

Mono PERC 210mm 80 Cells

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

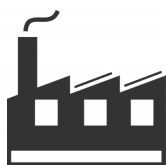
390/395/400/405/410 WP



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

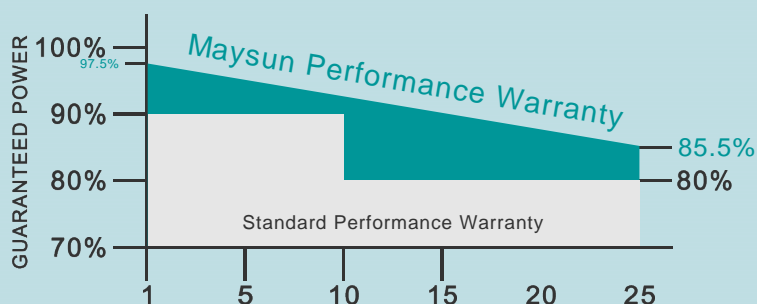
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive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

MAXIMUM EFFICIENCY

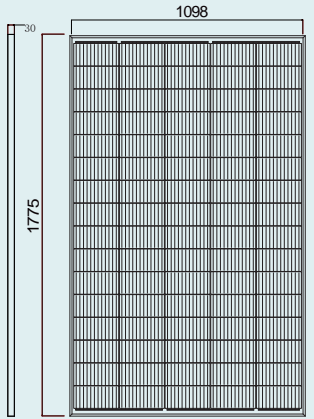
21%

POSITIVE POWER
TOLERANCE

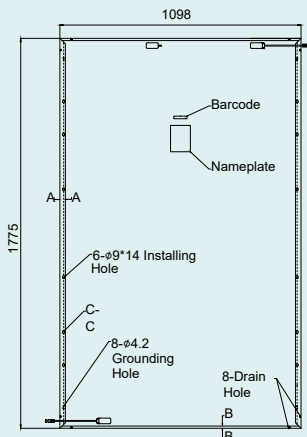
0 ~ +5W



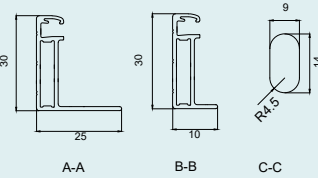
DIMENSIONS OF PV MODULE(mm)



Front View



Back View

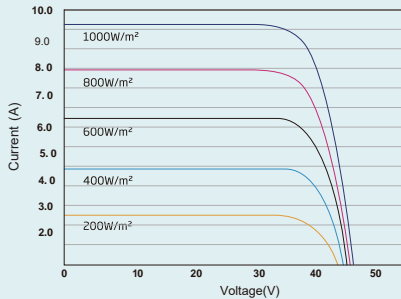


A-A

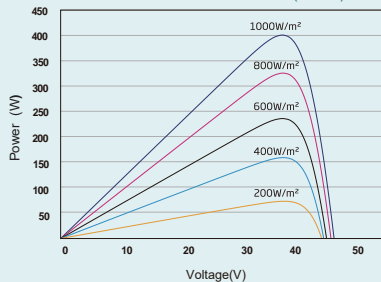
B-B

C-C

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 η_m (%)	20.0	20.2	20.5	20.7	21.0	

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)	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/m², Ambient Temperature 20°C, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	80 cells
Module Dimensions	1775mm x 1098mm x 30mm
Weight	21kg
Glass	3.2 mm High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA
Backsheet	Black
Frame	30mm Black, anodized aluminium alloy
J-Box	IP 68 rated (3 bypass diodes)
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²) Portrait: N 1000mm/P 1000mm(39.36/39.36inches) 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 ^o cient of P_{MAX}	- 0.34%/°C
Temperature Coe ^o cient of V_{OC}	- 0.25%/°C
Temperature Coe ^o cient 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: 962 pieces



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

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