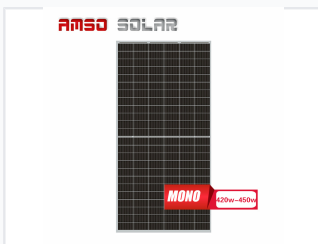


425W-450W Monocrystalline 9BB Half-Cell Solar Panel

This monocrystalline solar panel features 9BB technology and a half-cell design for enhanced performance. With a power output ranging from 425W to 450W, this module is ideal for residential and commercial solar energy systems.



ADDITIONAL IMAGES



Product Overview

AMSO SOLAR
144 cells
20.23% Module Efficiency

PRODUCT ADVANTAGE

- HIGH POWER OUTPUT:** 425W-450W power output, ideal for residential and commercial solar energy systems.
- DURABILITY:** High-transmission tempered glass and robust aluminum frame, capable of withstanding significant wind and snow loads.
- LOW-LIGHT PERFORMANCE:** Advanced 9BB technology and half-cell design, maximizing energy yield even in low-light conditions.
- QUALITY & SAFETY:** Engineered for durability, featuring high-transmission tempered glass and a robust aluminum frame.
- ENVIRONMENTAL RESILIENCE:** Designed to withstand severe weather conditions, ensuring long-term performance.

TECHNOLOGY

- Advanced 9BB technology
- Half-cell design
- Monocrystalline silicon

KEY FEATURES

- High power output
- Durable construction
- Low-light performance
- Environmental resilience

QUALIFICATION

- ISO 9001
- CE
- TUV
- UL
- IEC 61215
- IEC 61730

Linear performance warranty

- 25-year linear performance warranty
- 0.5% power loss per year

Overview of 9BB technology benefits, including low-light performance and severe weather resilience.

High-Efficiency 9BB Half-Cell Solar Solution

This monocrystalline solar panel utilizes advanced 9-busbar (9BB) technology and 144 half-cut cells to deliver a high power output ranging from 425W to 450W. By reducing internal resistance and heat generation, the half-cell design improves overall stability and reliability while maximizing energy yield even in low-light conditions. The module is engineered for durability, featuring high-transmission tempered glass and a robust aluminum frame capable of withstanding significant wind and snow loads.

Key Performance Metrics

Key Performance Metrics

450 W Max Power Output	20.37 % Max Module Efficiency	1500 VDC Max System Voltage
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Technical Specifications

The image shows a technical specification sheet for the 144-cell monocrystalline series. It includes a table of electrical characteristics for models 425M, 435M, 445M, and 450M. The table lists parameters such as Pmax (W), Vmp (V), Imp (A), and Voc (V) under STC conditions. Below the table, there are sections for Mechanical Data (Dimensions, Weight, Glass, Junction Box) and Operating Conditions (Operating Temperature, Max Mechanical Load). A photograph of the solar panel is also included.

Detailed electrical characteristics and mechanical dimensions for the 144-cell monocrystalline series.

Cell Technology

- Monocrystalline Silicon
- 144 Half-cut Cells (6x24 configuration)
- 9 Busbar (9BB) Technology
- Cell Size: 166mm x 83mm

Electrical Characteristics

Electrical Data (STC)

Model	Pmax (W)	Vmp (V)	Imp (A)	Voc (V)
425M	425	40.5	10.5	48.3
435M	435	40.88	10.64	48.84
445M	445	41.28	10.78	49.28
450M	450	41.47	10.85	49.51

Mechanical Data

Dimensions	2115 x 1052 x 35 mm
Weight	25 kg
Glass	3.2mm High transmission, low-iron tempered glass
Junction Box	IP68 rated with 3 bypass diodes

Operating Conditions

Operating Temperature	-40°C to +85°C
Max Mechanical Load	Snow 5400Pa / Wind 2400Pa

Certifications & Warranty

Warranty

- 12-year product warranty
- 25-year linear power warranty

Certifications

IEC 61215, IEC 61730, ISO 9001, ISO 14001, CE, TUV

Product Benefits

Efficiency & Cost Benefits

- Half-cell technique improves power output by 5-10W
- Installation area decreased by 3%
- Installation cost reduced by 6%
- Reduced operating temperature by 1.6°C
- Minimized risk of cell cracks and busbar damage