

# Maysun Solar

Full Black Monocrystalline  
PV Module  
MS(390-410)MB-40H Series



## 410W

MAXIMUM POWER OUTPUT

## 21%

MAXIMUM EFFICIENCY

## 0~+5W

POSITIVE POWER TOLERANCE

PRODUCTS  
MS(390-410)MB-40H Series

POWER RANGE  
390-410W



### High customer value

- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance Of System) cost, shorter payback time
- Lower guaranteed first year and annual degradation
- Designed for compatibility with existing mainstream system components
- Higher return on Investment



### High power up to 410W

- Large area cells based on 210mm silicon wafers and 1/2-cut cell technology
- Up to 21% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



### High reliability

- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load



### High energy yield

- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- The unique design provides optimized energy production under inter-row shading conditions

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

Management System

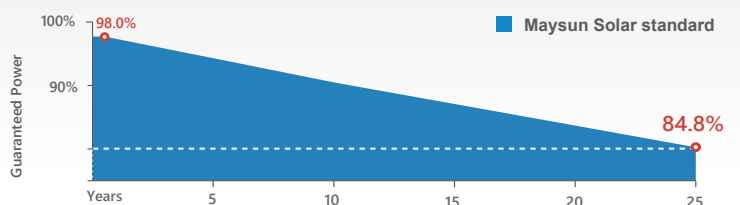


IEC 60068-2-68  
Sand test

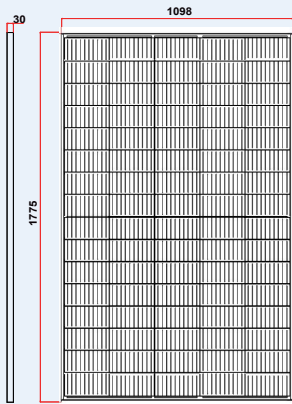
IEC 62804  
1500V PID test

IEC 61701  
Salt Spray test  
Severity (3)

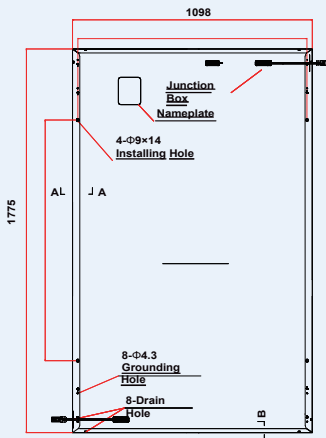
### Maysun Solar's Vertex Backsheet Performance Warranty



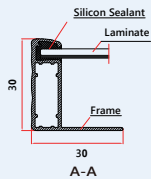
### DIMENSIONS OF PV MODULE(mm)



Front View

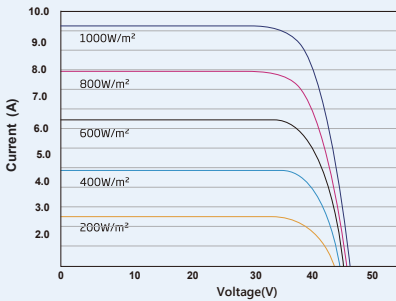


Back View

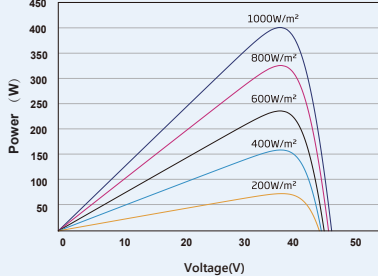


A-A

### I-V CURVES OF PV MODULE(400W)



### P-V CURVES OF PV MODULE(400W)



### ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}$ (Wp)*	390	395	400	405	410
Power Tolerance- $P_{MAX}$ (W)	0 ~ +5				
Maximum Power Voltage- $V_{MPP}$ (V)	42.63	42.94	43.3	43.65	44.0
Maximum Power Current- $I_{MPP}$ (A)	9.15	9.20	9.24	9.28	9.32
Open Circuit Voltage- $V_{OC}$ (V)	51.59	51.96	52.4	52.82	53.24
Short Circuit Current- $I_{SC}$ (A)	9.70	9.75	9.79	9.83	9.88
Module Efficiency $\eta_m$ (%)	20.0	20.2	20.5	20.7	21.0

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

### ELECTRICAL DATA (NOCT)

Maximum Power- $P_{MAX}$ (Wp)	295	299	302	306	309
Maximum Power Voltage- $V_{MPP}$ (V)	39.6	39.9	40.2	40.6	40.9
Maximum Power Current- $I_{MPP}$ (A)	7.44	7.49	7.51	7.54	7.56
Open Circuit Voltage- $V_{OC}$ (V)	47.9	48.3	48.6	49.1	49.4
Short Circuit Current- $I_{SC}$ (A)	7.82	7.86	7.89	7.99	8.01

NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

### MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	80 cells
Module Dimensions	1775×1098×30mm (69.88×43.22×1.18inches)
Weight	21 kg
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA
Backsheet	Black
Frame	30 mm (1.18 inches) Black, anodized aluminium alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches), Portrait: N 700mm/P 700mm(27.55/27.55inches) Length can be customized
Connector	MC4

\*Please refer to regional datasheet for specified connector.

### TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coe <sup>o</sup> cient of $P_{MAX}$	- 0.34%/°C
Temperature Coe <sup>o</sup> cient of $V_{OC}$	- 0.25%/°C
Temperature Coe <sup>o</sup> cient of $I_{SC}$	0.04%/°C

### MAXIMUM RATINGS

Operational Temperature	-40~ +85°C
Maximum System Voltage	1500V DC (IEC)
	1000V DC (IEC)
Max Series Fuse Rating	20A

### 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)

### PACKAGING CONFIGURATION

Modules per box: 37 pieces
Modules per 40' container: 988 pieces



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

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