



# AESOLAR

since 2003



## AURORA

**HIGH** ENERGY YIELD  
RELIABILITY  
DURABILITY

**30**  
years

Performance  
Warranty

**15**  
years

Product  
Warranty

## 440W-460W

### AE MD-120BS Series

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

[www.ae-solar.com](http://www.ae-solar.com)

Ver. 24.1.1



HALF  
CELLS



CELL  
SIZE



LID  
RESISTANT



PID  
RESISTANT



SALT CORROSION  
RESISTANT



SAND  
RESISTANT



AMMONIA  
RESISTANT

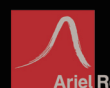


HIGHLY STABLE  
AND TOUGH



IEC 61215 IEC 61730  
Regular Production Surveillance  
[www.tuv.com](http://www.tuv.com)  
ID 1111251295

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



# AE MD-120BS Series 440W-460W



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

## Mechanical and design specification

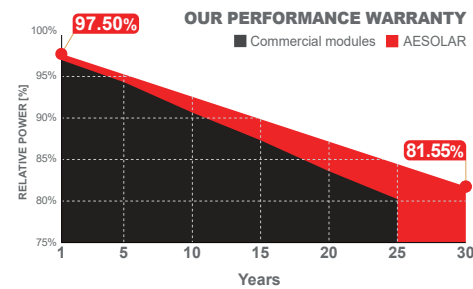
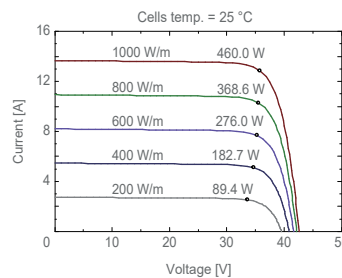
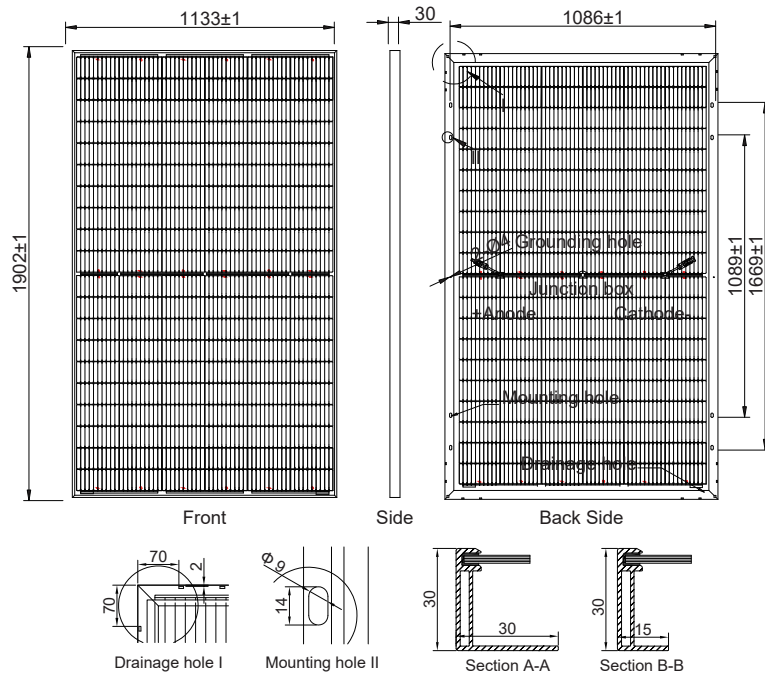
Cell type	Gallium-doped Mono c-Si PERC, Half-cut cells, 182 mm
No. of cells	120
Bifaciality	70 ± 5%
Front cover	3.2 mm glass, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	Transparent Backsheet
Junction box	IP68 rated, 3 Bypass Diodes
Frame	30 mm anodized Aluminium alloy
Cable	1 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	22.5 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa or 244 kg/m <sup>2</sup>
Snow load	5400 Pa or 550 kg/m <sup>2</sup>

## Packaging information

Packaging configuration	36 pcs / pallet
Loading capacity	864 pcs / 40 HQ
Size / Pallet	1945 mm x 1140 mm x 1245 mm
Weight	847 kg / pallet

## Temperature ratings

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



Electrical specifications (STC*):		AE440MD-120BS	AE445MD-120BS	AE450MD-120BS	AE455MD-120BS	AE460MD-120BS
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	$\eta$ (%)	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)	30				

\*STC: Standard test conditions (Irradiance 1000 W/m<sup>2</sup>, Cell temperature 25°C and air mass of AM1.5), measurement tolerance  $P_{max}$ : ±3%

Electrical specifications (NMOT*):		AE440MD-120BS	AE445MD-120BS	AE450MD-120BS	AE455MD-120BS	AE460MD-120BS
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/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.