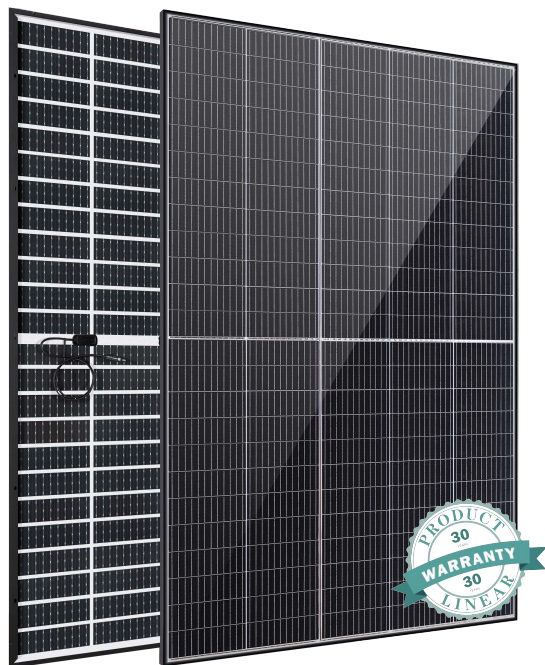


Mono PERC 210mm 120 Cells

## MS(390-410)MDG-40H Black Frame Bifacial

390/395/400/405/410 WP



### APPLICATIONS >>



On-grid residential  
roof-tops



On-grid commercial/  
industrial roof-tops



### Lightweight Double-Glass Tailored for European Distribution

# TwiSun

- Black Frame



#### 30-year Lifespan

Wide range of applications for severe weather with a service life of over 30 years.



#### Lightweight

Ultra-thin dual-glass design, tailored for European distribution and easy installation.



#### Reliability

Upgraded T6 aluminium frame for 20% more mechanical load strength.



#### Adaptability

1/3-cut low-current cell technology adaptable to mainstream European inverters.



#### Safety

Higher fire safety, more suitable for high density residential areas.



#### High Power

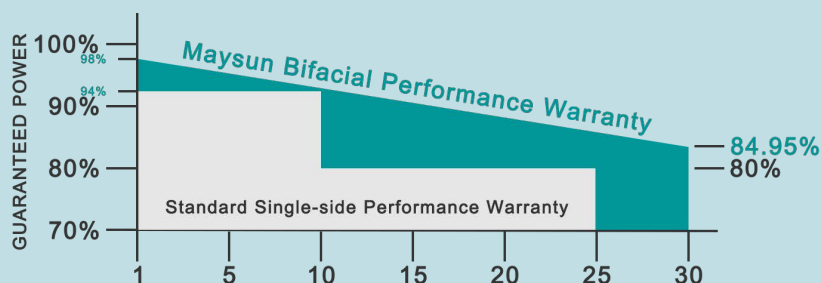
Bifacial power generation with 5%-25% increase in output for different conditions.

### MAXIMUM EFFICIENCY

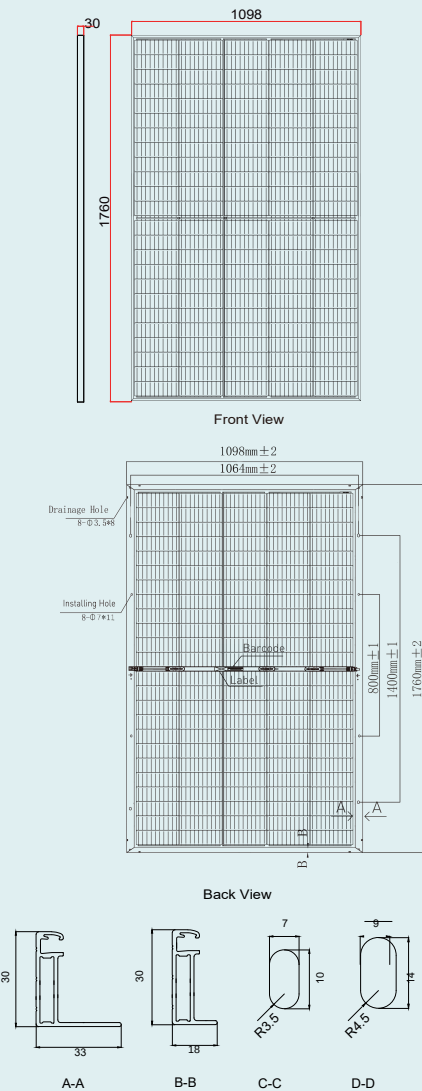
# 21.2%

### POSITIVE POWER TOLERANCE

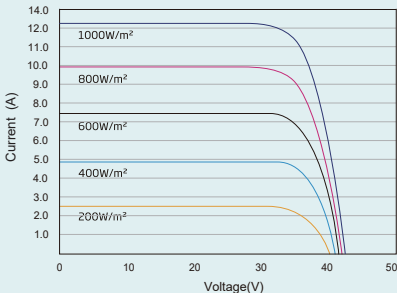
# 0 ~+5W



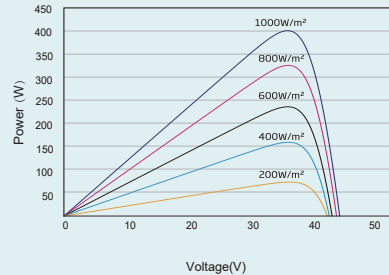
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(400W)



P-V CURVES OF PV MODULE(400W)



ELECTRICAL DATA (STC)

| Peak Power Watts-P <sub>MAX</sub> (Wp)*    | 390    | 395   | 400   | 405   | 410   |
|--------------------------------------------|--------|-------|-------|-------|-------|
| Power Tolerance-P <sub>MAX</sub> (W)       | 0 ~ +5 |       |       |       |       |
| Maximum Power Voltage-V <sub>MPP</sub> (V) | 33.8   | 34.0  | 34.2  | 34.4  | 34.6  |
| Maximum Power Current-I <sub>MPP</sub> (A) | 11.54  | 11.62 | 11.70 | 11.77 | 11.84 |
| Open Circuit Voltage-V <sub>OC</sub> (V)   | 40.8   | 41.0  | 41.2  | 41.4  | 41.6  |
| Short Circuit Current-I <sub>SC</sub> (A)  | 12.14  | 12.21 | 12.28 | 12.34 | 12.41 |
| Module Efficiency η <sub>m</sub> (%)       | 20.3   | 20.5  | 20.8  | 21.1  | 21.2  |

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

Electrical characteristics with different rear side power gain

| 5% Maximum Power-P <sub>MAX</sub> (Wp)   | 409.5 | 414.75 | 420.0 | 425.25 | 430.5 |
|------------------------------------------|-------|--------|-------|--------|-------|
| 5% Module Efficiency η <sub>m</sub> (%)  | 21.32 | 21.52  | 21.84 | 22.15  | 22.26 |
| 15% Maximum Power-PMAX (Wp)              | 448.5 | 454.25 | 460   | 465.75 | 471.5 |
| 15% Module Efficiency η <sub>m</sub> (%) | 23.35 | 23.58  | 23.92 | 24.26  | 24.38 |
| 25% Maximum Power-PMAX (Wp)              | 487.5 | 493.75 | 500.0 | 506.25 | 512.5 |
| 25% Module Efficiency η <sub>m</sub> (%) | 25.38 | 25.63  | 26.0  | 26.38  | 26.5  |

Power Bifaciality:70±5%.

ELECTRICAL DATA (NOCT)

| Maximum Power-P <sub>MAX</sub> (Wp)        | 295  | 298  | 302  | 306  | 310  |
|--------------------------------------------|------|------|------|------|------|
| Maximum Power Voltage-V <sub>MPP</sub> (V) | 31.8 | 32.0 | 32.2 | 32.5 | 32.8 |
| Maximum Power Current-I <sub>MPP</sub> (A) | 9.26 | 9.32 | 9.38 | 9.41 | 9.45 |
| Open Circuit Voltage-V <sub>OC</sub> (V)   | 38.4 | 38.6 | 38.8 | 38.9 | 39.1 |
| Short Circuit Current-I <sub>SC</sub> (A)  | 9.78 | 9.84 | 9.90 | 9.95 | 9.99 |

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

MECHANICAL DATA

|                      |                                                                                                           |
|----------------------|-----------------------------------------------------------------------------------------------------------|
| Solar Cells          | Monocrystalline                                                                                           |
| Cell Orientation     | 120 cells (5 x 24)                                                                                        |
| Module Dimensions    | 1760 mm × 1098 mm × 30 mm                                                                                 |
| Weight               | 19.5kg                                                                                                    |
| Front Glass          | 1.6 mm, High Transmission, AR Coated Heat Strengthened Glass                                              |
| Encapsulant material | POE                                                                                                       |
| Back Glass           | 1.6 mm, High Transmission, Heat Strengthened Glass                                                        |
| Frame                | 30 mm,Black, anodized aluminium alloy                                                                     |
| J-Box                | IP 68 rated (3 bypass diodes)                                                                             |
| Cables               | Photovoltaic Technology Cable 4.0mm <sup>2</sup><br>Portrait: N 300mm/P 300mm<br>Length can be customized |
| Connector            | MC4 Compatible                                                                                            |

\*Please refer to regional datasheet for specific connector.

TEMPERATURE RATINGS

|                                             |             |
|---------------------------------------------|-------------|
| NOCT(Nominal Operating Cell Temperature)    | 43°C (±2°C) |
| Temperature Coefficient of P <sub>MAX</sub> | - 0.35%/°C  |
| Temperature Coefficient of V <sub>OC</sub>  | - 0.27%/°C  |
| Temperature Coefficient of I <sub>SC</sub>  | 0.048%/°C   |

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

WARRANTY

|                                |
|--------------------------------|
| 30 years Product Warranty      |
| 30 years Power Warranty        |
| 2% First Year Degradation      |
| 0.45% Annual Power Degradation |

(Please refer to product warranty for details)

APPLICATION ENVIRONMENT

|                         |                    |
|-------------------------|--------------------|
| Operational Temperature | -40~+85°C          |
| Maximum System Voltage  | 1500VDC            |
| Max Series Fuse Rating  | (IEC) 25A          |
| Mechanical Performance  | P 3600 Pa/N 1600Pa |

PACKAGING CONFIGURATION

|                                       |
|---------------------------------------|
| Modules per pallet: 37 pieces         |
| Modules per 40' container: 962 pieces |



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

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