

Deutsche
Qualität
Garantiert



144

HALF
CELLS

182
mm

CELL
SIZE



LID
RESISTANT



PID
RESISTANT



SALT CORROSION
RESISTANT



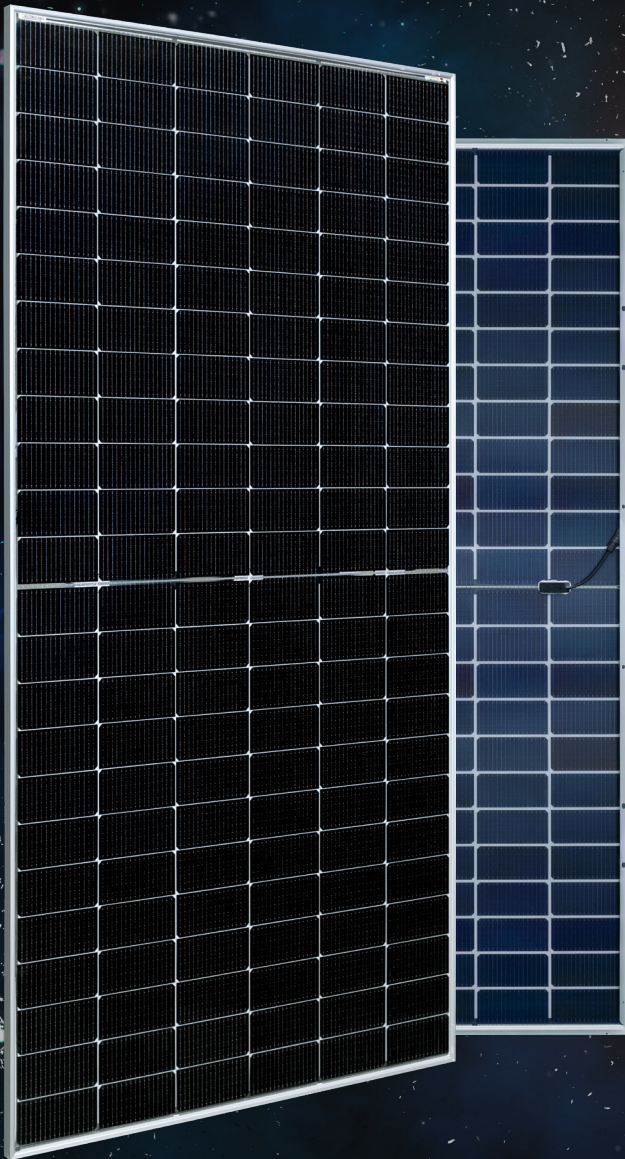
SAND
RESISTANT



AMMONIA
RESISTANT



HIGHLY STABLE
AND TOUGH



mete  r

POWER MORE, DEGRADE LESS

30

years

Performance
Guarantee

15

years

Product
Warranty

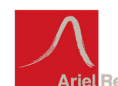
N-TYPE TOPCON TECHNOLOGY PV MODULES
HALF-CUT CELLS • BIFACIAL • DOUBLE-GLASS

555W-575W
AE CMD-144BDS Series



IEC 61215
IEC 61730
Regular Production Surveillance
Type Tested and Monitored

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



www.ae-solar.com

Mechanical and design specification

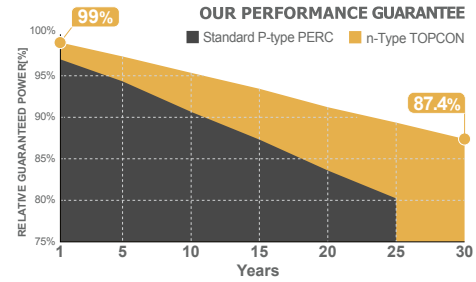
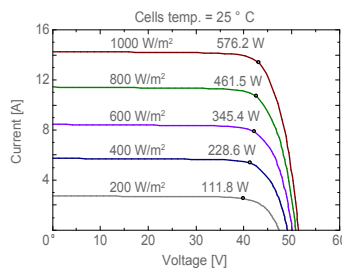
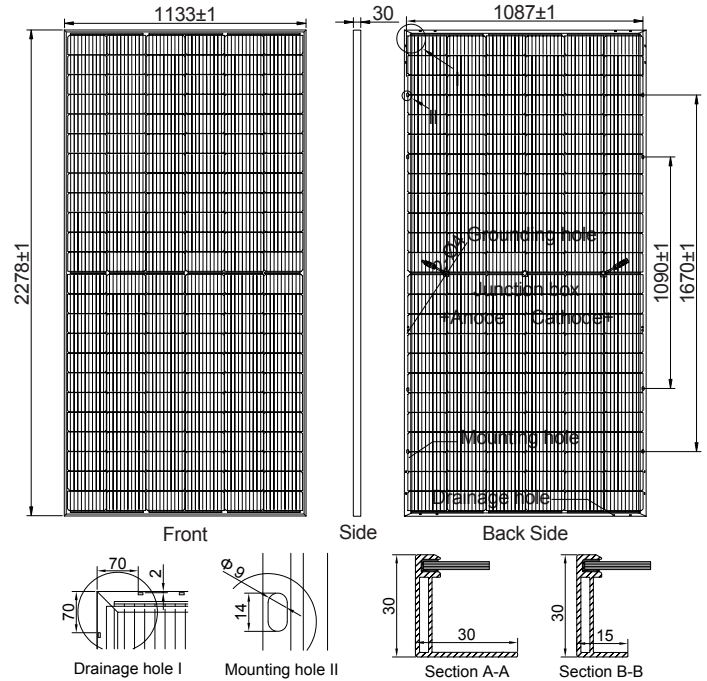
| | |
|-----------------|---|
| Cell type | N-type TOPCon Technology, Half-cut cells, 182 mm |
| No. of cells | 144 |
| Bifaciality | 80±5% |
| Glass | 2.0 mm, high transmission, AR coated, tempered |
| Encapsulation | POE |
| Back cover | 2.0 mm white glazed glass, tempered |
| Junction box | IP 68 rated |
| Frame | 30 mm anodized Aluminium alloy |
| Cable | 1 x 4 mm ² , 350 mm length or customized |
| Connectors | MC 4 / MC 4 compatible |
| Dimension | 2278 mm x 1133 mm x 30 mm |
| Weight | 32.5 kg |
| 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 |
| Fire Rating | Class A (according to UL 790) |

Packaging information

| | |
|-------------------------|-----------------------------|
| Packaging configuration | 72 pcs / double pallets |
| Loading capacity | 720 pcs / 40 HQ |
| Size / Pallet | 2310 mm x 1140 mm x 2490 mm |
| Weight | 2464 kg / double pallets |

Temperature ratings

| | | |
|--------------------------------------|--------|------------|
| Operating temperature | (°C) | -40 to +85 |
| Temp.coefficient of P _{max} | (%/°C) | -0.31 |
| Temp.coefficient of V _{oc} | (%/°C) | -0.26 |
| Temp.coefficient of I _{sc} | (%/°C) | 0.046 |
| Nom. operating temp. NOCT | (°C) | 42 ± 2 |



Electrical specifications (STC*): AE555CMD-144BDS AE560CMD-144BDS AE565CMD-144BDS AE570CMD-144BDS AE575CMD-144BDS

| | | | | | | |
|----------------------------|-----------------------|-------|-------|-------|-------|-------|
| Nominal Max. Power | P _{max} (Wp) | 555 | 560 | 565 | 570 | 575 |
| Maximum operating voltage | V _{MPP} (V) | 42.24 | 42.40 | 42.56 | 42.72 | 42.88 |
| Maximum operating current | I _{MPP} (A) | 13.14 | 13.21 | 13.28 | 13.34 | 13.41 |
| Open-circuit voltage | V _{oc} (V) | 50.07 | 50.23 | 50.39 | 50.55 | 50.68 |
| Short-circuit current | I _{sc} (A) | 14.07 | 14.14 | 14.20 | 14.26 | 14.33 |
| Module efficiency | η (%) | 21.50 | 21.70 | 21.89 | 22.08 | 22.28 |
| 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)

Electrical specifications (NMOT*): AE555CMD-144BDS AE560CMD-144BDS AE565CMD-144BDS AE570CMD-144BDS AE575CMD-144BDS

| | | | | | | |
|---------------------------|-----------------------|-------|-------|-------|-------|-------|
| Nominal Max. Power | P _{max} (Wp) | 422.8 | 426.0 | 430.1 | 434.0 | 437.4 |
| Maximum operating voltage | V _{MPP} (V) | 39.20 | 39.30 | 39.50 | 39.70 | 39.80 |
| Maximum operating current | I _{MPP} (A) | 10.79 | 10.84 | 10.89 | 10.94 | 10.99 |
| Open-circuit voltage | V _{oc} (V) | 47.40 | 47.50 | 47.70 | 47.80 | 48.00 |
| Short-circuit current | I _{sc} (A) | 11.35 | 11.40 | 11.45 | 11.50 | 11.55 |

*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)

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.