

BM-TM Series

BM182T-144DG

Bifacial Dual Glass Monocrystalline Module

BOAMAX

BM

Dual
glass
series

182T-144DG

Efficient bifacial Topcon monocrystalline
silicon half-piece solar module



580 W

Maximum power
output of module



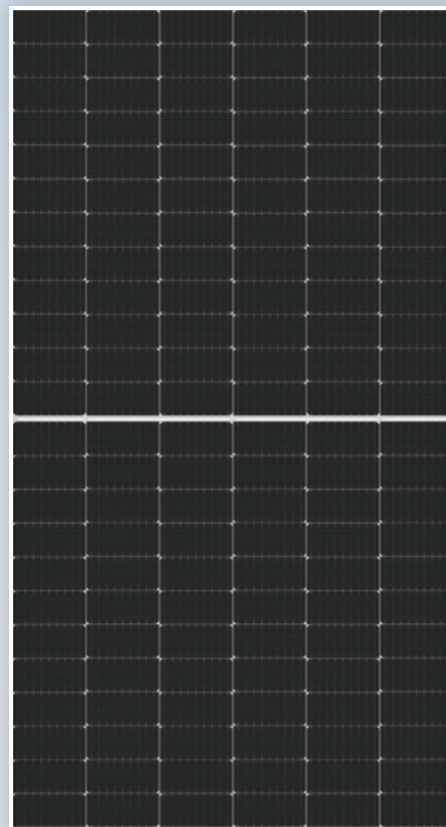
22.45%

Maximum module
efficiency



0~+5W

Power tolerance



Boamax's long-term stable quality is trustworthy

- Automatic production line and leading photovoltaic technology
- EL testing is performed before and after lamination, effectively ensuring the reliability of the components.
- Passed various long-term reliability tests
- Strict international standard management systems are adopted, including ISO 9001, ISO 14001, and ISO 45001.



MBB welding strip design optimizes optical and electrical properties of modules



The adoption of dual glass POE packaging enables effective resistance to various harsh outdoor environments



Additional safety brought by fire rating A



The battery slicing technology greatly reduces the series current and the internal damage of the modules, thus effectively reducing BOS and LCOE

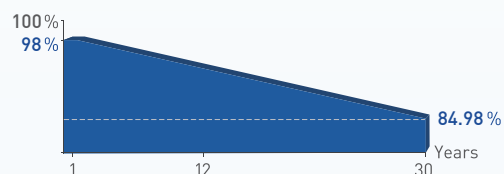


Optimized packaging materials and strict process scheme ensure the PID resistance of modules



Advanced non-destructive slicing technology, with small battery damage and low impact of cracking

Industry leading linear warranty



12-year warranty on materials and process 30-year linear warranty

Excellent warranty, with a commitment to a 30-year power warranty and a linear power attenuation of 0.4%



Electrical performance parameters STC

Power output	P _{max} (W)	560	565	570	575	580
Operating voltage of maximum power point	V _{mp} (V)	42.48	42.68	42.88	43.08	43.28
Operating current of maximum power point	I _{mp} (A)	13.18	13.24	13.29	13.35	13.40
Open-circuit voltage	V _{oc} (V)	50.84	51.04	51.24	51.44	51.64
Short-circuit current	I _{sc} (A)	14.13	14.17	14.21	14.25	14.29
Module efficiency	(%)	21.68	21.87	22.07	22.26	22.45
Power tolerance	(W)			0~+5		

*STC testing conditions: atmospheric quality AM1.5, irradiance 1000 W/m², cell temperature 25 °C

Electrical performance parameters NMOT

Power output	P _{max} (W)	421	425	429	432	436
Operating voltage of maximum power point	V _{mp} (V)	39.84	39.89	39.95	40.00	40.19
Operating current of maximum power point	I _{mp} (A)	10.57	10.65	10.73	10.81	10.85
Open-circuit voltage	V _{oc} (V)	48.29	48.48	48.67	48.86	49.05
Short-circuit current	I _{sc} (A)	11.42	11.47	11.52	11.56	11.60

*NMOT testing conditions: irradiance 800 W/m² ambient temperature 20 °C, wind speed 1 m/s

Electrical performance parameters

Bifacial power gain (taking back irradiation ratio of 10 % as an example)

Power output	P _{max} (W)	616	621	627	632	638
Operating voltage of maximum power point	V _{mp} (V)	44.34	44.54	44.74	44.94	45.14
Operating current of maximum power point	I _{mp} (A)	13.89	13.94	14.00	14.06	14.13
Open-circuit voltage	V _{oc} (V)	52.62	52.82	53.02	53.22	53.42
Short-circuit current	I _{sc} (A)	14.57	14.61	14.65	14.69	14.73
Module efficiency	(%)	23.85	24.04	24.25	24.47	24.70
Irradiation ratio	sc(A)			10%		

Electrical performance parameters

Cell arrangement	144 pieces [6*24]
Module dimension	2278*1134*35mm
Weight	32.0kg
Front glass	2.0mm, high transparency coated glass
Rear glass	2.0mm, semi-tempered glass
Frame	Aluminum alloy with anode oxide film
Junction box	Protection level IP68
Cable	4mm ² , with a positive wire length of 300mm and a negative wire length of 300mm
Number of diodes	3
Wind pressure/snow pressure	2400Pa/5400Pa
Connector	PV-H4

Temperature characteristic

Nominal operating temperature of cell	45±2°C
Temperature coefficient (I _{sc})	+0.05%/°C
Temperature coefficient (V _{oc})	-0.28%/°C
Temperature coefficient (P _{max})	-0.34%/°C

Packing method

Pieces per box	31 pieces
Loading capacity of 17.5 m flatbed trailer	868 pieces

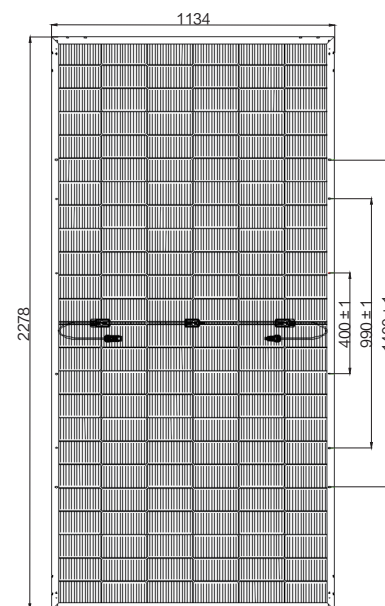
Limit parameters

Operating temperature	-40~+85°C
Maximum system voltage	1500V DC
Maximum rated current of fuse	30A

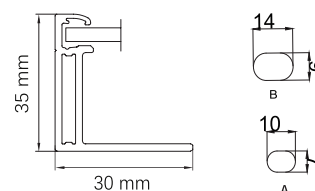
Optional configuration

Connector	<input type="checkbox"/> Original PV
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Module dimension

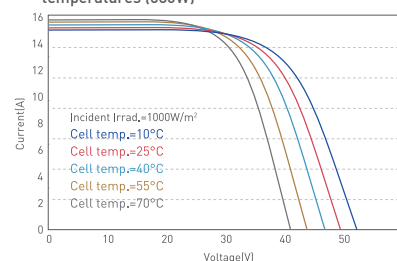


Rear view



Curve chart

Current and voltage curves at different temperatures (580W)



Current and voltage curves/power voltage curves at different irradiance (580W)

