



Deutsche
Qualität
Garantiert



SILICON HETEROJUNCTION PV MODULE

TME-120BDS 630W-650W

Enrich your energy yield

23.00%
MAXIMUM EFFICIENCY

120
HALF CELLS

15 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.



LID
RESISTANT



PID
RESISTANT



SALT CORROSION
RESISTANT



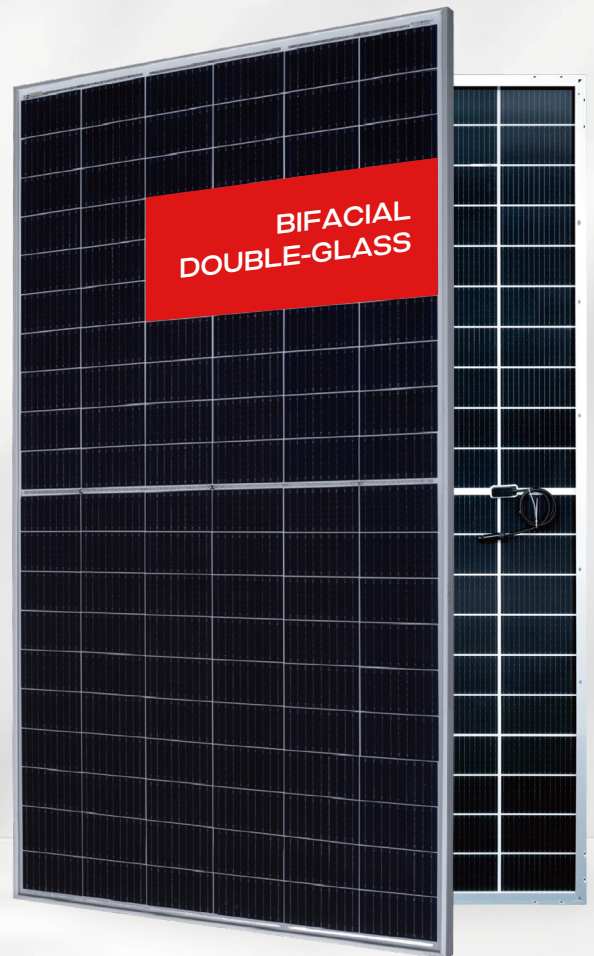
SAND
RESISTANT



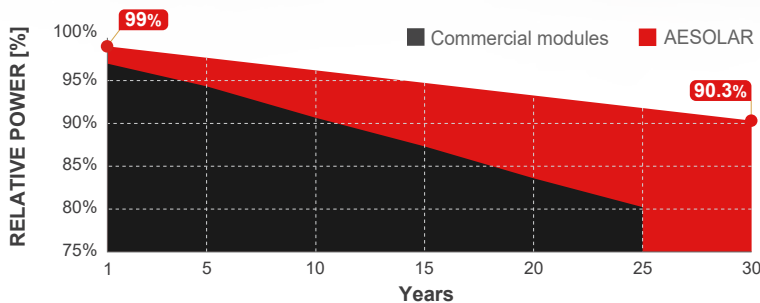
AMMONIA
RESISTANT



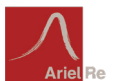
HIGHLY STABLE
AND TOUGH



OUR PERFORMANCE WARRANTY



SYSTEM AND PRODUCT CERTIFICATIONS



IEC 61215 IEC 61730
Regular Production Surveillance

www.tuv.com
ID 1111257249



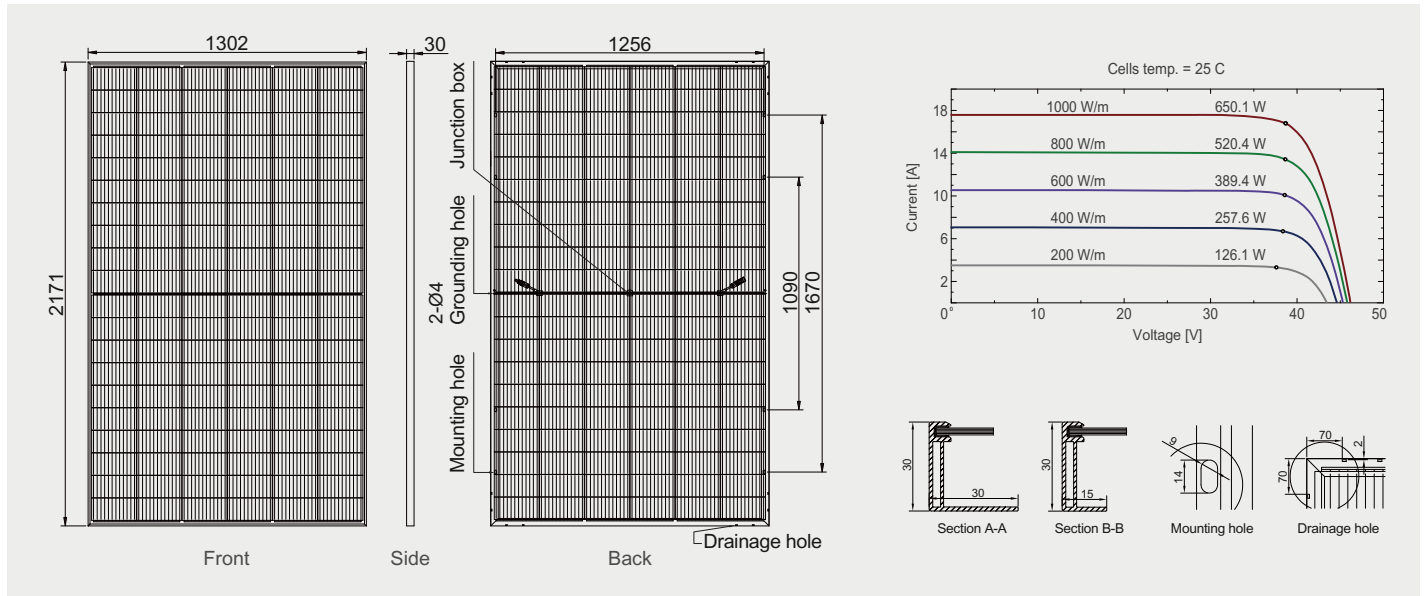
AESOLAR

www.ae-solar.com

AE TME-120BDS 630W-650W

SILICON HETEROJUNCTION PV MODULE

BIFACIAL • DOUBLE-GLASS



Electrical specifications (STC*):

	P_{max} (Wp)	630	635	640	645	650
Nominal max. power	P_{max} (Wp)	630	635	640	645	650
Maximum operating voltage	V_{MPP} (V)	38.03	38.19	38.35	38.51	38.67
Maximum operating current	I_{MPP} (A)	16.57	16.63	16.69	16.75	16.81
Open-circuit voltage	V_{oc} (V)	45.30	45.48	45.74	45.94	46.14
Short-circuit current	I_{sc} (A)	17.37	17.43	17.49	17.55	17.61
Module efficiency	η (%)	22.29	22.46	22.64	22.82	23.00
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 P_{max}: ±3%

Electrical specifications (NMOT*):

	P_{max} (Wp)	472	476	480	506	510
Nominal max. power	P_{max} (Wp)	472	476	480	506	510
Maximum operating voltage	V_{MPP} (V)	35.64	35.80	35.95	37.73	37.86
Maximum operating current	I_{MPP} (A)	13.26	13.30	13.35	13.41	13.47
Open-circuit voltage	V_{oc} (V)	42.50	42.69	42.88	45.01	45.17
Short-circuit current	I_{sc} (A)	13.90	13.94	13.99	14.05	14.11

*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	630		635		640		645		650	
P_{max} front (Wp)	630		635		640		645		650	
Backside Power Gain	5%	10%	5%	10%	5%	10%	5%	10%	5%	10%
Total equivalent power	662	693	667	699	672	704	677	710	683	715
P_{max} equ (Wp)	662		693		667		699		672	
Module efficiency	23.41	24.52	23.59	24.72	23.77	24.91	23.96	25.10	24.15	25.30
η (%)	23.41		24.52		23.59		24.72		23.77	

*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	Silicon heterojunction technology, half-cut cells
No. of cells	120
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, 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	2171 mm x 1302 mm x 30 mm
Weight	35 kg
Hail resistance	Max. Ø 25 mm at 23 m/s
Wind load	2400 Pa or 244 kg/m
Snow load	5400 Pa or 550 kg/m

Temperature ratings

Operating temperature	-40 to +85 C
Temp. coefficient of P_{max}	-0.24 %/ C
Temp. coefficient of V_{oc}	-0.22 %/ C
Temp. coefficient of I_{sc}	0.040 %/ C
Nom. operating cell temp. NOCT	44 ± 2 C

Packaging information

Packaging configuration	36 pcs / pallet
Loading capacity	648 pcs / 40 HQ
Size / Pallet	1350 mm x 1145 mm x 2310 mm (Upright)
Weight	1296 kg / pallet

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.