

AXIworldbipremium XXL HC MT 540 - 550 Wp

High performance bifacial solar module

144 halfcell, monocrystalline



German-American-Engineering

The advantages:



15 years Manufacturer's warranty



High module performance through Half-Cut-technology and selected materials



Guaranteed positive power tolerance from 0-5 Wp by individual measurement



100 % visual electroluminescence inspection in production



High quality junction box and connector systems

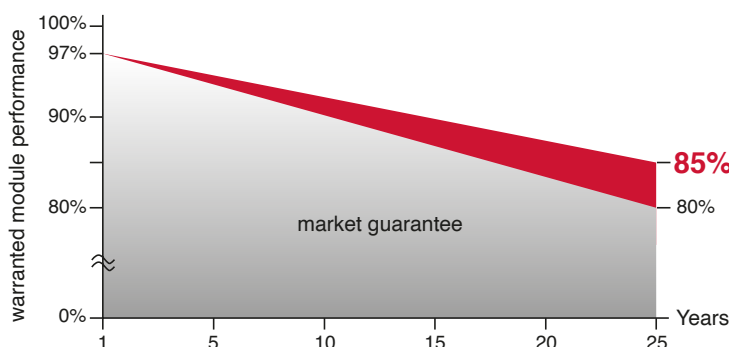


25 years Performance guarantee



Fig. similar 144MBTUSA240805A-153/1

Exclusive linear AXITEC high performance guarantee!



85% AXITEC Warranty Added Value: up to 5% more power after 25 years



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 U _{mpp}	40.70 V	40.80 V	42.41 V
Nominal current I _{mpp}	13.27 A	13.36 A	12.97 A
Short circuit current I _{sc}	13.85 A	13.94 A	13.78 A
Open circuit voltag U _{oc}	49.42 V	49.52 V	50.20 V
Module conversion efficiency	20.89 %	21.09 %	21.28 %

Bifacial output - Backside Power gain

	AC-540MBT/144V	AC-545MBT/144V	AC-550MBT/144V
10% Power output	594 Wp	600 Wp	605 Wp
Module Efficiency	22.99 %	23.23 %	23.41 %
15% Power output	621 Wp	627 Wp	633 Wp
Module Efficiency	24.04 %	24.27 %	24.50 %
20% Power output	648 Wp	654 Wp	660 Wp
Module Efficiency	25.08 %	25.32 %	25.54 %
25% Power output	675 Wp	681 Wp	688 Wp
Module Efficiency	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

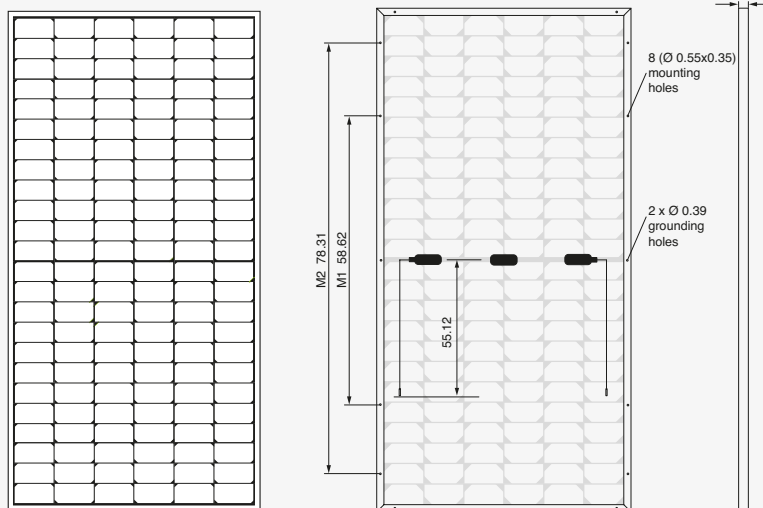


Fig. principle sketch

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 V_o 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 U _{oc}	-0.29 %/K
Current I _{sc}	0.048 %/K
Output P _{mpp}	-0.35 %/K

Low-light performance without Bifacial-effect

(Example for AC-550MBT/144V)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	2.65 A	40.82 V
400 W/m ²	5.35 A	41.29 V
600 W/m ²	7.99 A	41.61 V
800 W/m ²	10.56 A	41.96 V
1000 W/m ²	12.97 A	42.41 V

Packaging

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

