



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



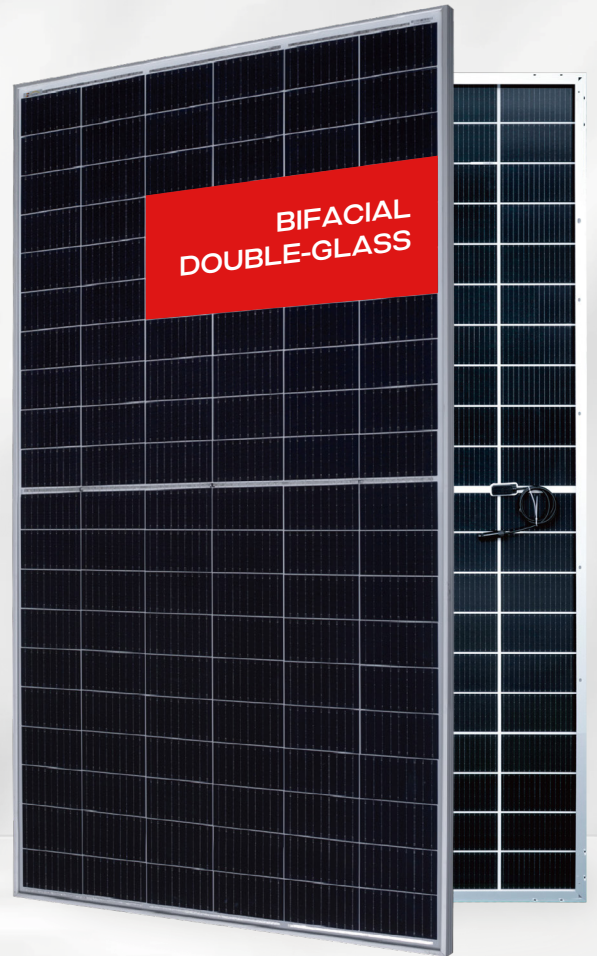
SAND  
RESISTANT



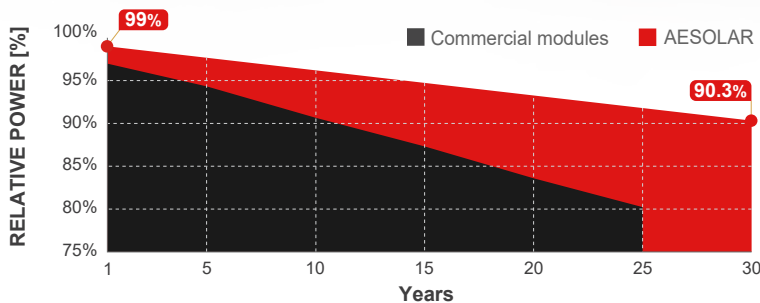
AMMONIA  
RESISTANT



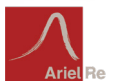
HIGHLY STABLE  
AND TOUGH



## OUR PERFORMANCE WARRANTY



## SYSTEM AND PRODUCT CERTIFICATIONS



IEC 61215 IEC 61730  
Regular Production Surveillance  
www.tuv.com  
ID 1111257249



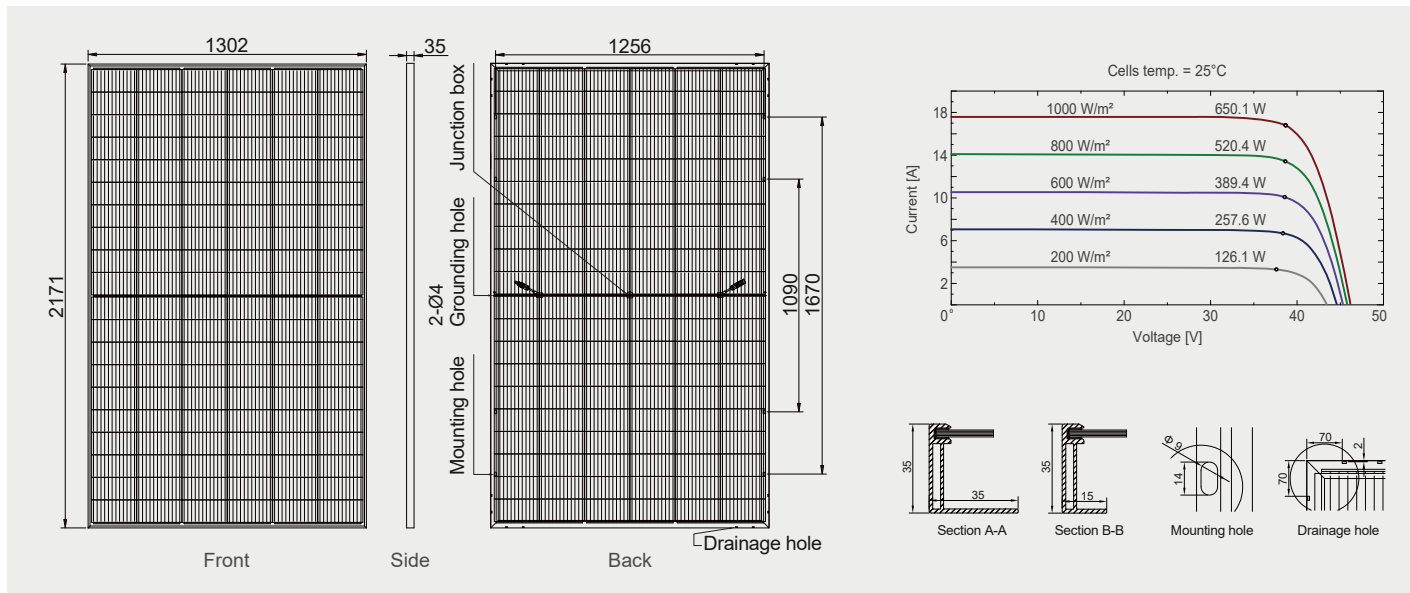
**AESOLAR**

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	$\eta$ (%)	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  $P_{max}$ :  $\pm 3\%$

## 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	704	677	710	683	715
Module efficiency	23.41	24.52	23.59	24.72	23.77	24.91	23.96	25.10	24.15	25.30
$\eta$ (%)	23.41	24.52	23.59	24.72	23.77	24.91	23.96	25.10	24.15	25.30

\*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 $\pm$ 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	35 mm anodized aluminium alloy
Cable	1 x 4 mm², 350 mm length or customized
Connectors	MC 4 / MC 4 compatible
Dimension	2171 mm x 1302 mm x 35 mm
Weight	36.5 kg
Hail resistance	Max. $\varnothing$ 25 mm at 23 m/s
Wind load	2400 Pa or 244 kg/m²
Snow load	5400 Pa or 550 kg/m²

## 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 $\pm$ 2°C

## Packaging information

Packaging configuration	31 pcs / pallet
Loading capacity	527 pcs / 40 HQ
Size / Pallet	1335 mm x 1140 mm x 2295 mm (Upright)
Weight	1162 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.