

MBB Half-cell Monofacial Black-frame Module (54)

TW395~415MAP

M10-108-H (Black Frame)

PRODUCT FEATURES



High Power Output
Low LCOE



Maximum Power
420W*



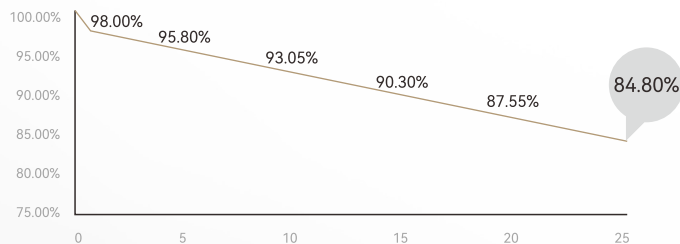
High
Reliability



Low
LID

POWER WARRANTY

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



12-year warranty for materials



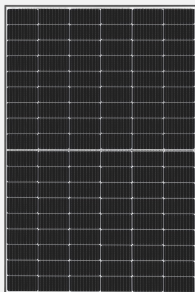
25-year warranty for linear power output

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 (Black Frame)

Maximum power: P _m (W)	395	400	405	410	415
Open circuit voltage: V _{oc} (V)	36.75	37.00	37.25	37.50	37.75
Short circuit current: I _{sc} (A)	13.69	13.78	13.86	13.94	14.02
Voltage at maximum power point: V _m (V)	30.85	31.05	31.24	31.43	31.64
Current at maximum power point: I _m (A)	12.81	12.89	12.97	13.05	13.13
Module efficiency: η (%)	20.2	20.5	20.7	21	21.3

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass1.5, Measuring tolerance: ±3%

Electrical Characteristics (NMOT)

Maximum power: P _m (W)	294.0	298.0	302.0	306.0	310.0
Open circuit voltage: V _{oc} (V)	34.60	34.80	35.10	35.30	35.50
Short circuit current: I _{sc} (A)	11.04	11.11	11.17	11.24	11.30
Voltage at maximum power point: V _m (V)	28.80	29.00	29.20	29.30	29.60
Current at maximum power point: I _m (A)	10.23	10.30	10.36	10.42	10.48

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

Mechanical Parameters

Cells	Monocrystalline silicon cell
Orientation	108 (6×18)
Size	1722±2×1134±2×30mm
Weight	20.5kg
Glass	3.2mm high transmittance, AR coated heat strengthened glass
Backsheet	White
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Cable	4.0mm ² , Landscape: 1200/1200mm
Connector	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 (P _{max})	-0.35%/°C
Temperature Coefficient (V _{oc})	-0.26%/°C
Temperature Coefficient (I _{sc})	0.048%/°C
NMOT	43±2°C

Drawings (Unit: mm)

