

# Maysun Solar

Shingling 166mm 408 Cells  
Monocrystalline PV Module

## TH(470-490)PM5- 72SB Series



### 408 LAYOUT

MONOCRYSTALLINE MODULE

### 470-490W

POWER OUTPUT RANGE

### 20.9%

MAXIMUM EFFICIENCY

### 0~+5W

POSITIVE POWER TOLERANCE

Maysun Solar brand was established in 2008, our marketing center is located in the beautiful Chinese city of Hangzhou. We are a professional solar panels manufacturer and wholesaler. Our business covers the production and manufacture of various types of mono solar panels and poly solar panels. We have two solar plates production bases in China and UAE, with an annual production capacity of 1G watts. Our solar panel products have been exported to more than 80 countries and regions around the world. We have overseas sales offices and warehouses in Germany, Italy, Poland, Hungary, Saudi Arabia, Indonesia, UAE, etc. We have strictly quality management system of solar PV module, we are capable of absorbing and applying advanced technologies and new processes in the photovoltaic module industry in the fastest time, bringing high-performance special solar PV modules to the market, and serve our customers.

**Comprehensive Products  
and System Certificates**

IEC61215/IEC61730/IEC61701/IEC62716  
ISO 9001: Quality Management System

Management System



#### PRODUCTS

TH(470-490)PM5- 72SB

#### POWER RANGE

470-490W

#### High power



- Up to 490W front power and 20.9% module efficiency
- Low system cost and high efficiency of components reduce system cost
- Innovative structure, low temperature bonding, high density layout, better aesthetics

#### High reliability



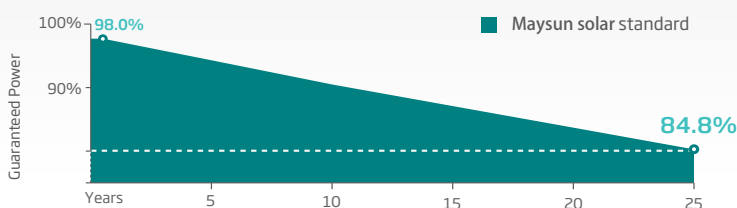
- Ensured PID resistance through cell process and module material control
- Resistant to salt, acid and ammonia
- Mechanical performance: Up to 5400 Pa positive load and 2400 Pa negative load

#### High energy generation

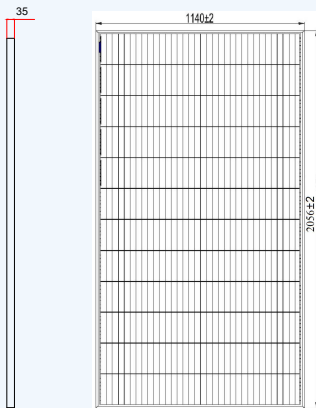


- Excellent IAM and low light performance validated by 3rd party with cell process and module material optimization
- Better anti-shading performance and lower operating temperature
- Low shading loss and full parallel circuit layout bring more effective power generation

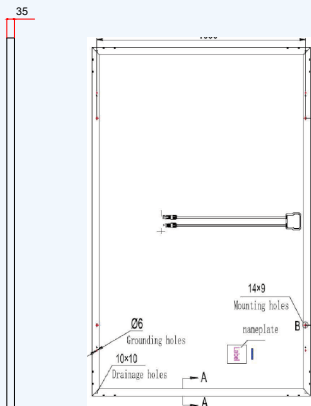
#### PERFORMANCE WARRANTY



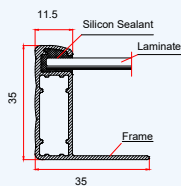
### DIMENSIONS OF PV MODULE(mm)



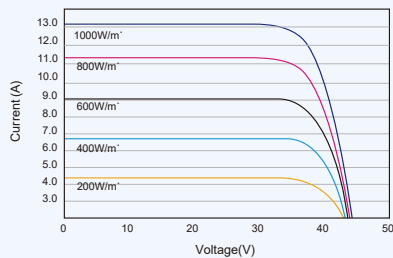
Front View



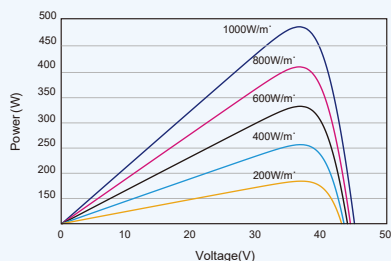
Back View



### I-V CURVES OF PV MODULE(470W)



### P-V CURVES OF PV MODULE(470W)



### ELECTRICAL DATA (STC)

Peak Power Watts-P <sub>MAX</sub> (Wp)*	470	475	480	485	490
Power Tolerance-P <sub>MAX</sub> (W)	0 ~ +5				
Maximum Power Voltage-V <sub>MPP</sub> (V)	38.6	38.7	38.8	38.8	38.9
Maximum Power Current-I <sub>MPP</sub> (A)	12.10	12.27	12.37	12.50	12.60
Open Circuit Voltage-V <sub>OC</sub> (V)	46.4	46.5	46.6	46.6	46.7
Short Circuit Current-I <sub>SC</sub> (A)	13.04	13.10	13.16	13.22	13.25
Module Efficiency η <sub>m</sub> (%)	20.1	20.3	20.5	20.7	20.9

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\*Measuring tolerance: ±3%.

### ELECTRICAL DATA (NOCT)

Maximum Power-P <sub>MAX</sub> (Wp)	354	358	361	365	369
Maximum Power Voltage-V <sub>MPP</sub> (V)	36.8	36.9	37.0	37.0	37.1
Maximum Power Current-I <sub>MPP</sub> (A)	9.62	9.69	9.77	9.87	9.95
Open Circuit Voltage-V <sub>OC</sub> (V)	44.2	44.3	44.4	44.4	44.5
Short Circuit Current-I <sub>SC</sub> (A)	10.52	10.57	10.62	10.67	10.72

NOCT: Irradiance at 1000W/m<sup>2</sup>, Ambient Temperature 25°C, Wind Speed 1m/s.

### MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	408 cells (34× 12)
Module Dimensions	2056× 1140 × 35 mm (80.94× 44.88 × 1.38 inches)
Weight	25.0 kg
Glass	3.2mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA/POE
Backsheet	White
Frame	35 mm (1.38 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ), Portrait: N 1200mm/P 1200mm(47.24/47.24 inches)
Connector	MC4

\*Please refer to regional datasheet for specific connector.

### TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	42.3°C (±2°C)
Temperature Coefficient of P <sub>MAX</sub>	- 0.34%/ °C
Temperature Coefficient of V <sub>OC</sub>	- 0.27%/ °C
Temperature Coefficient of I <sub>SC</sub>	0.04%/ °C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

### WARRANTY

12 year Product Workmanship Warranty
25 year Power Warranty
2% first year degradation
0.55% Annual Power Attenuation

(Please refer to product warranty for details)

### MAXIMUM RATINGS

Operational Temperature	-40~+85 °C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	20A

### PACKAGING CONFIGURATION

Modules per box: 31 pieces
Modules per 40' container: 682pieces



CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

© 2021 Maysun Solar FZCO. All rights reserved. Specifications included in this datasheet are subject to change without notice. Version number: MS20210720

Website: [www.maysunsolar.com](http://www.maysunsolar.com)