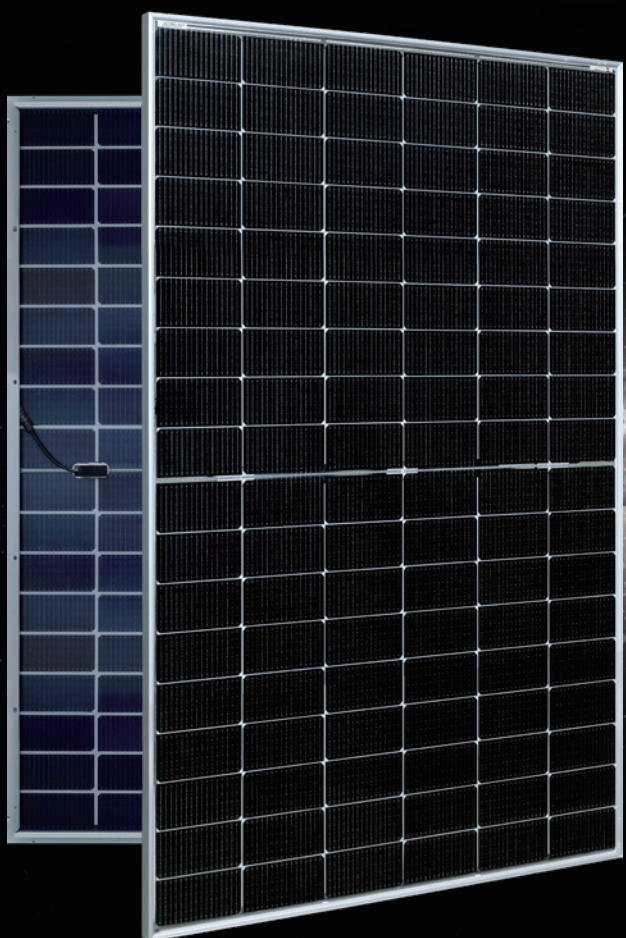




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30
years
Performance
Warranty

15
years
Product
Warranty

420W-440W

AE CMD-108BDS Series

N-TYPE TOPCON TECHNOLOGY PV MODULES
HALF-CUT CELLS • BIFACIAL • DOUBLE-GLASS

www.ae-solar.com

Ver. 24.1.1

108

HALF
CELLS

182
mm

CELL
SIZE



LID
RESISTANT



PID
RESISTANT



SALT CORROSION
RESISTANT



SAND
RESISTANT



AMMONIA
RESISTANT

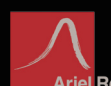


HIGHLY STABLE
AND TOUGH



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



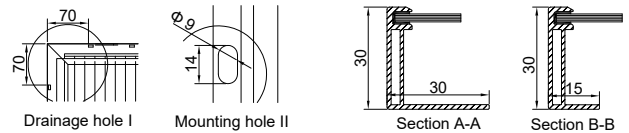
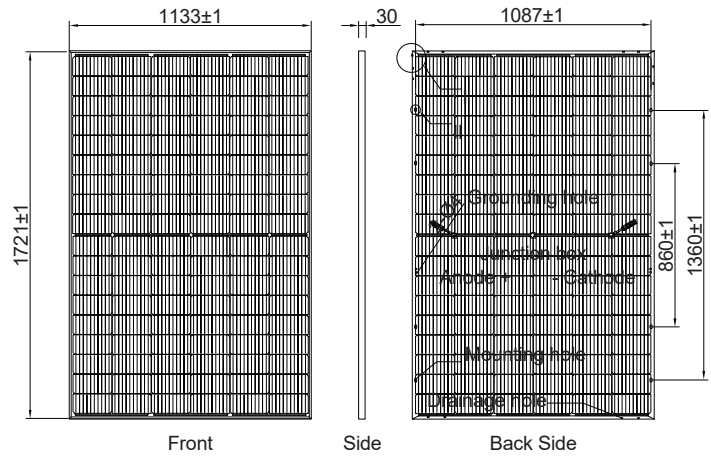
AE CMD-108BDS Series 420W-440W



N-TYPE TOPCON TECHNOLOGY PV MODULES
HALF-CUT CELLS • BIFACIAL • DOUBLE-GLASS

Mechanical and design specification

Cell type	n-Type TOPCon Technology, Half-cut cells, 182 mm
No. of cells	108
Bifaciality	80 ± 5%
Front cover	2.0 mm glass, high transmission, AR coated, tempered
Encapsulation	POE
Back cover	2.0 mm white glazed glass, tempered
Junction box	IP68 rated, 3 Bypass Diodes
Frame	30 mm anodized Aluminium alloy
Cable	1 x 4 mm ² , 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	1721 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 or 244 kg/m ²
Snow load	5400 Pa or 550 kg/m ²
Fire Rating	Class A (according to UL 790)

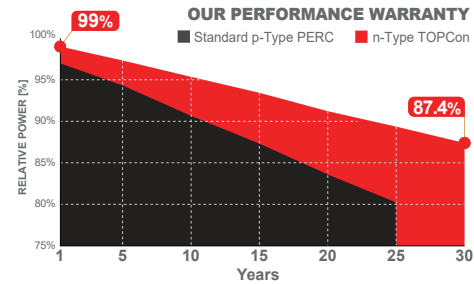
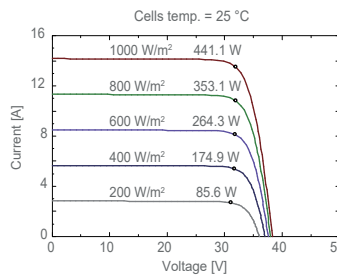


Packaging information

Packaging configuration	36 pcs / pallet
Loading capacity	936 pcs / 40 HQ
Size / Pallet	1755 mm x 1140 mm x 1245 mm
Weight	880 kg / pallet

Temperature ratings

Operating temperature (°C)	-40 to +85
Temp.coefficient of P _{max} (%/°C)	-0.30
Temp.coefficient of V _{oc} (%/°C)	-0.25
Temp.coefficient of I _{sc} (%/°C)	0.046
Nom. operating temp. NOCT (°C)	42 ± 2



Electrical specifications (STC*): AE420CMD-108BDS AE425CMD-108BDS AE430CMD-108BDS AE435CMD-108BDS AE440CMD-108BDS

	P _{max} (Wp)	420	425	430	435	440
Nominal Max. Power	P _{max} (Wp)	420	425	430	435	440
Maximum operating voltage	V _{MPP} (V)	32.04	32.25	32.43	32.64	32.84
Maximum operating current	I _{MPP} (A)	13.11	13.18	13.26	13.33	13.40
Open-circuit voltage	V _{oc} (V)	37.86	38.08	38.26	38.46	38.66
Short-circuit current	I _{sc} (A)	14.03	14.10	14.17	14.23	14.30
Module efficiency	η (%)	21.54	21.80	22.05	22.31	22.57
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 P_{max}: ±3%

Electrical specifications (NMOT*): AE420CMD-108BDS AE425CMD-108BDS AE430CMD-108BDS AE435CMD-108BDS AE440CMD-108BDS

	P _{max} (Wp)	320.0	323.5	327.1	331.0	335.3
Nominal Max. Power	P _{max} (Wp)	320.0	323.5	327.1	331.0	335.3
Maximum operating voltage	V _{MPP} (V)	29.70	29.90	30.10	30.30	30.51
Maximum operating current	I _{MPP} (A)	10.76	10.81	10.87	10.93	10.99
Open-circuit voltage	V _{oc} (V)	35.80	36.00	36.20	36.40	36.60
Short-circuit current	I _{sc} (A)	11.31	11.37	11.42	11.48	11.54

*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)

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.