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30
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530W-550W

AE MD-144 Series

MONO-CRYSTALLINE PV MODULES
HALF-CUT CELLS • MONO-FACIAL

www.ae-solar.com

Ver. 23.12.1



144

HALF
CELLS



182
mm

CELL
SIZE



LID
RESISTANT



PID
RESISTANT



SALT CORROSION
RESISTANT



SAND
RESISTANT



AMMONIA
RESISTANT



HIGHLY STABLE
AND TOUGH



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AE MD-144 Series 530W-550W



MONO-CRYSTALLINE PV MODULES
HALF-CUT CELLS • MONO-FACIAL

Mechanical and design specification

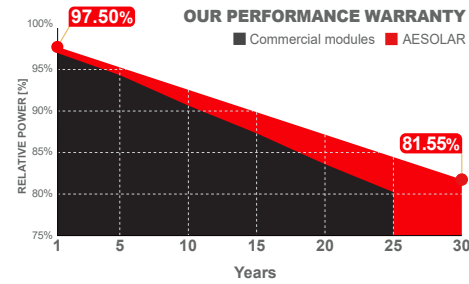
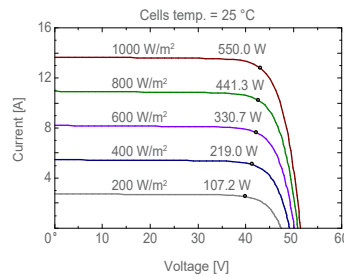
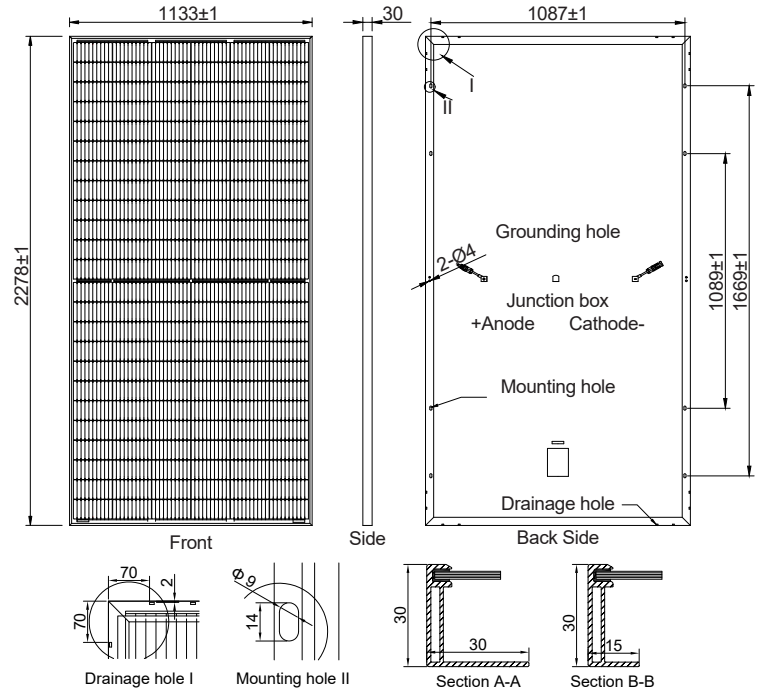
Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 182 mm
No. of cells	144
Front cover	3.2 mm glass, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	White backsheet
Junction box	IP68 rated, 3 Bypass Diodes
Frame	30 mm anodized Aluminium alloy
Cable	1 x 4 mm ² , 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	2278 mm x 1133 mm x 30 mm
Weight	26.5 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa or 244 kg/m ²
Snow load	5400 Pa or 550 kg/m ²

Packaging information

Packaging configuration	36 pcs / pallet
Loading capacity	720 pcs / 40 HQ
Size / Pallet	2310 mm x 1140 mm x 1245 mm
Weight	998 kg / pallet

Temperature ratings

Operating temperature	(°C)	-40 to +85
Temp.coefficient of P _{max}	(%/°C)	-0.35
Temp.coefficient of V _{oc}	(%/°C)	-0.275
Temp.coefficient of I _{sc}	(%/°C)	0.045
Nom. operating temp. NOCT	(°C)	45 ± 2



Electrical specifications (STC*):		AE530MD-144	AE535MD-144	AE540MD-144	AE545MD-144	AE550MD-144
Nominal Max. Power	P _{max} (Wp)	530	535	540	545	550
Maximum operating voltage	V _{MPP} (V)	41.70	41.93	42.15	42.38	42.57
Maximum operating current	I _{MPP} (A)	12.71	12.76	12.81	12.86	12.92
Open-circuit voltage	V _{oc} (V)	49.65	49.78	49.90	50.01	51.44
Short-circuit current	I _{sc} (A)	13.47	13.52	13.57	13.62	13.67
Module efficiency	η (%)	20.53	20.73	20.92	21.12	21.31
Power tolerance	(W)	0~+5				
Maximum system Voltage	(V)	1500				
Maximum series fuse rating	(A)	25				

*STC: Standard test conditions (Irradiance 1000 W/m², Cell temperature 25°C and air mass of AM1.5), measurement tolerance P_{max}: ±3%

Electrical specifications (NMOT*):		AE530MD-144	AE535MD-144	AE540MD-144	AE545MD-144	AE550MD-144
Nominal Max. Power	P _{max} (Wp)	400	403	407	410	414
Maximum operating voltage	V _{MPP} (V)	39.30	39.50	39.70	39.90	40.10
Maximum operating current	I _{MPP} (A)	10.17	10.21	10.25	10.29	10.34
Open-circuit voltage	V _{oc} (V)	47.00	47.20	47.40	47.60	47.80
Short-circuit current	I _{sc} (A)	10.78	10.82	10.86	10.90	10.94

*NMOT: Normal Module Operating Temperature (Irradiance 800 W/m², Ambient temperature 20°C, air mass of AM1.5 and wind speed of 1 m/s)

The specifications and characteristics contained in this datasheet may deviate slightly from our actual products due to the product developments and uncertainty of measurement devices. The specifications included in the datasheet are subject to change without prior notice.



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