



# AESOLAR

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power more, degrade less

**30**  
years  
Performance  
Guarantee

**15**  
years  
Product  
Guarantee

### 415W-435W

### AE CMD-108E Series

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

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

**108**

HALF  
CELLS

**182**  
mm

CELL  
SIZE



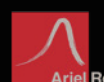
LID  
RESISTANT



HIGHLY STABLE  
AND TOUGH



IEC 61215  
IEC 61730  
Regular Production Surveillance  
Type Tested and Monitored



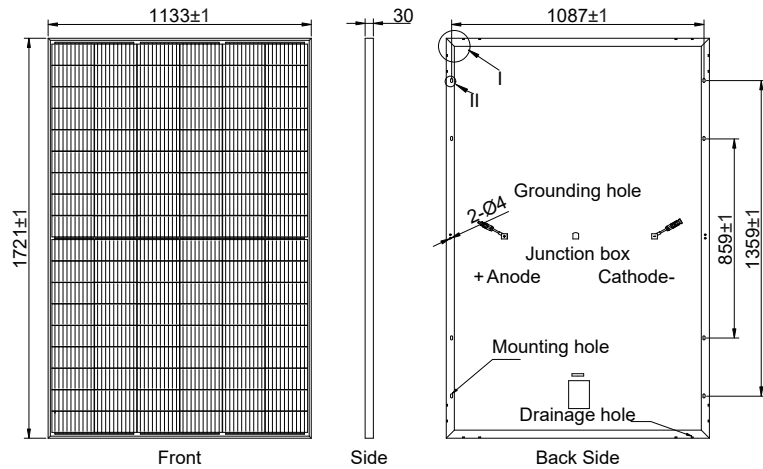
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N-TYPE TOPCON TECHNOLOGY PV MODULES  
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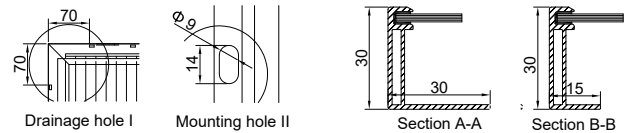
## Mechanical and design specification

Cell type	N-type TOPCon Technology, Half-cut cells, 182 mm
No. of cells	108
Glass	3.2 mm, high transmission, AR coated, tempered
Encapsulation	EVA
Back cover	EVA-side Black, Rear-side White Backsheet
Junction box	P68 rated, 3 Bypass Diodes
Frame	30 mm anodized Aluminium alloy, black
Cable	1 x 4 mm <sup>2</sup> , 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	1721 mm x 1133 mm x 30 mm
Weight	20.3 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>



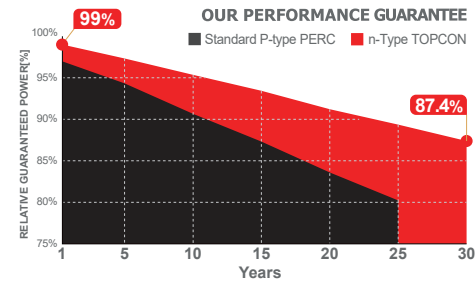
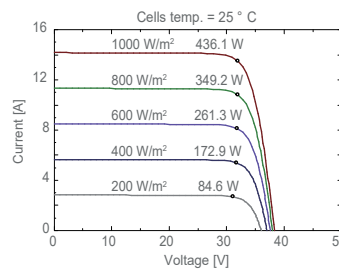
## Packaging information

Packaging configuration	72 pcs / double pallets
Loading capacity	936 pcs / 40 HQ
Size / Double pallets	1755 mm x 1140 mm x 2490 mm
Weight	1528 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)	0.045
Nom. operating temp. NOCT	(°C)	42 ± 2



## Electrical specifications (STC\*): AE415CMD-108E AE420CMD-108E AE425CMD-108E AE430CMD-108E AE435CMD-108E

Parameter	Symbol	AE415CMD-108E	AE420CMD-108E	AE425CMD-108E	AE430CMD-108E	AE435CMD-108E
Nominal Max. Power	P <sub>max</sub> (Wp)	415	420	425	430	435
Maximum operating voltage	V <sub>MPP</sub> (V)	31.81	32.04	32.25	32.43	32.64
Maximum operating current	I <sub>MPP</sub> (A)	13.05	13.11	13.18	13.26	13.33
Open-circuit voltage	V <sub>oc</sub> (V)	37.67	37.86	38.08	38.26	38.46
Short-circuit current	I <sub>sc</sub> (A)	13.95	14.03	14.10	14.17	14.23
Module efficiency	η (%)	21.28	21.54	21.80	22.05	22.31
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\*): AE415CMD-108E AE420CMD-108E AE425CMD-108E AE430CMD-108E AE435CMD-108E

Parameter	Symbol	AE415CMD-108E	AE420CMD-108E	AE425CMD-108E	AE430CMD-108E	AE435CMD-108E
Nominal Max. Power	P <sub>max</sub> (Wp)	316.0	320.0	323.5	327.1	331.0
Maximum operating voltage	V <sub>MPP</sub> (V)	29.5	29.7	29.9	30.1	30.30
Maximum operating current	I <sub>MPP</sub> (A)	10.7	10.76	10.81	10.87	10.93
Open-circuit voltage	V <sub>oc</sub> (V)	35.6	35.8	36.0	36.2	36.40
Short-circuit current	I <sub>sc</sub> (A)	11.25	11.31	11.37	11.42	11.48

\*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.

