AXIworldbipremium XXL HC MT

540 - 550 Wp

High performance bifacial solar module
144 halfcell, monocrystalline

German-American-Engineering

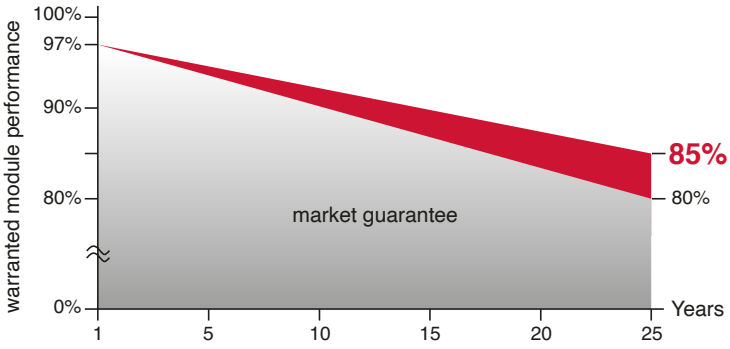
144MBTUSA250618A-153/1

Fig. similar

The advantages:

- 15 Years — 15 years Manufacturer‘s warranty
- HC — High module performance through Half-Cut-technology and selected materials
- Wp — Guaranteed positive power tolerance from 0-5 Wp by individual measurement
- 100% — 100 % visual electroluminescence inspection in production
- IP 68 — High quality junction box and connector systems
- 25 Years — 25 years Performance guarantee

Exclusive linear AXITEC high performance guarantee!



AXITEC Warranty Added Value: up to 5% more power after 25 years

Intertek
5026791
Conforms to UL STD No.1703
Certified to ULC/ORD Std. C1703

AXIworldbipremium XXL HC MT 540 - 550 Wp

Electrical data (at standard conditions (STC) irradiance 1000 watt/m². spectrum AM 1.5 at a cell temperature of 25°C)

Type	AC-540MBT/144V	AC-545MBT/144V	AC-550MBT/144V			
Nominal output	**540 Wp**	**545 Wp**	**550 Wp**			
Nominal voltage Umpp	40.70 V	40.80 V	42.41 V			
Nominal current Impp	13.27 A	13.36 A	12.97 A			
Short circuit current Isc	13.85 A	13.94 A	13.78 A			
Open circuit voltag Uoc	49.42 V	49.52 V	50.20 V			
Module conversion efficiency	20.89 %	21.09 %	21.28 %			

Bifacial output - Backside Power gain

10% Power output	594 Wp	600 Wp	605 Wp			
Module Effiency	22.99 %	23.23 %	23.41 %			
15% Power output	621 Wp	627 Wp	633 Wp			
Module Effiency	24.04 %	24.27 %	24.50 %			
20% Power output	648 Wp	654 Wp	660 Wp			
Module Effiency	25.08 %	25.32 %	25.54 %			
25% Power output	675 Wp	681 Wp	688 Wp			
Module Effiency	26.13 %	26.36 %	26.63 %			

Design

Frontside	0.13 inch (3.2 mm) hardened, low-reflection white glass
Backside	Composite film, cell spaces transparent
Cells	144 monocrystalline high efficiency cells
Frame	1.38 inch (35 mm) silver aluminium frame

Mechanical data

L x W x H	89.72 x 44.64 x 1.38 inch (2279 x 1134 x 35 mm)
Weight	63.93 lbs (29 kg) with frame

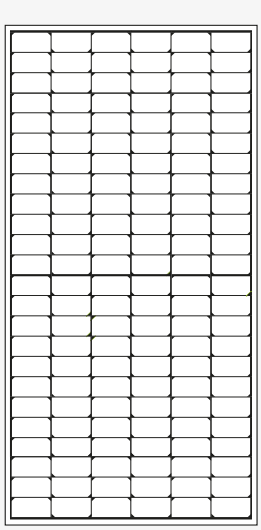
Mechanical load

Design load (pressure/suction)	33.3 PSF / 33.3 PSF *
Test load (pressure/suction)	50 PSF / 50 PSF *

* depending on the type of installation according to the installation instructions

Power connection

Socket	Protection Class IP68, 3 bypass diodes
Wire	55.12 inch, AWG 12
Plug-in system	IP68, Stäubli MC4 EVO2



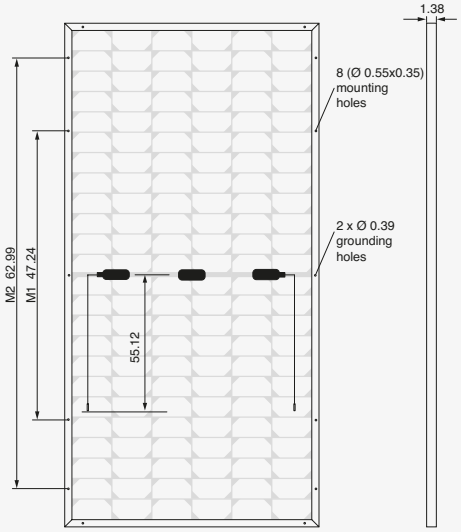


Fig. principle sketch

All dimensions in inch

Limit values

System voltage	1500 VDC (UL) 1000 VDC (IEC)
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)
NOCT (nominal operating cell temperature)*	45°C +/-2K
Reverse current feed IR	25.0 A
Permissible operating temp.	-40°C to 85°C / -40F to 185F
Bifaciality	70 % ± 10 %

(No external voltages greater than Vo may be applied to the module)

* NOCT, irradiance 800 W/m²; AM 1.5; wind speed 1 m/s; Temperature 20°C

Temperature coefficients

Voltage Uoc	-0.29 %/K
Current Isc	0.048 %/K
Output Pmpp	-0.35 %/K

Low-light performance without Bifacial-effect

(Example for AC-550MBT/144V)

I-U characteristic curve	Current Ipp	Voltage Upp
200 W/m²	2.65 A	40.82 V
400 W/m²	5.35 A	41.29 V
600 W/m²	7.99 A	41.61 V
800 W/m²	10.56 A	41.96 V
1000 W/m²	12.97 A	42.41 V

Packaging

Module pieces per pallet	31
Module pieces per HC-container	620

Technical data are subject to change without prior notice, errors excepted. The measurement tolerances are +/-3%. Please be aware: All technical data provided in our data sheets are property of Axitec LLC and intended for information purposes for our customers only. We cannot accept any guarantee of completeness or accuracy. These data are prohibited for any kind of commercial use.