

 Deutsche
 Qualität
 Garantiert



144

HALF
CELLS

166
mm

CELL
SIZE



LID
RESISTANT



PID
RESISTANT



SALT CORROSION
RESISTANT



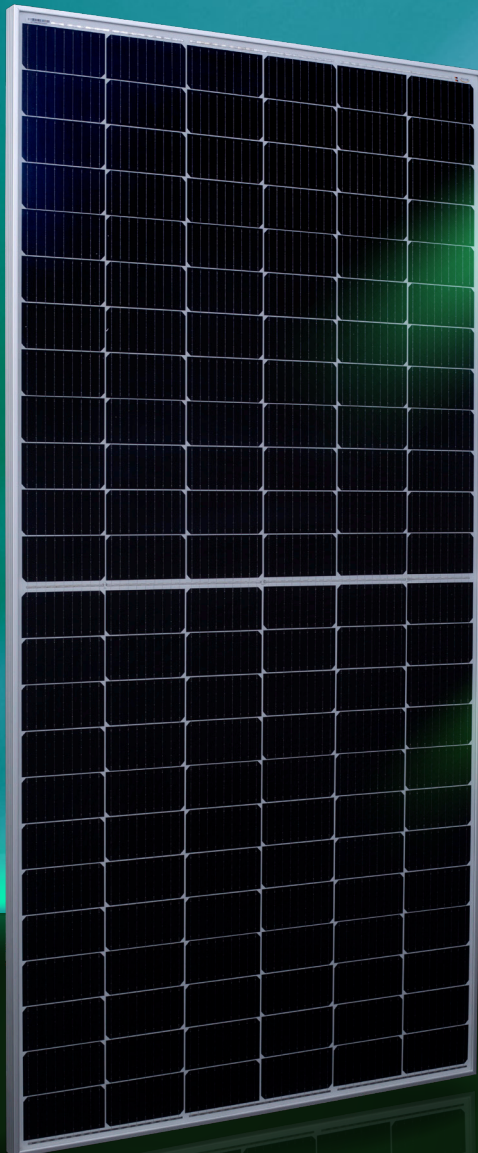
SAND
RESISTANT



AMMONIA
RESISTANT



HIGHLY STABLE
AND TOUGH



AURORA

HIGH ENERGY YIELD
RELIABILITY
DURABILITY

30

years

Performance
Guarantee

15

years

Product
Warranty

MONO-CRYSTALLINE PV MODULES
HALF-CUT CELLS • BIFACIAL • DOUBLE-GLASS

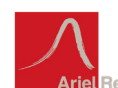
440W-450W

AE MC-144BD Series



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)



www.ae-solar.com

Mechanical and design specification

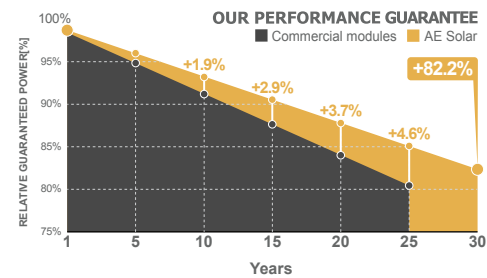
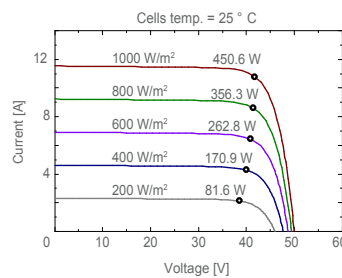
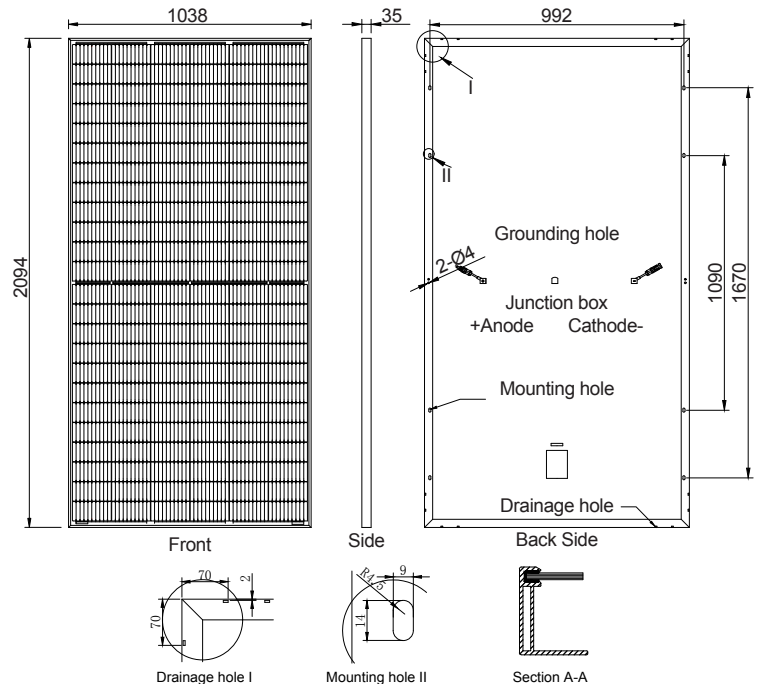
Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 166 mm
No. of cells	144
Bifaciality	70±5%
Glass	2.0 mm, high transmission, AR coated, tempered
Encapsulation	POE
Back cover	2.0 mm, high transmission solar glass, tempered
Junction box	IP 68 rated
Frame	35 mm anodized Aluminium alloy
Cable	1 x 4 mm ² , 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	2094 mm x 1038 mm x 35 mm
Weight	28 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	64 pcs / double pallet
Loading capacity	704 pcs / 40 HQ
Size / Pallet	2125 mm x 1140 mm x 2415 mm
Weight	1920 kg / double pallets

Temperature ratings

Operating temperature (°C)	-40 to +85
Temp.coefficient of P _{max} (%/°C)	-0.37
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*):		AE440MC-144BD	AE445MC-144BD	AE450MC-144BD
Nominal Max. Power	P _{max} (Wp)	440	445	450
Maximum operating voltage	V _{MPP} (V)	41.0	41.2	41.4
Maximum operating current	I _{MPP} (A)	10.74	10.80	10.87
Open-circuit voltage	V _{oc} (V)	49.60	49.80	50.0
Short-circuit current	I _{sc} (A)	11.33	11.46	11.54
Module efficiency	η (%)	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)

Electrical specifications (NMOT*):		AE440MC-144BD	AE445MC-144BD	AE450MC-144BD
Nominal Max. Power	P _{max} (Wp)	332	335	339
Maximum operating voltage	V _{MPP} (V)	38.60	38.80	39.00
Maximum operating current	I _{MPP} (A)	8.59	8.64	8.70
Open-circuit voltage	V _{oc} (V)	46.70	46.90	47.10
Short-circuit current	I _{sc} (A)	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.