

AXIworldbipremium XXL HC MT 530 - 555 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

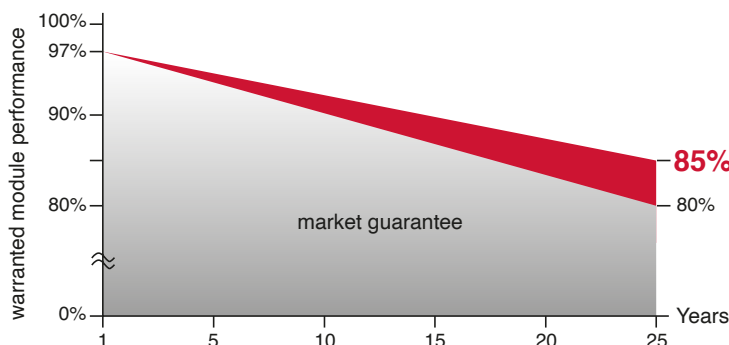


25 years Performance guarantee



Fig. similar 144MHUSA240429A

Exclusive linear AXITEC high performance guarantee!



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



60447

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

AXIworldbipremium XXL HC MT 530 - 555 Wp

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

Type	AC-530MBT/144US	AC-535MBT/144US	AC-540MBT/144US	AC-545MBT/144US	AC-550MBT/144US	AC-555MBT/144US
Nominal output	530 Wp	535 Wp	540 Wp	545 Wp	550 Wp	555 Wp
Nominal voltage U _{mpp}	41.10 V	41.30 V	41.50 V	41.70 V	41.90 V	42.10 V
Nominal current I _{mpp}	12.91 A	12.96 A	13.02 A	13.07 A	13.13 A	13.19 A
Short circuit current I _{sc}	13.65 A	13.71 A	13.77 A	13.83 A	13.89 A	13.95 A
Open circuit voltag U _{oc}	49.40 V	49.60 V	49.80 V	50.00 V	50.20 V	50.40 V
Module conversion efficiency	20.52 %	20.71 %	20.90 %	21.10 %	21.29 %	21.48 %

Bifacial output - Backside Power gain

10% Power output	583 Wp	589 Wp	594 Wp	600 Wp	605 Wp	611 Wp
Module Efficiency	22.57 %	22.78 %	22.99 %	23.23 %	23.41 %	23.65 %
15% Power output	610 Wp	615 Wp	621 Wp	627 Wp	633 Wp	638 Wp
Module Efficiency	23.61 %	23.81 %	24.04 %	24.27 %	24.50 %	24.70 %
20% Power output	636 Wp	642 Wp	648.00 Wp	654 Wp	660 Wp	666 Wp
Module Efficiency	24.62 %	24.85 %	25.08 %	25.32 %	25.54 %	25.77 %
25% Power output	663 Wp	669 Wp	675 Wp	681 Wp	688 Wp	694 Wp
Module Efficiency	25.67 %	25.90 %	26.13 %	26.36 %	26.63 %	26.87 %

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	89.68 x 44.64 x 1.38 inch (2278 x 1134 x 35 mm)
Weight	61.73 lbs (28 kg) with frame

Mechanical load

Design load (pressure/suction) 75.3.3 PSF / 33.3 PSF*
 Test load (pressure/suction) 113 PSF / 50 PSF*

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

Power connection

Socket	Protection Class IP68, 3 bypass diodes
Wire	51.18 inch, AWG 12
Plug-in system	IP68, Stäubli MC4

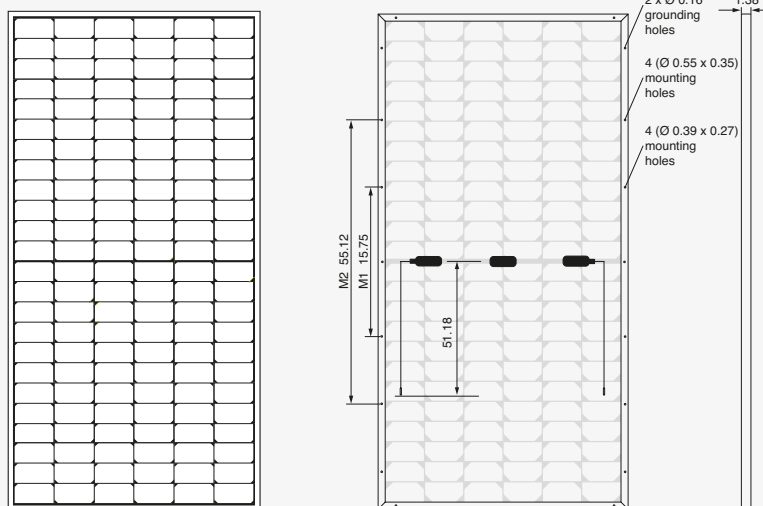


Fig. principle sketch

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	30.0 A

Permissible operating temperature -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 (Example for AC-555MH/144US)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	2.69 A	40.52 V
400 W/m ²	5.44 A	40.98 V
600 W/m ²	8.13 A	41.30 V
800 W/m ²	10.74 A	41.66 V
1000 W/m ²	13.19 A	42.10 V

Packaging

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

