

Monocrystalline 450W Solar Panel

This monocrystalline solar panel offers high power output and efficient energy conversion. It is engineered for durability and reliable performance in various environmental conditions.



Product Overview



Integration setup demonstrating the module in professional energy systems.

High-Efficiency 450W Monocrystalline Solar Module

This high-performance 72-cell monocrystalline solar panel is engineered for professional energy generation, delivering reliable power outputs ranging from 430W to 450W. Featuring advanced half-cut cell technology and a robust PERC design, the module minimizes internal current loss and maintains exceptional performance even in challenging hot-spot conditions. Designed for durability and longevity, it offers a high conversion efficiency and is certified for harsh environmental resistance, including salt-spray corrosion and system voltage endurance.

Electrical Characteristics

Performance Metrics (STC)

| | | | |
|---------------------------------|---|---|--|
| 450 W Max Power (Pmp) | 50.4 V Open Circuit Voltage (Voc) | 11.47 A Short Circuit Current (Isc) | 41.3 V Max Power Voltage (Vmp) |
|---------------------------------|---|---|--|

Performance Metrics (NOCT)

| | | | |
|---------------------------------|--|--|---|
| 342 W Max Power (Pmp) | 47.76 V Open Circuit Voltage (Voc) | 9.22 A Short Circuit Current (Isc) | 38.94 V Max Power Voltage (Vmp) |
|---------------------------------|--|--|---|

Technical Specifications



Detailed breakdown of the module construction, including frame, glass, and cell layering for efficiency.

Structural Details

| Attribute | Specification |
|--------------|--------------------------|
| Cell Count | 144 cells (6x24) |
| Dimensions | 2108 x 1046 x 35 mm |
| Weight | 24 kg |
| Glass | 3.2mm Tempered AR Coated |
| Frame | Anodized Aluminum Alloy |
| Junction Box | IP67 Rated |

Compliance & Standards

CE, ISO 9001, ISO 14001, OHSAS 18001, IEC61701 Salt-Spray Resistant

Temperature Ratings

Temperature Coefficients

- Pmax: $-0.37\%/^{\circ}\text{C}$
- Voc: $-0.29\%/^{\circ}\text{C}$
- Isc: $+0.05\%/^{\circ}\text{C}$
- Nominal Operating Cell Temperature: $45\pm 2^{\circ}\text{C}$