



Deutsche
Qualität
Garantiert

AURORA
P-TYPE PERC TECHNOLOGY

MD-120BD 440W-460W

High in energy yield, reliability and durability

21.35%
MAXIMUM EFFICIENCY

120
HALF CELLS

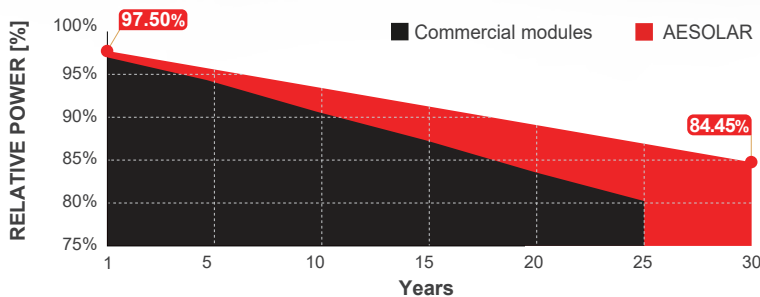
30 YEARS Performance Warranty up to **30 YEARS*** Product Warranty

*The regular product warranty is 15 years, please refer to the latest version of AESOLAR Limited Warranty for the duration of the product warranty under special conditions. for extensions, please contact AESOLAR staff.

- LID
RESISTANT
- PID
RESISTANT
- SALT CORROSION
RESISTANT
- SAND
RESISTANT
- AMMONIA
RESISTANT
- HIGHLY STABLE
AND TOUGH



OUR PERFORMANCE WARRANTY



SYSTEM AND PRODUCT CERTIFICATIONS



IEC 61215 IEC 61730
Regular Production Surveillance
www.tuv.com
ID 1111257249

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

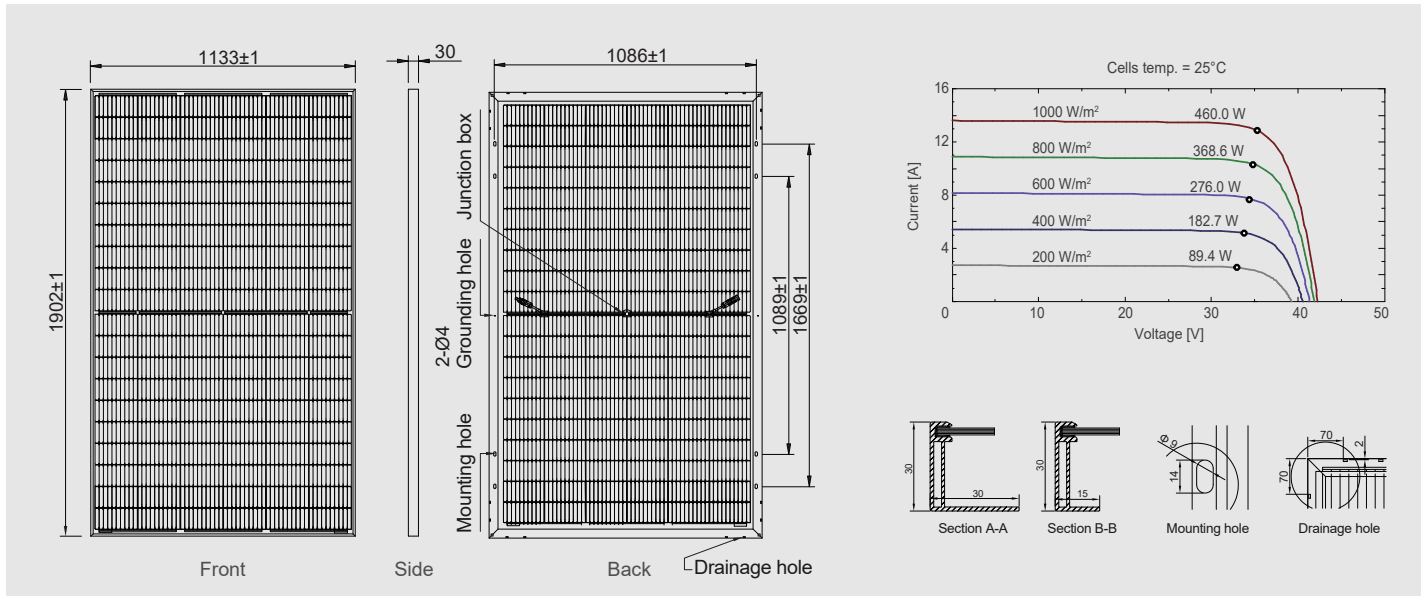


www.ae-solar.com

AE MD-120BD 440W-460W

P-TYPE PERC TECHNOLOGY PV MODULE

BIFACIAL • DOUBLE-GLASS



Electrical specifications (STC*):

Parameter	Symbol	440	445	450	455	460
Nominal max. power	P_{max} (Wp)	440	445	450	455	460
Maximum operating voltage	V_{MPP} (V)	34.62	34.87	35.13	35.38	35.60
Maximum operating current	I_{MPP} (A)	12.71	12.76	12.81	12.86	12.92
Open-circuit voltage	V_{oc} (V)	41.35	41.66	41.98	42.29	42.60
Short-circuit current	I_{sc} (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/m², Cell temperature 25°C and air mass of AM1.5), measurement tolerance Pmax: ±3%

Electrical specifications (NMOT*):

Parameter	Symbol	331	335	338	342	345
Nominal max. power	P_{max} (Wp)	331	335	338	342	345
Maximum operating voltage	V_{MPP} (V)	32.60	32.80	33.00	33.20	33.40
Maximum operating current	I_{MPP} (A)	10.17	10.21	10.25	10.29	10.34
Open-circuit voltage	V_{oc} (V)	38.80	39.00	39.20	39.40	39.60
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)

Bifacial electrical specifications

Max. power front-side	440										445										450										455										460																																																											
$P_{max front}$ (Wp)																																																																																																				
Backside power gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%																																																																
Total equivalent power	462										484										467										489										473										495										478										500										483										506									
$P_{max equ}$ (Wp)																																																																																																				
Module efficiency	21.44	22.46	21.68	22.71	21.93	22.97	22.17	23.22	22.41	23.48	21.44	22.46	21.68	22.71	21.93	22.97	22.17	23.22	22.41	23.48	21.44	22.46	21.68	22.71	21.93	22.97	22.17	23.22	22.41	23.48	21.44	22.46	21.68	22.71	21.93	22.97	22.17	23.22	22.41	23.48	21.44	22.46	21.68	22.71	21.93	22.97	22.17	23.22	22.41	23.48																																																		
η (%)																																																																																																				

*Bifacial Gain: The additional gain from the back side compared to the power of the front side at the standard test condition. It depends on the mounting (structure, height, tilt angle, etc.) and albedo of the ground.

Mechanical and design specification

Cell type	Gallium-doped mono c-Si PERC, half-cut cells
No. of cells	120
Bifaciality	70 ± 5%
Front cover	2.0 mm glass, high transmission, AR coated, tempered
Encapsulation	POE
Back cover	2.0 mm, high transmission solar glass, tempered
Junction box	IP68 rated, 3 bypass diodes
Frame	30 mm anodized aluminium alloy
Cable (Including Connector)	1 x 4 mm ² , 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	1902 mm x 1133 mm x 30 mm
Weight	25.5 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

Temperature ratings

Operating temperature	-40 to +85°C
Temp. coefficient of P_{max}	-0.35 %/°C
Temp. coefficient of V_{oc}	-0.275 %/°C
Temp. coefficient of I_{sc}	0.045 %/°C
Nom. operating cell temp. NOCT	45 ± 2°C

Packaging information

Packaging configuration	36 pcs / pallet
Loading capacity	864 pcs / 40 HQ
Size / Pallet	1945 mm x 1140 mm x 1245 mm
Weight	973 kg / pallet

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.