



AESOLAR

since 2003



AURORA

HIGH ENERGY YIELD
RELIABILITY
DURABILITY

30
years
Performance
Guarantee

15
years
Product
Guarantee

430W-450W

AE MC-144E Series

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

www.ae-solar.com

144

HALF
CELLS

**166
mm**

CELL
SIZE



LID
RESISTANT



PID
RESISTANT



SALT CORROSION
RESISTANT



SAND
RESISTANT



AMMONIA
RESISTANT

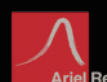


HIGHLY STABLE
AND TOUGH



IEC 61215
IEC 61730
Regular Production Surveillance
Type Tested and Monitored

IEC 62716 (Ammonia corrosion)
IEC 61701 (Salt mist corrosion)
IEC 60068 (Sand and dust)
IEC 62804 (PID resistance)



AE MC-144E Series 430W-450W



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

Mechanical and design specification

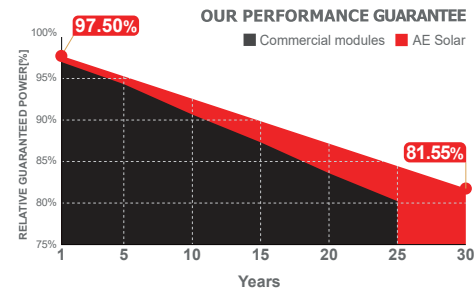
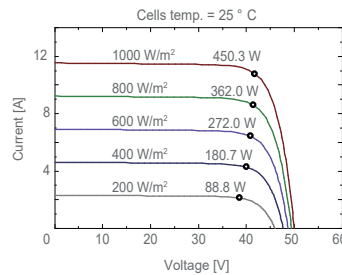
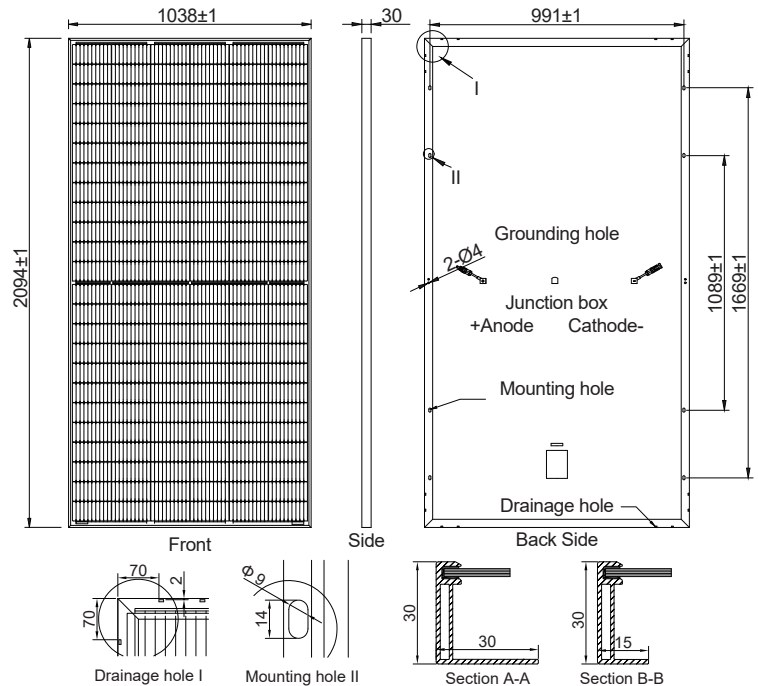
Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 166 mm
No. of cells	144
Glass	3.2 mm, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	EVA-side Black, Rear-side White Backsheet
Junction box	IP68 rated, 3 Bypass Diodes
Frame	30 mm anodized Aluminium alloy
Cable	1 x 4 mm ² , 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/ 244 kg/ m ²
Mechanical load	5400 Pa/ 550 kg/ m ²

Packaging information

Packaging configuration	74 pcs / double pallets
Loading capacity	814 pcs / 40 HQ
Size / Pallet	2125 mm x 1140 mm x 2415 mm
Weight	1714 kg / double pallets

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)	40.6	40.8	41.0	41.2	41.4
Maximum operating current	I _{MPP} (A)	10.6	10.67	10.74	10.80	10.87
Open-circuit voltage	V _{oc} (V)	49.2	49.4	49.6	49.8	50.0
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	20.7
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)

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)	38.2	38.4	38.6	38.8	39.0
Maximum operating current	I _{MPP} (A)	8.48	8.54	8.59	8.64	8.7
Open-circuit voltage	V _{oc} (V)	46.3	46.5	46.7	46.9	47.1
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.

