

MBB Half-cell Bifacial Module (72)³⁵

TW530~555MBAP

M10-144-D

PRODUCT FEATURES



High Power Output
Low LCOE



Maximum Power
555W*



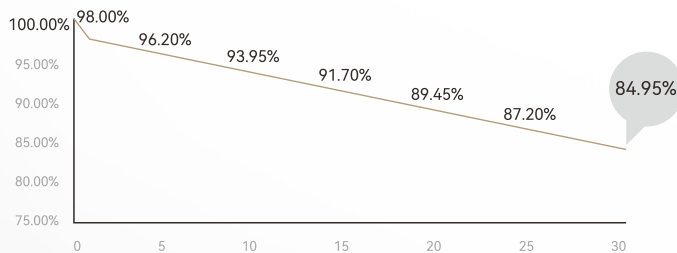
High
Reliability



Low
LID

POWER WARRANTY

1st year <2%, 0.45% power degradation per year from 2 to 30 years



12-year warranty for materials



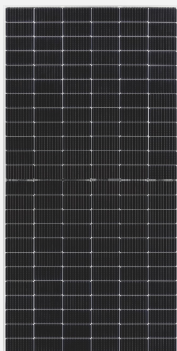
30-year warranty for linear power output

PRODUCT CERTIFICATIONS

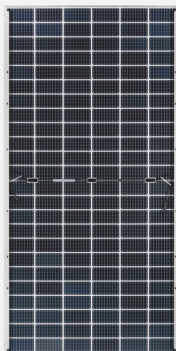
ISO9001: 2015/Quality Management System

ISO14001: 2015/Environment Management System

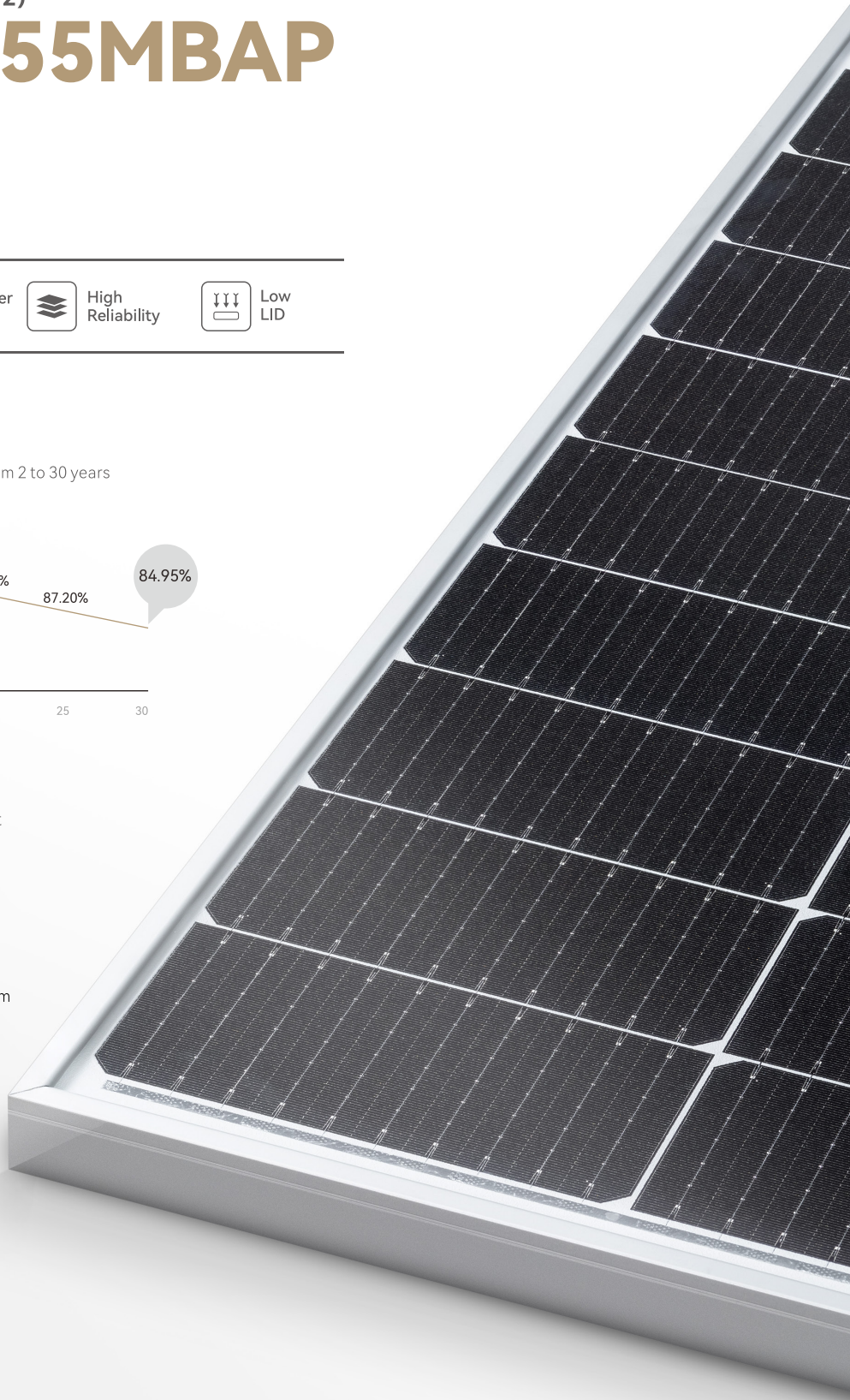
ISO45001: 2018/Occupational Health and Safety



Front



Rear



Electrical Characteristics (STC)

Module type: TW***MBAP-144-D

Maximum power: P _m (W)	530	535	540	545	550	555
Open circuit voltage: V _{oc} (V)	48.68	48.96	49.24	49.52	49.80	50.08
Short circuit current: I _{sc} (A)	13.68	13.73	13.78	13.83	13.88	13.93
Voltage at maximum power point: V _m (V)	40.96	41.22	41.45	41.70	41.93	42.18
Current at maximum power point: I _m (A)	12.94	12.98	13.03	13.07	13.12	13.16
Module efficiency: η (%)	20.5	20.7	20.9	21.1	21.3	21.5

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

Electrical Characteristics (NMOT)

Maximum power: P _m (W)	401.1	404.8	408.6	412.4	416.2	420.0
Open circuit voltage: V _{oc} (V)	45.95	46.21	46.48	46.74	47.01	47.28
Short circuit current: I _{sc} (A)	10.96	11.00	11.04	11.08	11.12	11.16
Voltage at maximum power point: V _m (V)	38.00	38.23	38.45	38.67	38.90	39.12
Current at maximum power point: I _m (A)	10.54	10.58	10.62	10.66	10.70	10.74

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

Electrical characteristics with different power bin(reference to different Irradiance ratio)

5%	Maximum power: P _m (W)	556.5	561.8	567.0	572.3	577.5	582.8
	Module efficiency: η (%)	21.5	21.7	21.9	22.2	22.4	22.6
15%	Maximum power: P _m (W)	609.5	615.3	621.0	626.8	632.5	638.3
	Module efficiency: η (%)	23.6	23.8	24.0	24.3	24.5	24.7
25%	Maximum power: P _m (W)	662.5	668.8	675.0	681.3	687.5	693.8
	Module efficiency: η (%)	25.6	25.9	26.1	26.4	26.6	26.9

Mechanical Parameters

Cells	Monocrystalline silicon cell
Orientation	144 (6×24)
Size	2279±2×1134±2×35mm
Weight	32.7kg
Front Glass	2.0mm high transmittance, AR coated heat strengthened glass
Rear Glass	2.0mm high transmittance, heat strengthened glass
Frame	Anodized aluminum alloy frame
Junction Box	IP68, 3 diodes
Cable	4.0mm ² , Landscape: 1200/1200mm, Portrait: 280/280mm
Connector	MC4 Compatible
Wind/Snow Load	2400Pa/5400Pa
Packaging	31pcs per pallet, 620pcs per 40'HC

Operating Parameters

Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	30A
Power Output Tolerance	0~+5W
Bifaciality	70±5%

Temperature Ratings

Temperature Coefficient (P _{max})	-0.35%/°C
Temperature Coefficient (V _{oc})	-0.28%/°C
Temperature Coefficient (I _{sc})	0.05%/°C
NMOT	42±2°C

Drawings (Unit: mm)

