METEOR

N-TYPE TOPCON TECHNOLOGY

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

Deutsche Qualität Garantiert

440W-460W

CMER-96BDE

23.04%
MAXIMUM EFFICIENCY

96
HALF CELLS



- N-type cell technology
- High efficiency and power output
- Cost-effective scalability and market dominance
- Low degradation and high durability
- No LID or LeTID

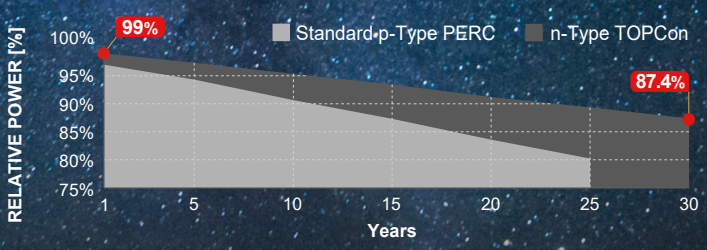
Ver..26.10.1

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



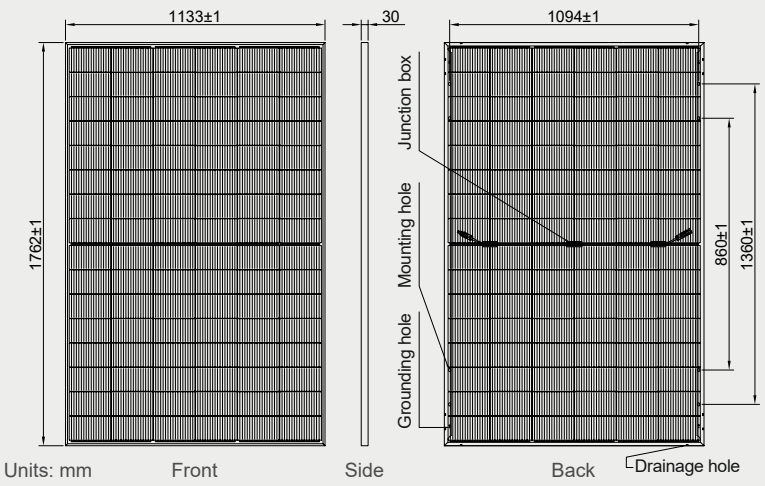
AESOLAR
Since 2003

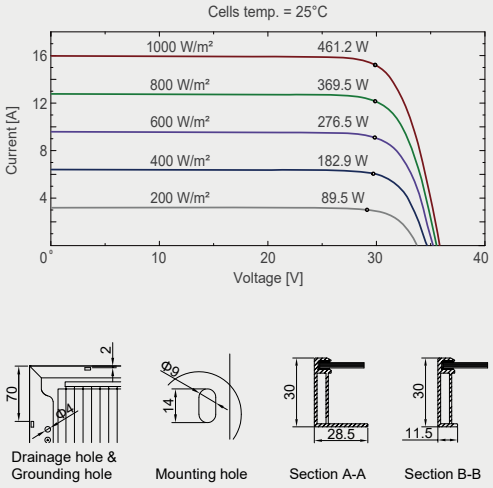
LID RESISTANT | PID RESISTANT | SALT CORROSION RESISTANT | SAND RESISTANT | AMMONIA RESISTANT | HIGHLY STABLE AND TOUGH

AE CMER-96BDE 440W-460W

N-TYPE TOPCON TECHNOLOGY PV MODULE

BLACK • DOUBLE-GLASS





Electrical specifications (STC*):

Nominal max. power	P_{max} (Wp)	440	445	450	455	460
Maximum operating voltage	V_{MPP} (V)	29.50	29.78	30.06	30.34	30.59
Maximum operating current	I_{MPP} (A)	14.92	14.95	14.98	15.01	15.04
Open-circuit voltage	V_{oc} (V)	35.05	35.33	35.61	35.89	36.17
Short-circuit current	I_{sc} (A)	15.89	15.93	15.96	15.99	16.10
Module efficiency	η (%)	22.04	22.29	22.54	22.79	23.04
Power tolerance	(W)			0~+5		
Maximum system voltage	(V)			1500		
Maximum series fuse rating	(A)			30		

*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)	335	340	345	350	355
Maximum operating voltage	V_{MPP} (V)	27.72	28.08	28.43	28.79	29.15
Maximum operating current	I_{MPP} (A)	12.09	12.11	12.13	12.16	12.18
Open-circuit voltage	V_{oc} (V)	32.53	32.94	33.36	33.77	34.03
Short-circuit current	I_{sc} (A)	12.87	12.90	12.93	12.95	13.04

*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

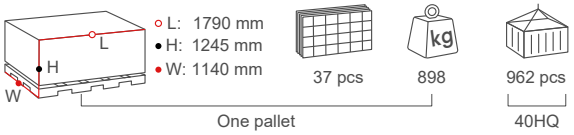
Max.power front-side $P_{max\ front}$ (Wp)	440		445		450		455		460	
Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Total equivalent power $P_{max\ equ}$ (Wp)	462	484	467	490	473	495	478	501	483	506
Module efficiency η (%)	23.15	24.25	23.42	24.53	23.68	24.81	23.95	25.09	24.19	25.35

*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
Bifaciality	80 ± 5%
Front cover	2.0 mm glass, high transmission, AR coated, tempered
Encapsulation	POE
Back cover	2.0 mm black glazed glass, tempered
Junction box	IP68 rated, 3 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	1762 mm x 1133 mm x 30 mm
Weight	23 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa or 244 kg/m²
Snow load	5400 Pa or 550 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}	-0.24 %/°C
Temp. coefficient of I_{sc}	0.040 %/°C
Nom. operating cell temp. NOCT	43 ± 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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