

Deutsche  
Qualität  
Garantiert



120

HALF  
CELLS

182  
mm

CELL  
SIZE



LID  
RESISTANT



PID  
RESISTANT



SALT CORROSION  
RESISTANT



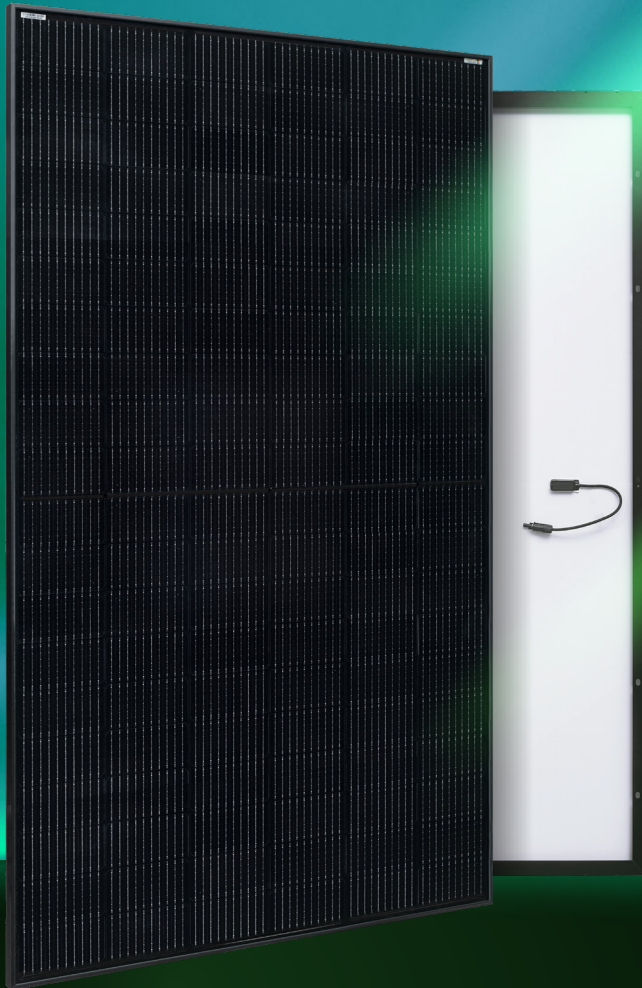
SAND  
RESISTANT



AMMONIA  
RESISTANT



HIGHLY STABLE  
AND TOUGH



**AURORA**

**HIGH** ENERGY YIELD  
RELIABILITY  
DURABILITY

30

years  
Performance  
Guarantee

15

years  
Product  
Warranty

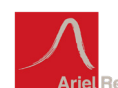
MONO-CRYSTALLINE PV MODULES  
HALF-CUT CELLS • MONO-FACIAL • BLACK

**440W-460W**  
AE MD-120E Series



IEC 61215  
IEC 61730  
Regular Production Surveillance  
Type Tested and Monitored

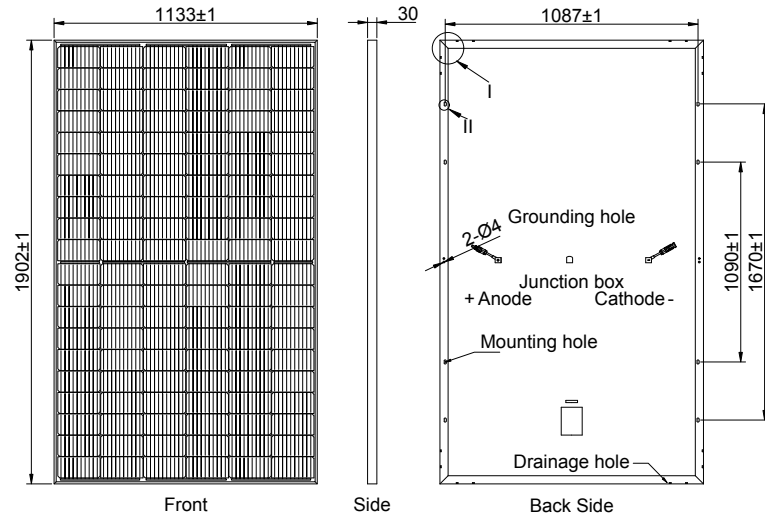
IEC 62716 (Ammonia corrosion)  
IEC 61701 (Salt mist corrosion)  
IEC 60068 (Sand and dust)  
IEC 62804 (PID resistance)



www.ae-solar.com

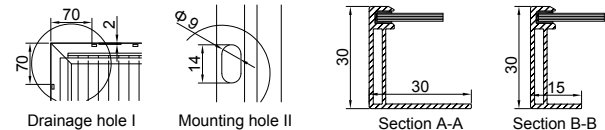
### Mechanical and design specification

Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 182 mm
No. of cells	120
Glass	3.2 mm, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	EVA-side Black, Rear-side White Backsheet
Junction box	IP 68 rated
Frame	30 mm anodized Aluminium alloy
Cable	1 x 4 mm <sup>2</sup> , 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	1902 mm x 1133 mm x 30 mm
Weight	23.5 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa/ 244 kg/ m <sup>2</sup>
Mechanical load	5400 Pa/ 550 kg/ m <sup>2</sup>



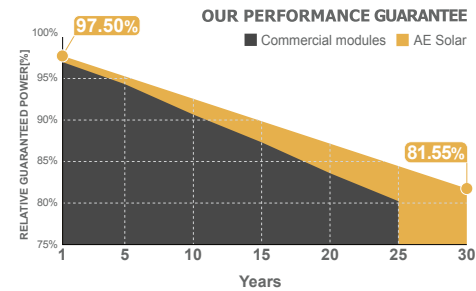
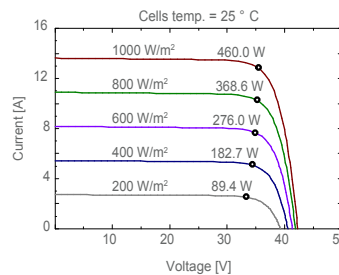
### Packaging information

Packaging configuration	72 pcs / double pallets
Loading capacity	864 pcs / 40 HQ
Size / Pallet	1945 mm x 1140 mm x 2490 mm
Weight	1760kg / double pallets



### Temperature ratings

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



Electrical specifications (STC*):		AE440MD-120E	AE445MD-120E	AE450MD-120E	AE455MD-120E	AE460MD-120E
Nominal Max. Power	P <sub>max</sub> (Wp)	440	445	450	455	460
Maximum operating voltage	V <sub>MPP</sub> (V)	34.62	34.87	35.13	35.38	35.60
Maximum operating current	I <sub>MPP</sub> (A)	12.71	12.76	12.81	12.86	12.92
Open-circuit voltage	V <sub>oc</sub> (V)	41.35	41.66	41.98	42.29	42.60
Short-circuit current	I <sub>sc</sub> (A)	13.47	13.52	13.57	13.62	13.67
Module efficiency	η (%)	20.42	20.65	20.88	21.11	21.35
Power tolerance	(W)	0~+5				
Maximum system Voltage	(V)	1500				
Maximum series fuse rating	(A)	25				

\*STC: Standard test conditions (Irradiance 1000 W/m<sup>2</sup>, Cell temperature 25°C and air mass of AM1.5)

Electrical specifications (NMOT*):		AE440MD-120E	AE445MD-120E	AE450MD-120E	AE455MD-120E	AE460MD-120E
Nominal Max. Power	P <sub>max</sub> (Wp)	331	335	338	342	345
Maximum operating voltage	V <sub>MPP</sub> (V)	32.60	32.80	33.00	33.20	33.40
Maximum operating current	I <sub>MPP</sub> (A)	10.17	10.21	10.25	10.29	10.34
Open-circuit voltage	V <sub>oc</sub> (V)	38.80	39.00	39.20	39.40	39.60
Short-circuit current	I <sub>sc</sub> (A)	10.78	10.82	10.86	10.90	10.94

\*NMOT: Normal Module Operating Temperature (Irradiance 800 W/m<sup>2</sup>, 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.