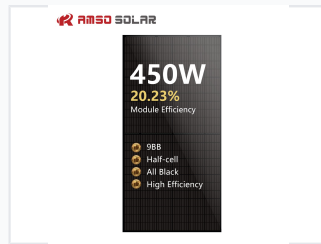


# 425W-450W Monocrystalline 9BB Half-Cell Solar Panel

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**  
Solar panel with 144 cells (180W solar cells)

**PRODUCT ADVANTAGE**

- HIGH POWER OUTPUT**: High power output, up to 450W, for maximum energy yield.
- LOW-LIGHT PERFORMANCE**: High performance in low-light conditions, maximizing energy yield even in overcast weather.
- LONG-LIGHT PERFORMANCE**: High performance in low-light conditions, maximizing energy yield even in overcast weather.
- QUALITY-ASSURANT EXTREME ENVIRONMENTAL CONDITIONS**: High performance in low-light conditions, maximizing energy yield even in overcast weather.
- EXCELLENT WEATHER RESILIENCE**: High performance in low-light conditions, maximizing energy yield even in overcast weather.

**TECHNOLOGY**

- 9BB Technology
- Half-cell Design
- All Black
- High Efficiency

**KEY FEATURES**

- High Power Output
- Low-Light Performance
- Long-Light Performance
- Quality-Assurant Extreme Environmental Conditions
- Excellent Weather Resilience

**QUALIFICATION**

- ISO 9001
- ISO 14001
- CE
- TUV
- UL
- IEC 61215
- IEC 61730

**Linear performance warranty**

- 10 Year Power Output
- 25 Year Linear Performance

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

<b>450 W</b> Max Power Output	<b>20.37 %</b> Max Module Efficiency	<b>1500 VDC</b> Max System Voltage
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## Technical Specifications

The screenshot displays the 'Electrical Characteristics' section of the RIBBO SOLAR technical specifications. It includes a table of electrical data for various models (425M, 435M, 445M, 450M) under STC conditions. The table lists parameters such as Pmax (W), Vmp (V), Imp (A), and Voc (V). Below the table, there are sections for 'Mechanical Data' and 'Operating Conditions', which include details about the panel's dimensions, weight, glass type, and mechanical load capacity. The document also features a small diagram of the solar panel and contact information for RIBBO SOLAR.

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