

Mono PERC 210mm 80 Cells

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

390/395/400/405/410 WP

CORNELL ENERGY

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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



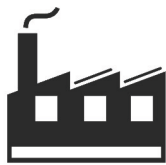
High reliability

- 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

APPLICATIONS >>



On-grid residential roof-tops



On-grid commercial/ industrial roof-tops

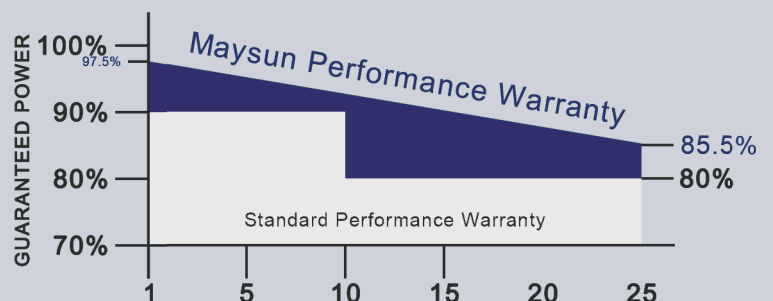


MAXIMUM EFFICIENCY

21.2%

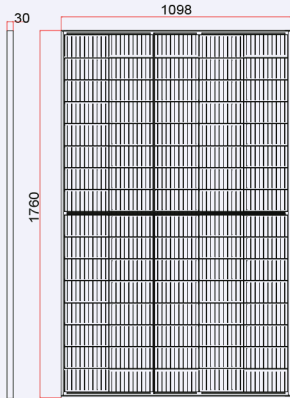
POSITIVE POWER TOLERANCE

0 ~ +5W

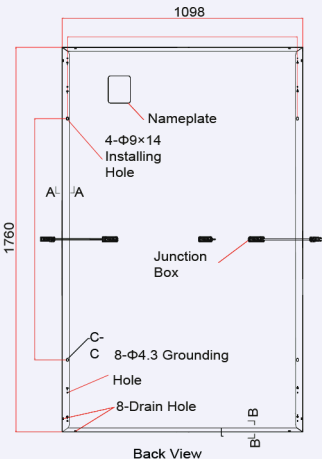


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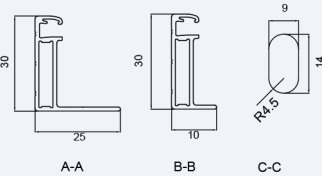
DIMENSIONS OF PV MODULE(mm)



Front View



Back View

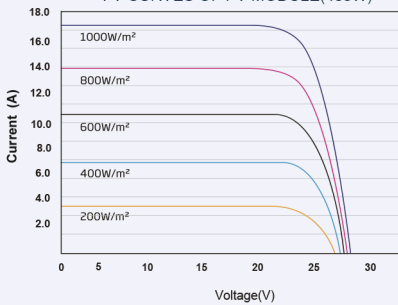


A-A

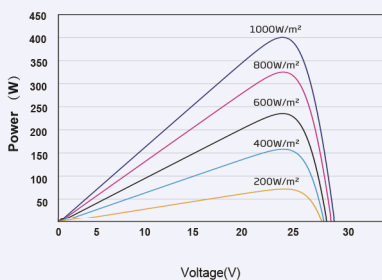
B-B

C-C

I-V CURVES OF PV MODULE(400W)



P-V CURVES OF PV MODULE(400W)



ELECTRICAL DATA (STC)

Parameter	390	395	400	405	410
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 η_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)

Parameter	295	299	302	306	309
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 4.0mm ² (0.006 inches ²) 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 ^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

MAXIMUM RATINGS

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

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.

PACKAGING CONFIGUREATION

- Modules per pallet: 37 pieces
- Modules per 40' container: 988 pieces