

Mono PERC 166mm 340 Cells

## TH(390-410)PM5-60SB Black Frame

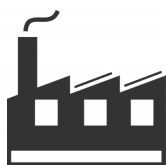
390/395/400/405/410 WP



### APPLICATIONS >>



On-grid residential  
roof-tops



On-grid commercial/  
industrial roof-tops



### 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 energy yield

- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- Better anti-shading performance and lower operating temperature
- Low shading loss and full parallel circuit layout bring more effective power generation



### 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
- Class-C fire safety test passed



### High power up to **410W**

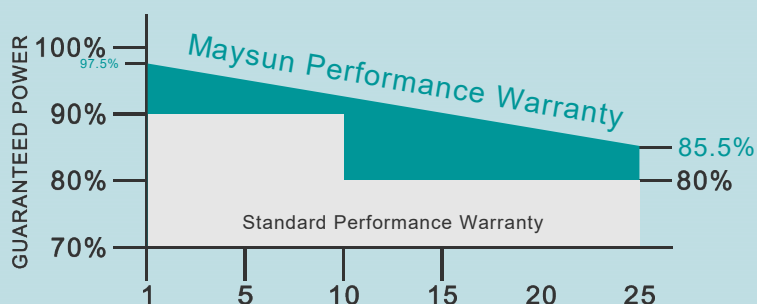
- Large area cells based on 166mm silicon wafers and shingled cell technology
- Up to 20.9% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect lower series resistance and improved current collection
- Innovative structure, low temperature bonding, high density layout, better aesthetics

### MAXIMUM EFFICIENCY

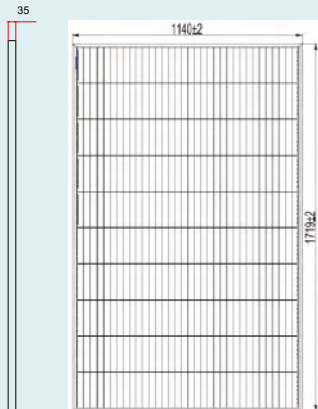
# 20.9%

### POSITIVE POWER TOLERANCE

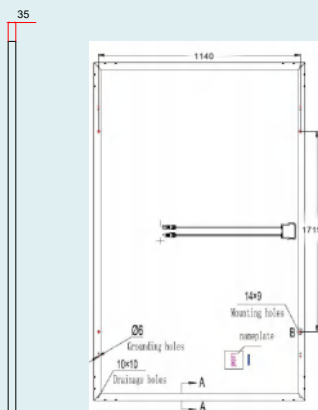
# 0 ~ +5W



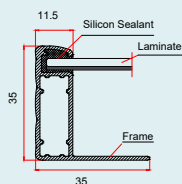
DIMENSIONS OF PV MODULE(mm)



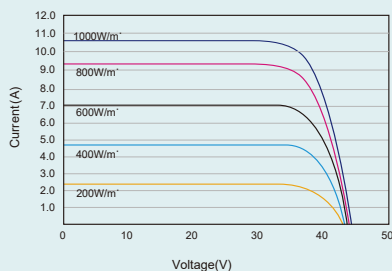
Front View



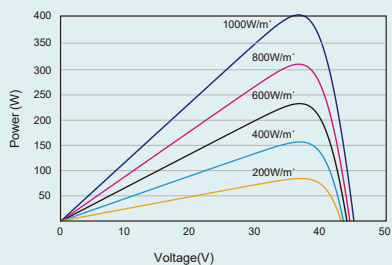
Back View



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)	38.5	38.5	38.6	38.7	38.8	
Maximum Power Current- $I_{MPP}$ (A)	10.13	10.26	10.36	10.47	10.57	
Open Circuit Voltage- $V_{OC}$ (V)	46.3	46.3	46.4	46.5	46.6	
Short Circuit Current- $I_{SC}$ (A)	10.87	10.92	10.97	11.02	11.07	
Module Efficiency $\eta_m$ (%)	19.9	20.2	20.4	20.7	20.9	

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

ELECTRICAL DATA (NOCT)

Maximum Power- $P_{MAX}$ (Wp)	294	297	301	305	309	
Maximum Power Voltage- $V_{MPP}$ (V)	36.7	36.7	36.8	36.9	37.0	
Maximum Power Current- $I_{MPP}$ (A)	8.00	8.10	8.18	8.27	8.35	
Open Circuit Voltage- $V_{OC}$ (V)	44.1	44.1	44.2	44.3	44.4	
Short Circuit Current- $I_{SC}$ (A)	8.77	8.81	8.85	8.89	8.93	

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

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	340 cells (34× 10)
Module Dimensions	1719×1140×30 mm (67.68×44.88×1.18 inches)
Weight	22 kg
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA/POE
Backsheet	White
Frame	30 mm(1.18 inches) Black anodized aluminium alloy
J-Box	IP 68 rated (3 bypass diodes)
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ) Portrait: N 1000mm/P 1000mm(39.37/39.37 inches) Length can be customized
Connector	MC4 Compatible

\*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C ( $\pm 2^\circ\text{C}$ )
Temperature Coefficient of $P_{MAX}$	- 0.34%/°C
Temperature Coefficient of $V_{OC}$	- 0.25%/°C
Temperature Coefficient of $I_{SC}$	0.04%/°C

WARRANTY

15 year Product Workmanship Warranty
25 year Power Warranty
2.5% first year degradation
0.5% Annual Power Attenuation

\*Please refer to product warranty for details.

MAXIMUM RATINGS

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

PACKAGING CONFIGURATION

Modules per pallet: 31 pieces
Modules per 40' container: 806 pieces



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

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