

Mono PERC 182mm 108 Cells

MS(395-415)MB-54H Full Black

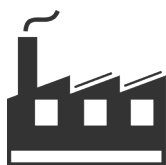
395/400/405/410/415 WP



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

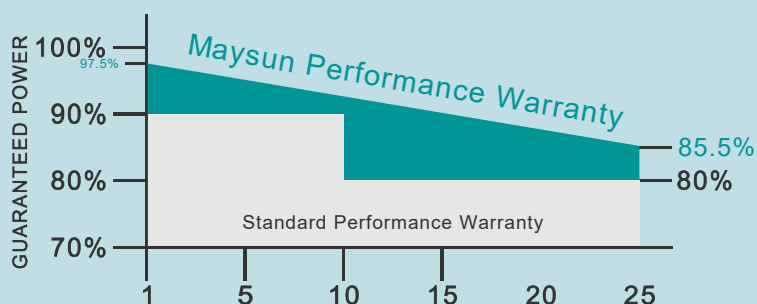
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive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

MAXIMUM EFFICIENCY

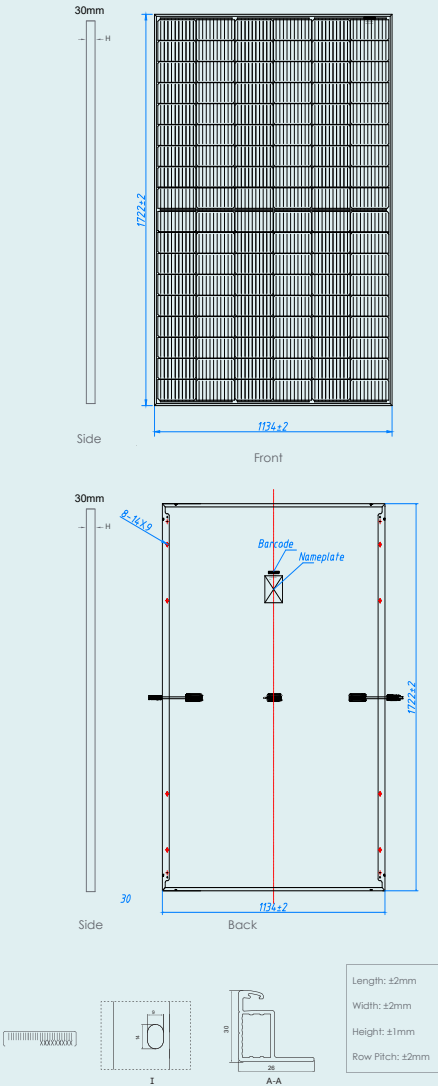
21.25%

POSITIVE POWER
TOLERANCE

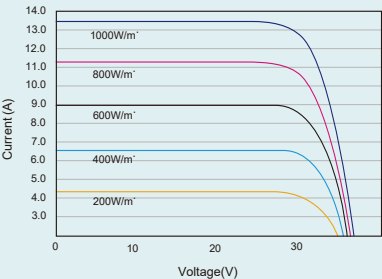
0 ~ +5W



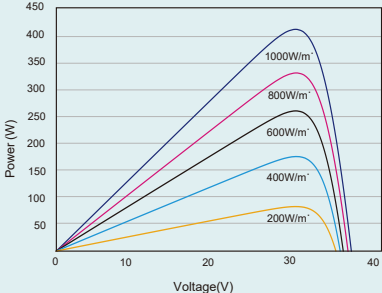
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(410W)



P-V CURVES OF PV MODULE(410W)



ELECTRICAL DATA (STC)

Peak Power Watts- P_{MAX} (Wp)*	395	400	405	410	415	
Power Tolerance- P_{MAX} (W)	0 ~ +5					
Maximum Power Voltage- V_{MPP} (V)	30.32	30.42	30.52	30.62	30.79	
Maximum Power Current- I_{MPP} (A)	13.03	13.15	13.27	13.39	13.48	
Open Circuit Voltage- V_{OC} (V)	36.90	36.98	37.06	37.14	37.31	
Short Circuit Current- I_{SC} (A)	13.71	13.78	13.85	13.92	14.01	
Module Efficiency η_m (%)	20.23	20.48	20.74	21.00	21.25	

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: ±3%.

ELECTRICAL DATA (NOCT)

Maximum Power- P_{MAX} (Wp)	294	298	301	305	309	
Maximum Power Voltage- V_{MPP} (V)	28.26	28.42	28.56	28.72	28.88	
Maximum Power Current- I_{MPP} (A)	10.40	10.47	10.55	10.62	10.69	
Open Circuit Voltage- V_{OC} (V)	34.83	34.90	34.98	35.05	35.21	
Short Circuit Current- I_{SC} (A)	11.07	11.13	11.19	11.24	11.32	

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

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	108 cells
Module Dimensions	1722×1134×30mm (67.8×44.65×1.18 inches)
Weight	22 kg
Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Encapsulant Material	EVA/POE
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

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coe°cient of P_{MAX}	- 0.34%/°C
Temperature Coe°cient of V_{OC}	- 0.25%/°C
Temperature Coe°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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