ALPINE

STRONGER DESIGN FOR EXTREME WEATHER

Wood Mackenzie Grade A | TIER 1 BloombergNEF | SMM TIER 1

Deutsche Qualität Garantiert

375W-395W

CMD-96BD-I



40%
HIGH TRANSPARENCY

96
HALF CELLS

- Certified to endure 40mm hailstones (HW4)
- 3.2 mm glass thickness on the front, offering exceptional durability
- T6 high-strength anodized aluminum alloy frame, ensuring stability in harsh conditions
- Long-term reliability for hail-prone regions

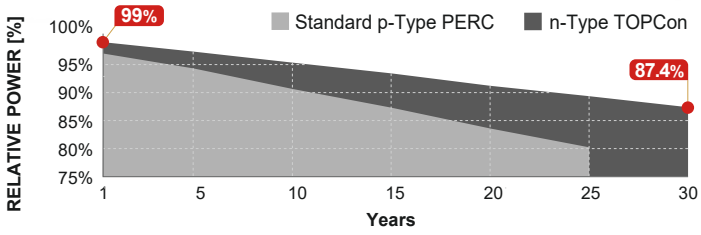
Ver. 26.10.1

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.

OUR PERFORMANCE WARRANTY



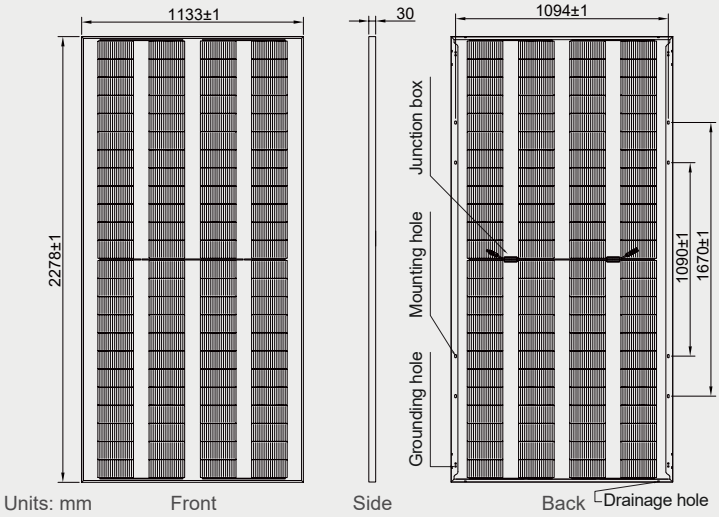
AESOLAR
Since 2003

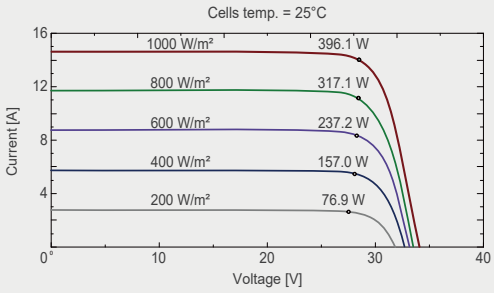
LID RESISTANT | PID RESISTANT | HAIL RESISTANCE | SALT CORROSION RESISTANT | SAND RESISTANT | AMMONIA RESISTANT | HIGHLY STABLE AND TOUGH

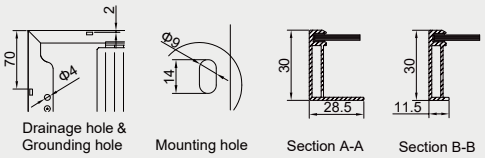
AE CMD-96BD-I 375W-395W

STRONGER DESIGN FOR EXTREME WEATHER

BIFACIAL • DOUBLE-GLASS







Electrical specifications (STC*):

Nominal max. power	P_{max} (Wp)	375	380	385	390	395
Maximum operating voltage	V_{MPP} (V)	28.24	28.49	28.54	28.76	28.85
Maximum operating current	I_{MPP} (A)	13.28	13.34	13.49	13.56	13.69
Open-circuit voltage	V_{oc} (V)	33.01	33.31	33.42	33.69	33.80
Short-circuit current	I_{sc} (A)	14.20	14.26	14.40	14.47	14.61
Module efficiency	η (%)	14.53	14.72	14.92	15.11	15.30
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*):

Nominal max. power	P_{max} (Wp)	285	290	295	300	305
Maximum operating voltage	V_{MPP} (V)	26.49	26.84	27.00	27.31	27.50
Maximum operating current	I_{MPP} (A)	10.76	10.81	10.93	10.98	11.09
Open-circuit voltage	V_{oc} (V)	30.97	31.38	31.61	31.99	32.22
Short-circuit current	I_{sc} (A)	11.50	11.55	11.66	11.72	11.83

*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

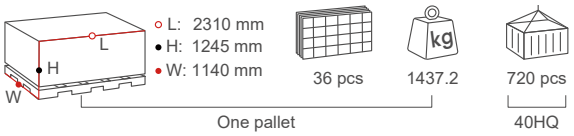
Max.power front-side $P_{max\ front}$ (Wp)	375		380		385		390		395	
Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Total equivalent power $P_{max\ equ}$ (Wp)	394	413	399	418	404	424	410	429	415	435
Module efficiency η (%)	15.26	15.98	15.46	16.20	15.66	16.41	15.87	16.62	16.07	16.83

*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	n-Type TOPCon technology, half-cut cells
No. of cells	96
Transparency	40%
Bifaciality	80 ± 5%
Front cover	3.2 mm glass, high transmission, AR coated, tempered
Encapsulation	POE
Back cover	2.0 mm transparent glass, tempered
Junction box	IP68 rated, 2 bypass diodes
Frame	30 mm anodized aluminium alloy
Cable (Including Connector)	1 x 4 mm², 300 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	2278 mm x 1133 mm x 30 mm
Weight	38.7 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	3600 Pa or 367 kg/m²
Snow load	6000 Pa or 612 kg/m²
Fire rating	Class A (according to UL 790)

Packaging information



Temperature ratings

Operating temperature	-40 to +85°C
Temp. coefficient of P_{max}	-0.29 %/°C
Temp. coefficient of V_{oc}	-0.25 %/°C
Temp. coefficient of I_{sc}	0.046 %/°C
Nom. operating cell temp. NOCT	42 ± 2°C

SYSTEM AND PRODUCT CERTIFICATIONS

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

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

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.

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