



MBB Half-cell Monofacial Full-black Module (54)

# TW400~420MAP

## M10-108-H-F

### PRODUCT FEATURES



High Power Output  
Low LCOE



Maximum Power  
420W\*



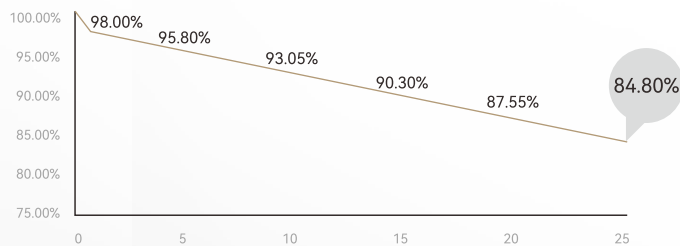
High  
Reliability



Low  
LID

### POWER WARRANTY

1st year <2%, 0.55% power degradation per year from 2 to 25 years



15-year warranty for materials



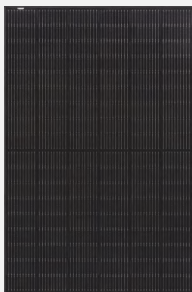
25-year warranty for linear power output

### PRODUCT CERTIFICATIONS

ISO9001: 2015/Quality Management System

ISO14001: 2015/Environment Management System

ISO45001: 2018/Occupational Health and Safety



Front



Rear



## Electrical Characteristics (STC)

Module type: TW\*\*\*MAP-108-H-F

Maximum power: Pm (W)	400	405	410	415	420
Open circuit voltage: Voc (V)	37.07	37.23	37.38	37.53	37.68
Short circuit current: Isc (A)	13.79	13.87	13.93	13.99	14.05
Voltage at maximum power point: Vm (V)	31.01	31.21	31.40	31.60	31.80
Current at maximum power point: Im (A)	12.9	12.98	13.06	13.14	13.22
Module efficiency: $\eta$ (%)	20.5	20.7	21.0	21.3	21.6

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass1.5, Measuring tolerance:  $\pm$ 3%

## Electrical Characteristics (NMOT)

Maximum power: Pm (W)	302.0	306.0	310.0	314.0	318.0
Open circuit voltage: Voc (V)	34.88	35.12	35.31	35.50	35.69
Short circuit current: Isc (A)	11.03	11.10	11.16	11.22	11.28
Voltage at maximum power point: Vm (V)	29.26	29.47	29.68	28.89	30.10
Current at maximum power point: Im (A)	10.32	10.38	10.44	10.51	10.56

NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20 °C, AM=1.5, Wind Speed 1m/s

## Mechanical Parameters

Cells	P-TPC
Orientation	108 (6×18)
Size	1722±2×1134±2×30mm
Weight	20.5kg
Glass	3.2mm AR coated heat strengthened glass
Backsheet	White
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Cable	4.0mm <sup>2</sup> , Positive: 200mm, Negative: 300mm, length can be customized
Connector	MC4 Compatible or MC4 original
Wind/Snow Load	2400Pa/5400Pa
Packaging	36pcs per pallet , 936pcs per 40'HC

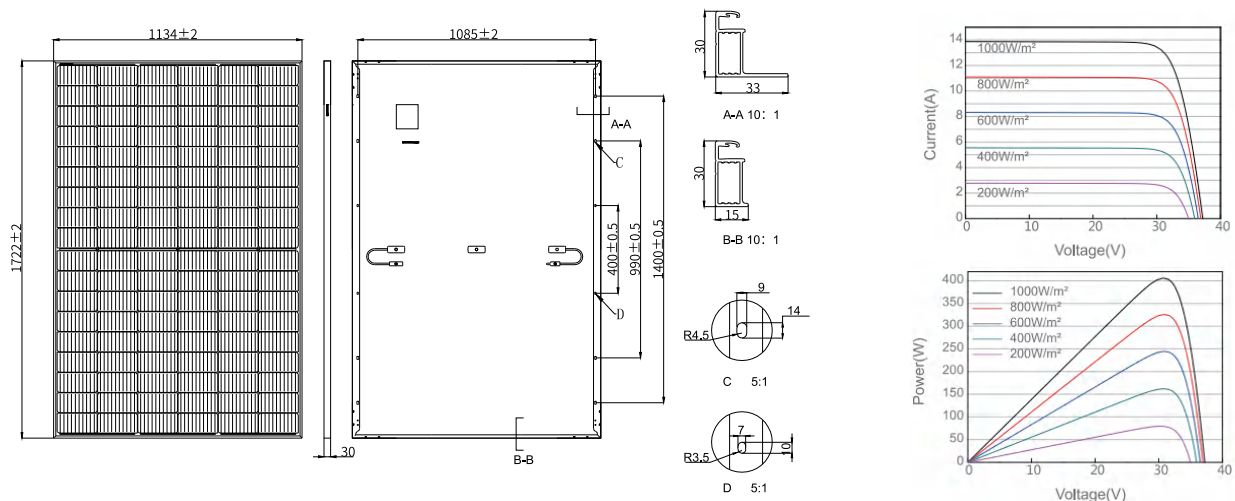
## Operating Parameters

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	25A
Power Output Tolerance	0~+5W

## Temperature Ratings

Temperature Coefficient (Pmax)	-0.35%/°C
Temperature Coefficient (Voc)	-0.27%/°C
Temperature Coefficient (Isc)	+0.045%/°C
NMOT	45±2°C

## Drawings (Unit: mm)



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