

## AXIworldbipremium XXL HC MT 540 - 550 Wp

High performance bifacial solar module  
144 halfcell, monocrystalline



German-American-Engineering

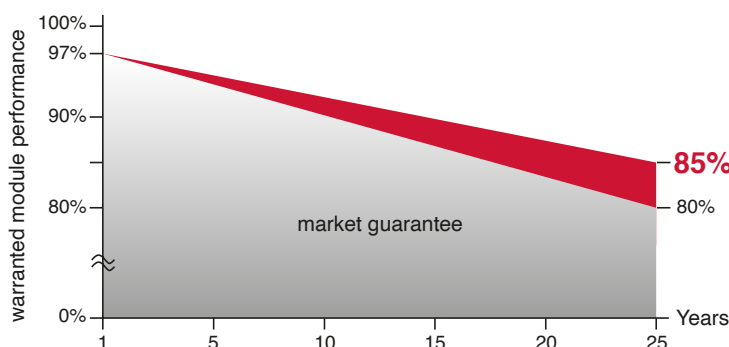
### The advantages:

- 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



Fig. similar 144MBTUSA240523A-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/m<sup>2</sup>. spectrum AM 1.5 at a cell temperature of 25°C)

Type	AC-540MBT/144V	AC-545MBT/144V	AC-550MBT/144V
Nominal output	<b>540 Wp</b>	<b>545 Wp</b>	<b>550 Wp</b>
Nominal voltage U <sub>mpp</sub>	40.70 V	40.80 V	42.41 V
Nominal current I <sub>mpp</sub>	13.27 A	13.36 A	12.97 A
Short circuit current I <sub>sc</sub>	13.85 A	13.94 A	13.78 A
Open circuit voltag U <sub>oc</sub>	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

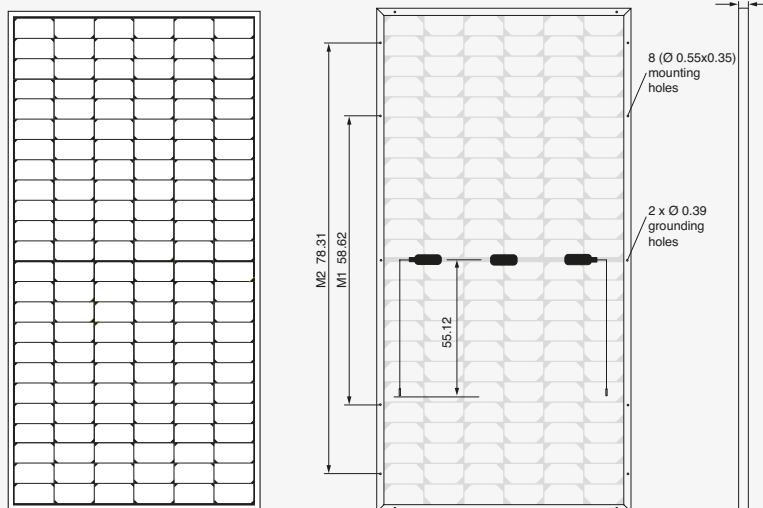


Fig. principle sketch

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<sub>o</sub> may be applied to the module)

\* NOCT, irradiance 800 W/m<sup>2</sup>; AM 1.5; wind speed 1 m/s; Temperature 20°C

### Temperature coefficients

Voltage U <sub>oc</sub>	-0.29 %/K
Current I <sub>sc</sub>	0.048 %/K
Output P <sub>mpp</sub>	-0.35 %/K

### Low-light performance without Bifacial-effect

(Example for AC-550MBT/144V)

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

### Packaging

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

