

Mono N-Type 182mm 108 Cells

MS(420-435)MDG-54H
N-Topcon Double Glass

420/425/430/435 WP



APPLICATIONS >>



On-grid residential
roof-tops



On-grid commercial/
industrial roof-tops



**New Technology Tailored
for European Distribution**

N-TOPCON

- Full Black



30-year Lifespan

Wide range of applications for severe weather with a service life of over 30 years.



Lower Degradation

N-type solar technology gains slower power Degradation and excellent low-light performance.



Elegance

Full-black aesthetics, the best choice for BAPV. More excellent for snowy environments.



Adaptability

1/2-cut low-current cell technology adaptable to mainstream European inverters.



Safety

Higher fire safety, more suitable for high density residential areas.



High Power

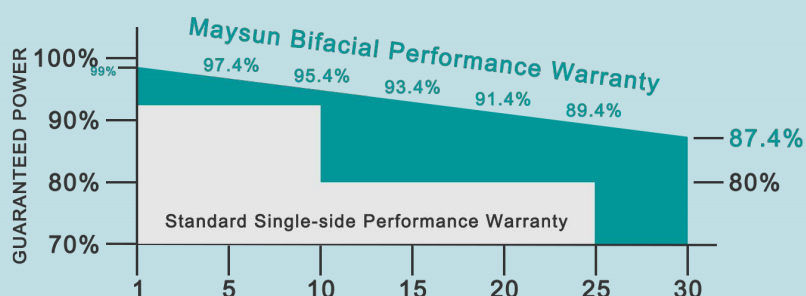
Bifacial power generation with 5%-30% increase in output for different conditions.

MAXIMUM EFFICIENCY

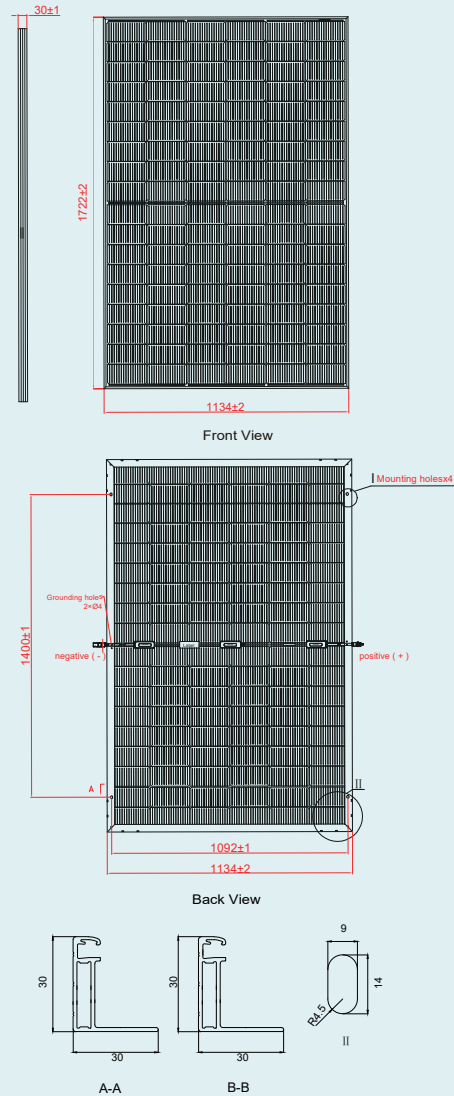
22.8%

POSITIVE POWER
TOLERANCE

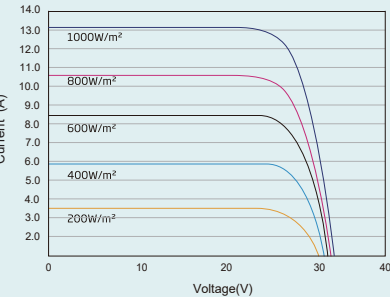
0 ~+5W



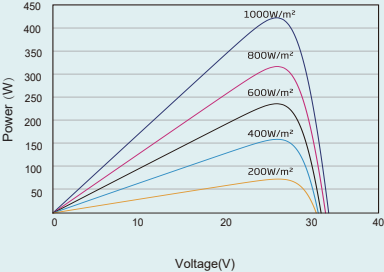
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(420W)



P-V CURVES OF PV MODULE(420W)



ELECTRICAL DATA (STC)

Peak Power Watts- P_{MAX} (Wp)*	420	425	430	435	
Power Tolerance- P_{MAX} (W)	0 ~ +5				
Maximum Power Voltage- V_{MPP} (V)	31.90	32.10	32.30	32.50	
Maximum Power Current- I_{MPP} (A)	13.17	13.24	13.32	13.39	
Open Circuit Voltage- V_{OC} (V)	38.50	38.70	38.90	39.10	
Short Circuit Current- I_{SC} (A)	13.83	13.91	13.99	14.07	
Module Efficiency η_m (%)	21.51	21.76	22.02	22.28	

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

Electrical characteristics with different rear side power gain

10% Maximum Power- P_{MAX} (Wp)	462	467.5	473	478.5	
10% Module Efficiency η_m (%)	23.66	23.94	24.22	24.51	
20% Maximum Power- P_{MAX} (Wp)	504	510	516	522	
20% Module Efficiency η_m (%)	25.81	26.11	26.42	26.74	
30% Maximum Power- P_{MAX} (Wp)	546	552.5	559	565.5	
30% Module Efficiency η_m (%)	27.96	28.29	28.63	28.96	

Power Bifaciality: 80±5%.

ELECTRICAL DATA (NOCT)

Maximum Power- P_{MAX} (Wp)	316	320	324	328	
Maximum Power Voltage- V_{MPP} (V)	31.8	32.0	32.2	32.5	
Maximum Power Current- I_{MPP} (A)	9.26	9.32	9.38	9.41	
Open Circuit Voltage- V_{OC} (V)	36.58	36.77	36.96	37.15	
Short Circuit Current- I_{SC} (A)	11.06	11.13	11.19	11.26	

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

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	N-TOPCon 182 x 91(108 pcs) (6 x 18)
Module Dimensions	1722 × 1134 × 30 mm
Weight	24.0 kg
Front Glass	2.0mm AR coating semi-tempered glass, low iron
Encapsulant material	POE
Back Glass	2.0mm AR coating semi-tempered glass, low iron
Frame	Anodized aluminium alloy
J-Box	IP 68 rated (3 bypass diodes)
Cables	Photovoltaic Technology Cable 4.0mm2 300mm(+)/1000mm(-) or Customized Length
Connector	MC4 Compatible

*Please refer to regional datasheet for specific connector.

TEMPERATURE RATINGS

NOCT(Nominal Operating Cell Temperature)	45°C (±2°C)
Temperature Coefficient of P_{MAX}	-0.30% /°C
Temperature Coefficient of V_{OC}	-0.25% /°C
Temperature Coefficient of I_{SC}	+0.046% /°C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

WARRANTY

30 years Product Warranty
30 years Power Warranty
1% First Year Degradation
0.42% Annual Power Degradation

(Please refer to product warranty for details)

APPLICATION ENVIRONMENT

Operational Temperature	-40~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	(IEC) 25A
Mechanical Performance	P 5400 Pa/N 2400Pa

PACKAGING CONFIGURATION

Modules per pallet: 36 pieces
Modules per 40' container: 936 pieces



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

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