

Inspiring green-energy since 2003



HALF LARGE CELL MONOCRYSTALLINE PV MODULES AE MC-1 44 Series 430W-450W

tested by  **Fraunhofer**
CSP

144 CELLS	 PID RESISTANT	 SALT CORROSION RESISTANT	 SAND RESISTANT	$\frac{NH_3}{S}$ AMMONIA RESISTANT	 HIGHLY STABLE AND TOUGH
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TEMPERATURE
Hot spot temperature lower than 85°C
The IEC61215 test shows that with a zero percentage, a small and a 100 percentage of shaded area, respectively hot spots will not exceed 85°C, which is the maximum operating condition.

SAFETY
Instantly reduced temperature, thus eliminating material hazard and ensuring more safety of the module, preventing fire risks caused by hot spots.

GERMAN QUALITY
AE Solar photovoltaic modules are produced using high quality materials, automated robotic lines, German technology and standards.

PERFORMANCE GUARANTEE
AE Solar assures high investment, security and warranty claims by providing linear performance guarantee of 30 years and 12 years of product warranty.

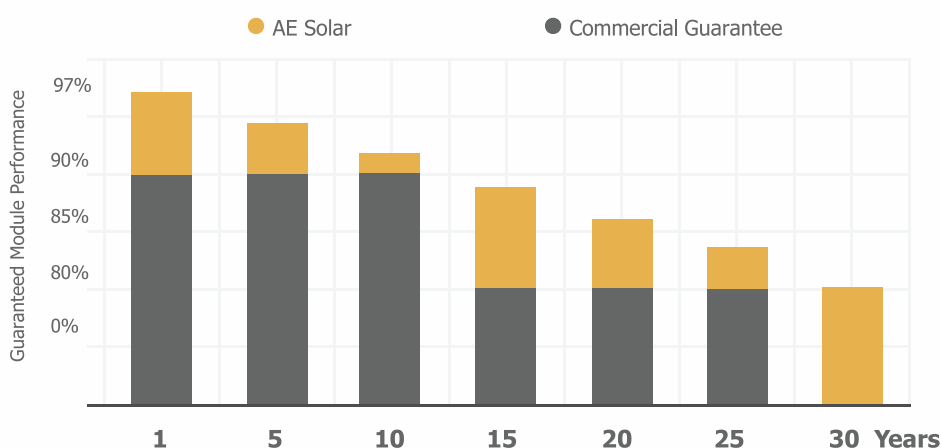
RELIABILITY
Bypass diodes prevent cells mismatching at shaded areas. The lower temperature of hot-spot free modules will eliminate potential cause for back sheet degradation, hence enhancing reliability for longer term.

HIGH RETURNS
This new technology prevents instant falls in the module output, thus increasing the performance ratio up to 30% and return for all types of installations.

PLUS-SORTING
Higher yield due to plus-sorting from 0 up to +5 Wp guarantees the high system efficiency and yield stability.

CERTIFICATES
Lining with international standards, AE Solar Photovoltaic modules are tested and certified under extreme stress conditions and it can bear harsh environment influences.

OUR PERFORMANCE GUARANTEE



30
years
Performance Guarantee

12
years
Product Warranty



Deutsche
Qualität
Garantiert

TECHNICAL DATA

AE MC-144 Series 430W-450W

SPECIFICATIONS

AE430MC-144 AE435MC-144 AE440MC-144 AE445MC-144 AE450MC-144

Parameter	Unit	AE430MC-144	AE435MC-144	AE440MC-144	AE445MC-144	AE450MC-144
Nominal Max. Power	Pmax (Wp)	430	435	440	445	450
Maximum power voltage	Vmp(V)	40.6	40.8	41.0	41.2	41.4
Maximum power current	Imp (A)	10.60	10.67	10.74	10.80	10.87
Open-circuit voltage	Voc(V)	49.2	49.4	49.6	49.8	50.0
Short-circuit current	Isc (A)	11.19	11.26	11.33	11.46	11.54
Module efficiency	(%)	19.78	20.01	20.24	20.47	20.70
Operating temperature	(°C)	-40 to +85				
Maximum system voltage DC	V (IEC)	1500				
Maximum series fuse rating	(A)	20				
Power tolerance	(%)	0 ~ + 5				
Temp. coefficients of Pmax	(%/°C)	-0.370				
Temp. coefficients of Voc	(%/°C)	-0.286				
Temp. coefficients of Isc	(%/°C)	0.057				
Nom. Operating cell temp.(NOCT)	(°C)	45±2				

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m² with spectrum AM 1.5 and a cell temperature of 25°C.

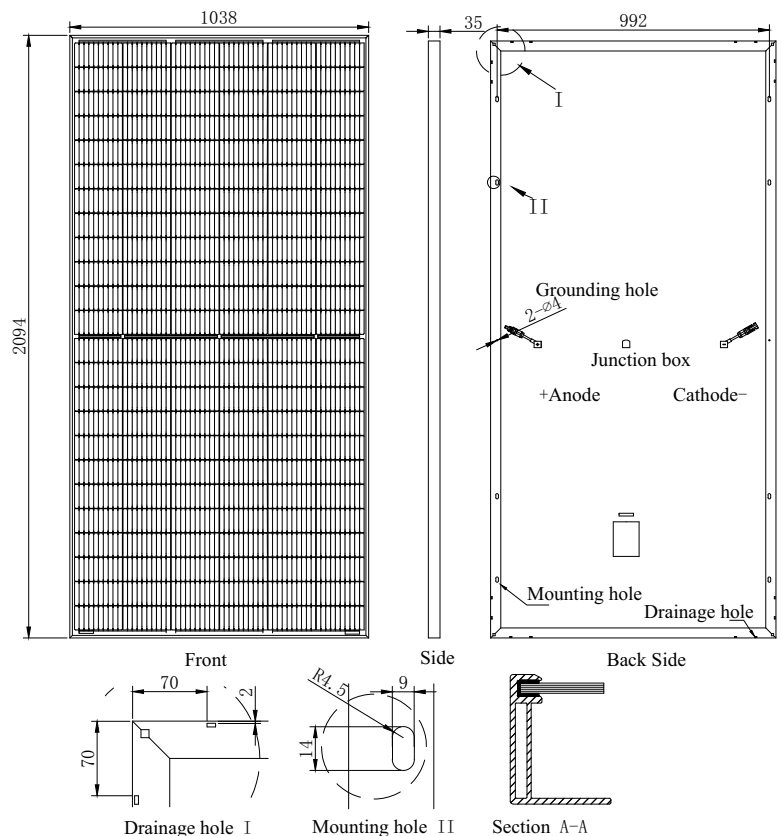
MATERIAL CHARACTERISTICS

Cell type	Mono-crystalline 166*83 mm
No. of cells	144 Cells (72 Full Cells)
Dimensions	2094 x 1038 x 35 mm
Weight	23 kg
Junction box	IP 68 rated (3 bypass diodes)
Output cable	1 x 4.0mm ² , 350mm length or customised
Connector type	MC4 / MC4 compatible
Hail resistance	Max. Ø 25 mm, at 23 m/s
Wind load	2400 Pa / 244 kg/m ²
Mechanical load	5400 Pa / 550 kg/m ²

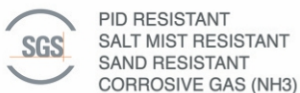
PACKAGING INFORMATION

Packing configuration	64 pcs / double pallet
Loading Capacity	704 pcs / 40HQ
Size / pallet (mm)	2125x1140x2415 mm
Weight	1596kg /double pallet

DIMENSIONS



CERTIFICATES



AES-DSH2019 V.002

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