

Mono PERC 210mm 80 Cells

## MS(390-410)MB-40H Full Black

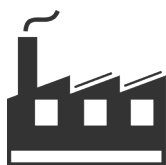
390/395/400/405/410 WP



### APPLICATIONS >>



On-grid residential  
roof-tops



On-grid commercial/  
industrial roof-tops



### Better appearance

- Full-black tone makes the modules blend perfectly with the building roof, ideal for residential roofs and BIPVs
- Cleaner and more aesthetic than traditional modules and complements your home's architectural style
- The new layout design is uniform overall, and the vision is extremely beautiful



### 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
- The unique design provides optimized energy production under inter-row shading conditions



### High reliability

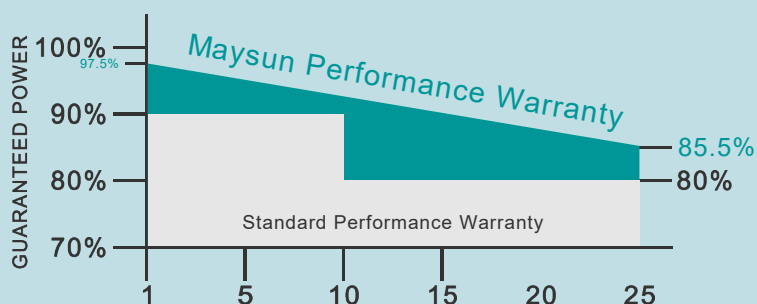
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive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

MAXIMUM EFFICIENCY

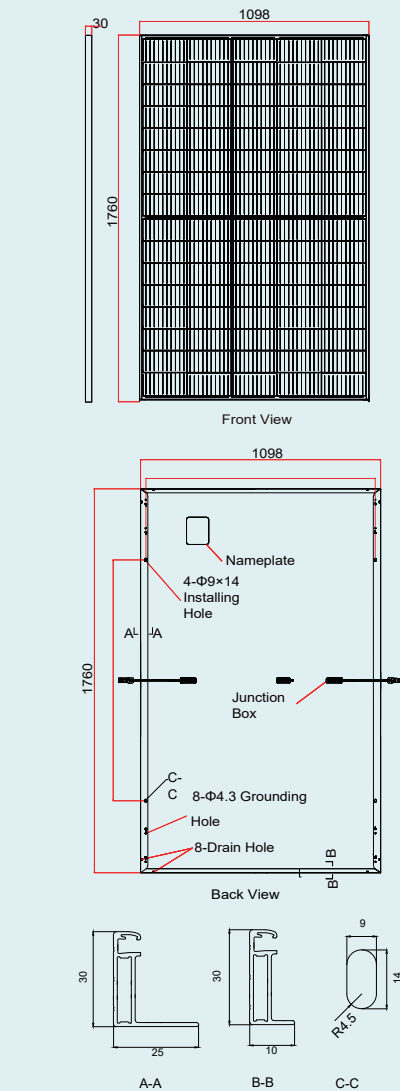
# 21.2%

POSITIVE POWER  
TOLERANCE

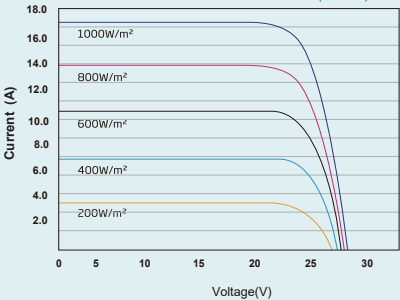
# 0 ~ +5W



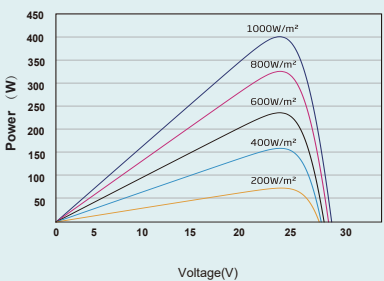
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(400W)



P-V CURVES OF PV MODULE(400W)



ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}$ (Wp)*	390	395	400	405	410	
Power Tolerance- $P_{MAX}$ (W)	0 ~ +5					
Maximum Power Voltage- $V_{MPP}$ (V)	24.0	24.2	24.4	24.6	24.8	
Maximum Power Current- $I_{MPP}$ (A)	16.26	16.32	16.39	16.45	16.54	
Open Circuit Voltage- $V_{OC}$ (V)	28.9	29.1	29.4	29.6	29.8	
Short Circuit Current- $I_{SC}$ (A)	17.26	17.33	17.40	17.47	17.51	
Module Efficiency $\eta_m$ (%)	20.2	20.5	20.7	21.0	21.2	

STC: Irradiance 1000W/m², 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)	22.3	22.5	22.7	22.9	23.1	
Maximum Power Current- $I_{MPP}$ (A)	13.22	13.27	13.33	13.37	13.38	
Open Circuit Voltage- $V_{OC}$ (V)	27.2	27.5	27.7	27.9	28.1	
Short Circuit Current- $I_{SC}$ (A)	13.91	13.96	14.02	14.07	14.13	

NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	80 cells
Module Dimensions	1760×1098×30 mm (69.29×43.22×1.18 inches)
Weight	21.5 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 (3 bypass diodes)
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²) Portrait: N 300mm/P 300mm(11.8/11.8 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 (±2°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: 37 pieces
Modules per 40' container: 988 pieces



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

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