Voltage       | 49.10 V   |
| Short Circuit Current      | 10.35 A   |
| Maximum System Voltage     | 1500 V DC |
| Maximum Protection Current | 20 A      |

## Construction & Durability

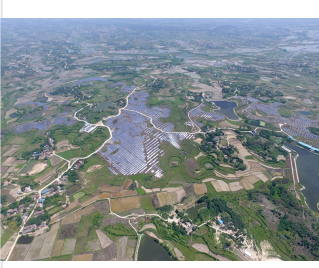
### Physical Dimensions

| Attribute     | Measurement            |
|---------------|------------------------|
| Cell Type     | Mono-crystalline       |
| Cell Quantity | 144 (6*24)             |
| Dimensions    | 2014mm * 1002mm * 35mm |
| Weight        | 22.5 kg                |

### Environmental Resilience

- Operating Temperature: -40°C to +85°C
- Rated Operating Temperature: 45±2°C
- Open Circuit Voltage Temperature Coefficient: -0.34%/°C
- Short Circuit Current Temperature Coefficient: +0.05%/°C
- Peak Power Temperature Coefficient: -0.46%/°C

## System Benefits



Large-scale installation showing effective land-use integration.



Photovoltaic modules arranged in rows across a terraced landscape.



Optimized module placement for maximum sunlight absorption.



Robust crystalline silicon modules integrated with rural infrastructure.

### Core Advantages

System Stability, Maintenance Free, Architectural Integration, Low Attenuation