



MBB Half-cell Monofacial Black-frame Module (66)

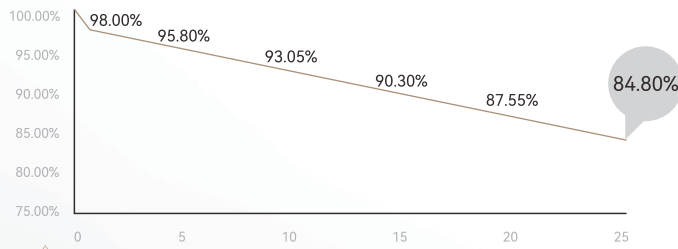
# TW490~510PERC M10-132-H-S

## PRODUCT FEATURES

- High Power Output Low LCOE
- Maximum Power 510W\*
- High Reliability
- Low LID

## POWER WARRANTY

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



**12** 12-year warranty for materials

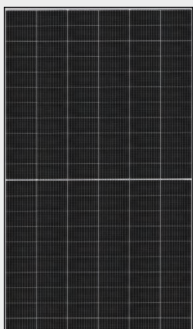
**25** 25-year warranty for linear power output

## MANAGEMENT SYSTEM AND PRODUCT CERTIFICATION

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-132-H-S

Maximum power: Pmax (W)	490	495	500	505	510
Open circuit voltage: Voc (V)	45.25	45.45	45.65	45.85	46.05
Short circuit current: Isc (A)	13.8	13.85	13.9	13.95	14.0
Voltage at maximum power point: Vmp (V)	37.23	37.39	37.55	37.71	37.87
Current at maximum power point: Imp (A)	13.16	13.24	13.32	13.39	13.47
Module efficiency: $\eta$ (%)	20.6	20.8	21.0	21.3	21.5

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

## Electrical Characteristics (NMOT)

Maximum power: Pmax(W)	370.8	374.6	378.4	382.2	386.0
Open circuit voltage: Voc (V)	42.92	43.14	43.35	43.57	43.80
Short circuit current: Isc (A)	10.89	10.92	10.95	10.98	11.02
Voltage at maximum power point: Vmp (V)	35.55	35.78	36.00	36.23	36.45
Current at maximum power point: Imp (A)	10.42	10.47	10.51	10.55	10.58

NMOT: Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20 °C, Air Mass1.5, Wind Speed 1m/s

## Mechanical Parameters

Cells	P-TPC
Orientation	132 (6×22)
Size	2093±2×1134±2×35mm
Weight	25.4kg
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: 280mm, Negative: 280mm, length can be customized
Connector	MC4 Compatible
Wind/Snow Load	2400Pa/5400Pa
Packaging	31pcs per pallet , 682pcs per 40'HC

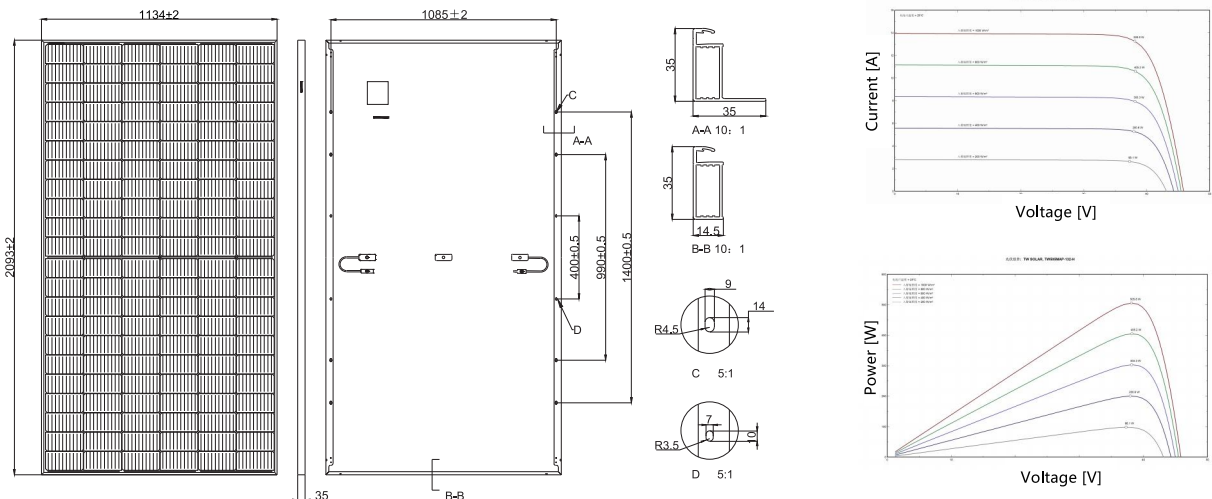
## Operating Parameters

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)	-0.34%/°C
Temperature Coefficient (Voc)	-0.27%/°C
Temperature Coefficient (Isc)	+0.045%/°C
NMOT	45±2°C

## Drawings (Unit: mm)



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