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RELIABILITY
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years

Product
Warranty

430W-450W AE MC-144E Series

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

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Ver. 24.1.1



HALF
CELLS



CELL
SIZE



LID
RESISTANT



PID
RESISTANT



SALT CORROSION
RESISTANT



SAND
RESISTANT



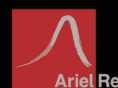
AMMONIA
RESISTANT



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AE MC-144E Series 430W-450W



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

Mechanical and design specification

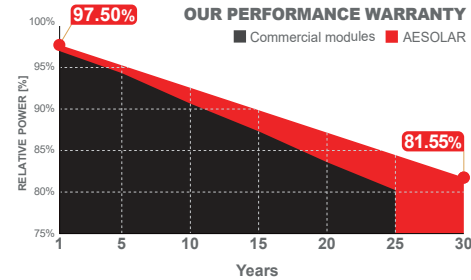
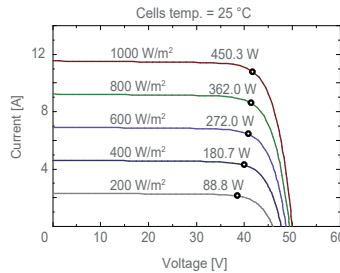
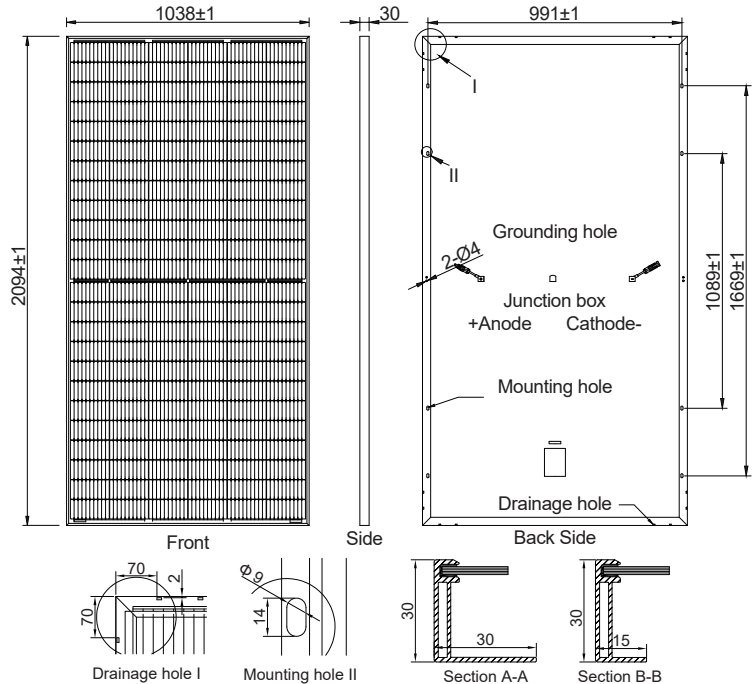
Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 166 mm
No. of cells	144
Front cover	3.2 mm glass, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	EVA-side Black, Rear-side White Backsheet
Junction box	IP68 rated, 3 Bypass Diodes
Frame	30 mm anodized Aluminium alloy
Cable	1 x 4 mm ² , 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	2094 mm x 1038 mm x 30 mm
Weight	22 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	792 pcs / 40 HQ
Size / Pallet	2125 mm x 1140 mm x 1150 mm
Weight	850 kg / pallet

Temperature ratings

Operating temperature	(°C)	-40 to +85
Temp.coefficient of P_{max}	(%/°C)	-0.35
Temp.coefficient of V_{oc}	(%/°C)	-0.286
Temp.coefficient of I_{sc}	(%/°C)	0.057
Nom. operating temp. NOCT	(°C)	45 ± 2



Electrical specifications (STC*):		AE430MC-144E	AE435MC-144E	AE440MC-144E	AE445MC-144E	AE450MC-144E
Nominal Max. Power	P_{max} (Wp)	430	435	440	445	450
Maximum operating voltage	V_{MPP} (V)	40.60	40.80	41.00	41.20	41.40
Maximum operating current	I_{MPP} (A)	10.60	10.67	10.74	10.80	10.87
Open-circuit voltage	V_{oc} (V)	49.20	49.40	49.60	49.80	50.00
Short-circuit current	I_{sc} (A)	11.19	11.26	11.33	11.46	11.54
Module efficiency	η (%)	19.78	20.01	20.24	20.47	20.70
Power tolerance	(W)	0~+5				
Maximum system Voltage	(V)	1500				
Maximum series fuse rating	(A)	20				

*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*):		AE430MC-144E	AE435MC-144E	AE440MC-144E	AE445MC-144E	AE450MC-144E
Nominal Max. Power	P_{max} (Wp)	324	328	332	335	339
Maximum operating voltage	V_{MPP} (V)	38.20	38.40	38.60	38.80	39.0
Maximum operating current	I_{MPP} (A)	8.48	8.54	8.59	8.64	8.70
Open-circuit voltage	V_{oc} (V)	46.30	46.50	46.70	46.90	47.10
Short-circuit current	I_{sc} (A)	8.95	9.01	9.06	9.16	9.23

*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.