

Deutsche  
Qualität  
Garantiert

**TIER 1**  
BloombergNEF



# AESOLAR

since 2003

## mete<sup>r</sup>

power more, degrade less

**30**  
years  
Performance  
Guarantee

**15**  
years  
Product  
Guarantee

### 460W-480W

### AE CMD-120 Series

N-TYPE TOPCON TECHNOLOGY PV MODULES  
HALF-CUT CELLS • MONO-FACIAL

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

**120**

HALF  
CELLS

**182**  
mm

CELL  
SIZE



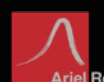
LID  
RESISTANT



HIGHLY STABLE  
AND TOUGH



IEC 61215  
IEC 61730  
Regular Production Surveillance  
Type Tested and Monitored



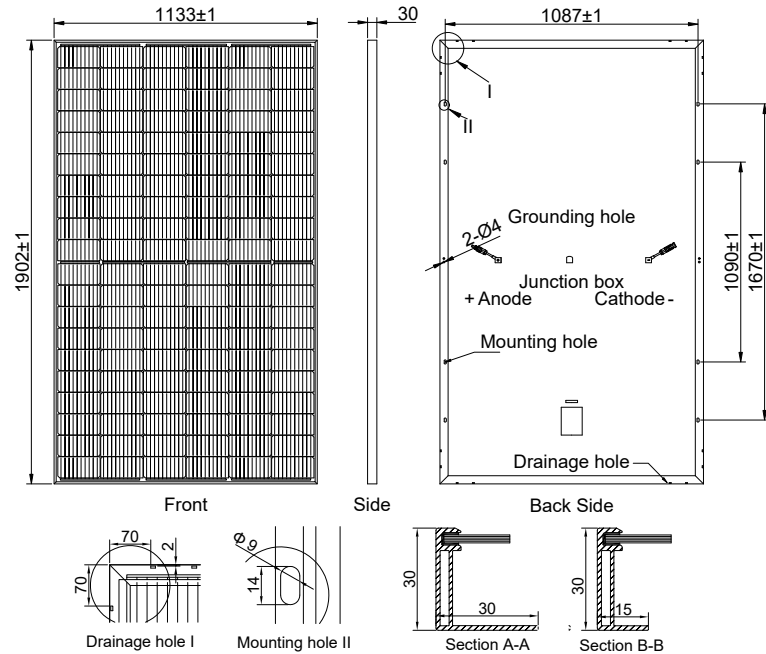
# AE CMD-120 Series 460W-480W



N-TYPE TOPCON TECHNOLOGY PV MODULES  
HALF-CUT CELLS • MONO-FACIAL

## Mechanical and design specification

Cell type	N-type TOPCon Technology, Half-cut cells, 182 mm
No. of cells	120
Glass	3.2 mm, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	White 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/ 244 kg/ m <sup>2</sup>
Mechanical load	5400 Pa/ 550 kg/ m <sup>2</sup>

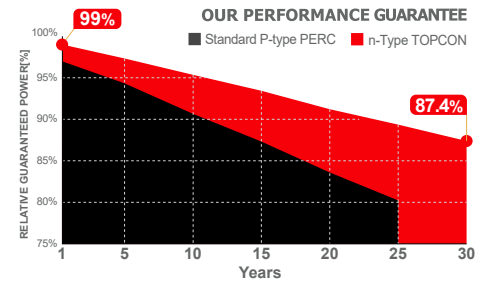
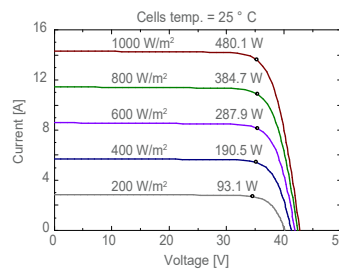


## Packaging information

Packaging configuration	72 pcs / double pallets
Loading capacity	864 pcs / 40 HQ
Size / Double pallets	1945 mm x 1140 mm x 2490 mm
Weight	1694 kg / double pallets

## Temperature ratings

Operating temperature (°C)	-40 to +85
Temp. coefficient of P <sub>max</sub> (%/°C)	-0.3
Temp. coefficient of V <sub>oc</sub> (%/°C)	-0.25
Temp. coefficient of I <sub>sc</sub> (%/°C)	0.046
Nom. operating temp. NOCT (°C)	42 ± 2



Electrical specifications (STC*):	AE460CMD-120	AE465CMD-120	AE470CMD-120	AE475CMD-120	AE480CMD-120	
Nominal Max. Power	P <sub>max</sub> (Wp)	460	465	470	475	480
Maximum operating voltage	V <sub>MPP</sub> (V)	34.72	34.89	35.05	35.22	35.38
Maximum operating current	I <sub>MPP</sub> (A)	13.25	13.33	13.41	13.49	13.57
Open-circuit voltage	V <sub>oc</sub> (V)	42.05	42.22	42.38	42.54	42.71
Short-circuit current	I <sub>sc</sub> (A)	13.99	14.07	14.15	14.23	14.31
Module efficiency	η (%)	21.35	21.58	21.81	22.04	22.27
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*):	AE460CMD-120	AE465CMD-120	AE470CMD-120	AE475CMD-120	AE480CMD-120	
Nominal Max. Power	P <sub>max</sub> (Wp)	346	350	353	357	361
Maximum operating voltage	V <sub>MPP</sub> (V)	32.6	32.77	32.94	33.1	33.27
Maximum operating current	I <sub>MPP</sub> (A)	10.61	10.67	10.73	10.79	10.85
Open-circuit voltage	V <sub>oc</sub> (V)	39.94	40.1	40.25	40.41	40.57
Short-circuit current	I <sub>sc</sub> (A)	11.29	11.36	11.42	11.49	11.55

\*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.

