



520 - 545 Wp

AXITEC®

AXIbipremium XXL HC MW

High performance bifacial solar module

144 halfcell, monocrystalline



German-American-Engineering

The advantages:

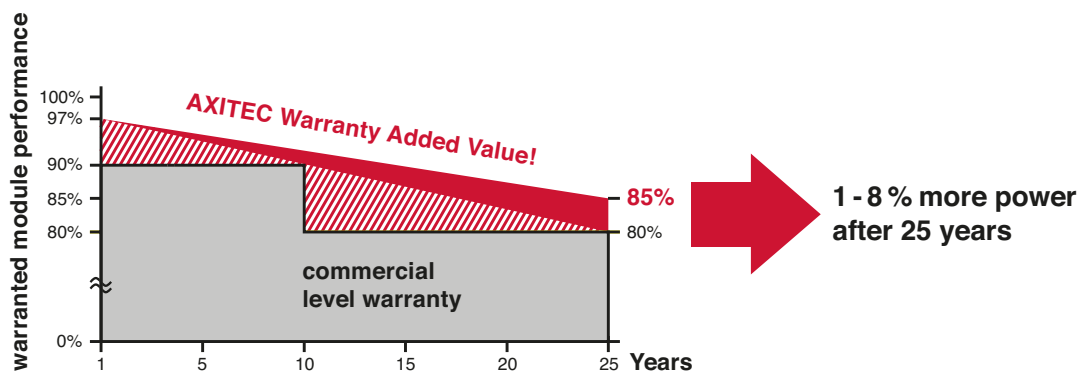
- 15 Years** 15 years Manufacturer's warranty
- +25%** Up to 25 % more power output by Bifacial-Technology
- + Wp** Guaranteed positive power tolerance from 0-5 Wp by individual measurement
- 100%** 100 % visual electroluminescence inspection in production
- Frame** High stability due to innovative frame design
- IP 68** High quality junction box and connector systems



Fig. similar 144MBTUSA220622A

Exclusive linear AXITEC high performance guarantee!

- 15 years manufacturer's guarantee on 90 % of the nominal performance
- 25 years manufacturer's guarantee on 85 % of the nominal performance



5018214
Conforms to UL STD No.1703
Certified to ULC/ORD Std. C1703

AXIbipremium XXL HC MW 520 - 545 Wp

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

Type	AC-520MBT/144V	C-525MBT/144V	AC-530MBT/144V	AC-535MBT/144V	AC-540MBT/144V	AC-545MBT/144V
Nominal output	520 Wp	525 Wp	530 Wp	535 Wp	540 Wp	545 Wp
Nominal voltage U _{mpp}	41,00 V	41,15 V	41.31 V	41.47 V	41.64 V	41.80 V
Nominal current I _{mp}	12,69 A	12,76 A	12.83 A	12.91 A	12.97 A	13.04 A
Short circuit current I _{sc}	13,58 A	13,65 A	13.72 A	13.79 A	13.86 A	13.93 A
Open circuit voltag U _{oc}	49,00 V	49,15 V	49.30 V	49.45 V	49.60 V	49.75 V
Module conversion efficiency	20,13 %	20,32 %	20.52 %	20.71 %	20.90 %	21.10 %

Bifacial output - Backside Power gain

10% Power output	572,00 Wp	577,50 Wp	583.00 Wp	588.50 Wp	594.00 Wp	599.50 Wp
Module Efficiency	26,32 %	26,57 %	26.82 %	27.08 %	27.33 %	27.58 %
15% Power output	598,00 Wp	603,75 Wp	609.50 Wp	615.25 Wp	621.00 Wp	626.75 Wp
Module Efficiency	27,51 %	27,78 %	28.04 %	28.31 %	28.57 %	28.84 %
20% Power output	624,00 Wp	630,00 Wp	636.00 Wp	642.00 Wp	648.00 Wp	654.00 Wp
Module Efficiency	28,71 %	28,98 %	29.26 %	29.54 %	29.81 %	30.09 %
25% Power output	650,00 Wp	656,25 Wp	662.50 Wp	668.75 Wp	675.00 Wp	681.25 Wp
Module Efficiency	29,90 %	30,19 %	30.48 %	30.77 %	31.05 %	31.34 %

Design

Frontside	0.13 inch (3.2 mm) hardened, low-reflection white glass
Backside	Composite film, cell gaps white
Cells	144 bifacial-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	61.73 lbs (28 kg) with frame

Mechanical load

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

Power connection

Socket	Protection Class IP68
Wire	51.18 inch, AWG 11
Plug-in system	Plug/socket IP68, Stäubli EVO2 / EVO2 pluggable

Limit values

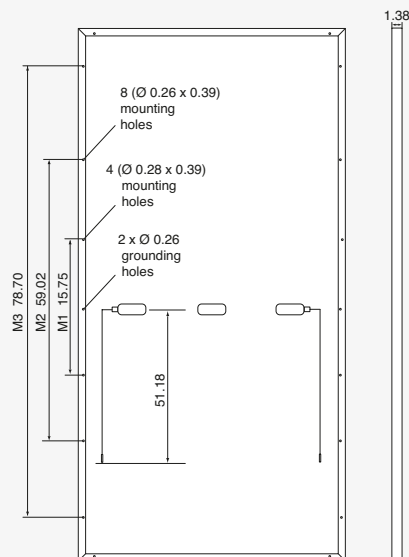
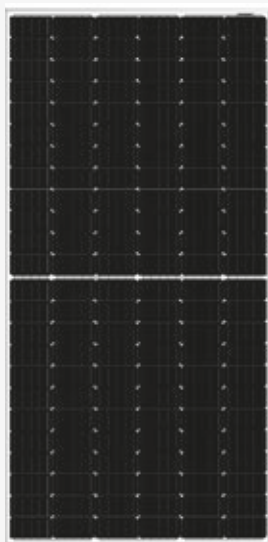
System voltage	1500 VDC (UL) 1500 VDC (IEC)
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)
NOCT (nominal operating cell temperature)*	45°C +/-2K
Reverse current feed IR	25.0 A

Permissible operating temperature	-40°C to 85°C / -40F to 185F
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Bifaciality	70 % ± 10 %
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(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



All dimensions in inch

Temperature coefficients

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

Low-light performance (Example for AC-545MBT/144V)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	2.66 A	40.23 V
400 W/m ²	5.38 A	40.69 V
600 W/m ²	8.03 A	41.01 V
800 W/m ²	10.62 A	41.36 V
1000 W/m ²	13.04 A	41.80 V

Packaging

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