


AXIworldblackbiperfect GXXL 430 - 450 Wp

High performance bifacial solar modul
108 halfcell, glass/glass, N-Type




German-American-Engineering


The advantages:


- 
30
Years

30 years Manufacturer's warranty and Performance guarantee
- 

Up to 30 % more power output by Bifacial-Technology
- 

More performance through innovative N-Type-Technology
- 

PID reduced through glass/glass-Technology
- 

Increased safety through improved fire protection
- 

Positive power sorting from 0-5 Wp

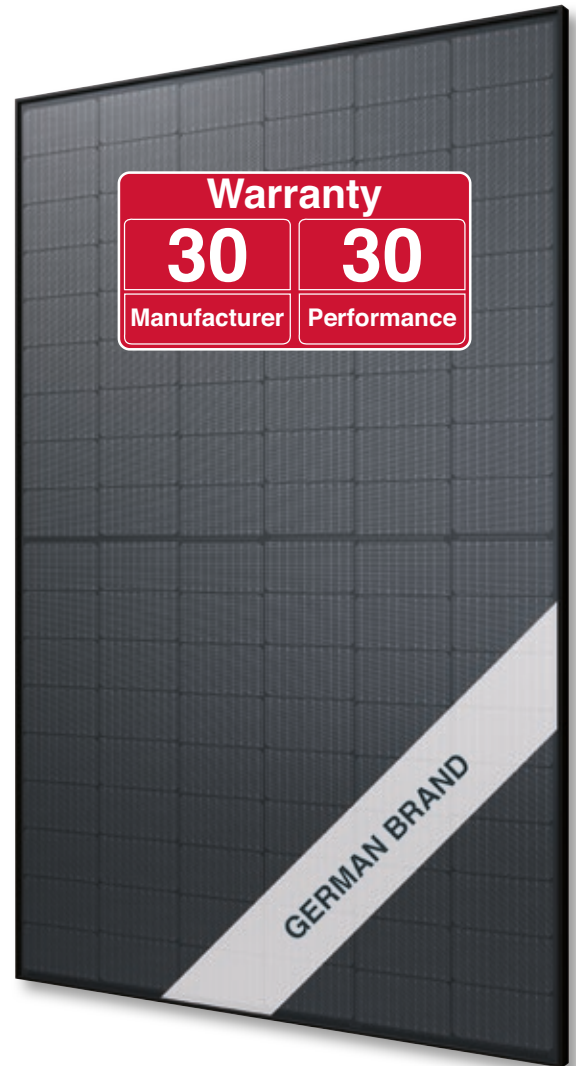
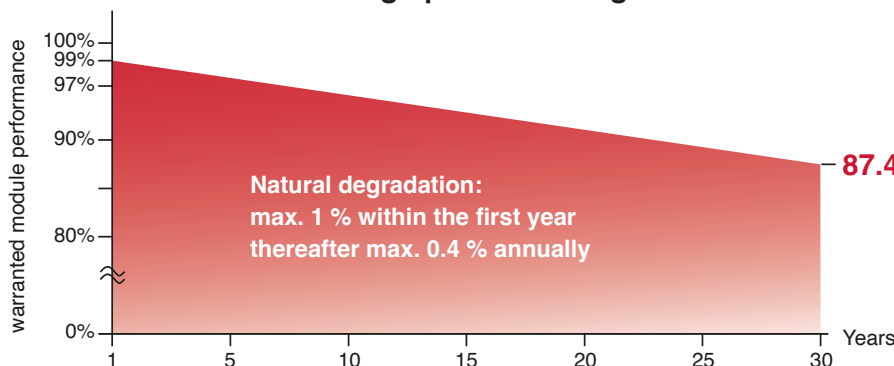


Fig. similar 108TGBUSA260302MGE0-165/1

Exclusive linear AXITEC high performance guarantee!



87.4 % AXITEC Warranty Added Value

 N-Type Module



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

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

Type	AC-430TGB/108BB	AC-435TGB/108BB	AC-440TGB/108BB	AC-445TGB/108BB	AC-450TGB/108BB
Nominal output	430 Wp	435 Wp	440 Wp	445 Wp	450 Wp
Nominal voltage U _{mpp}	33.06 V	33.28 V	33.50 V	33.72 V	33.92 V
Nominal current I _{mpp}	13.03 A	13.09 A	13.15 A	13.21 A	13.27 A
Short circuit current I _{sc}	14.16 A	14.22 A	14.28 A	14.34 A	14.40 A
Open circuit voltag U _{oc}	39.36 V	39.47 V	39.59 V	39.70 V	39.81 V
Module conversion efficiency	22.02 %	22.28 %	22.53 %	22.79 %	23.04 %

at BNPI test conditions: irradiance frontside 1000 W/m². backside 135 W/m². with spectrum AM 1.5 at a cell temperature of 25°C

Nominal output P _{mpp}	470 Wp	475 Wp	480 Wp	485 Wp	490 Wp
Short circuit current I _{sc}	15.58 A	15.64 A	15.71 A	15.77 A	15.84 A
Open circuit voltag U _{oc}	39.36 V	39.47 V	39.59 V	39.70 V	39.81 V

Bifacial coefficients: φ_{Uoc} 0.98±5%; φ_{Isc} 0.80±10%; φ_{Pmpp} 0.80±10%

Design

Frontside	2.0 mm semi temperd AR solar glass
Backside	2.0 mm glass, cell spaces black
Cells	108 N-Type bifacial high efficiency cells
Frame	1.18 inch (30 mm) black aluminium frame

Mechanical data

L x W x H	67.80 x 44.65 x 1.18 inch (1722 x 1134 x 30 mm)
Weight	54.23 lbs (24.6 kg) with frame

Mechanical load

Design load (pressure/suction) 75.3 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	47.24 inch, AWG 12
Plug-in system	Plug/socket IP68, Stäubli MC4-EVO 2A

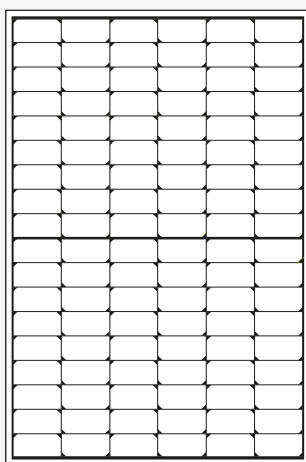
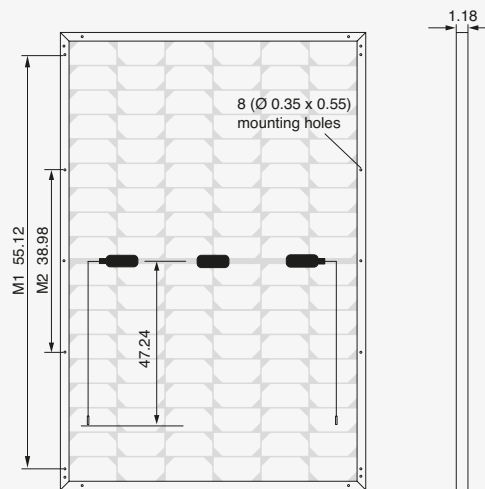


Fig. principle sketch



All dimensions in inch

Limit values

System voltage	1500 VDC (UL) 1500 VDC (IEC)
Module Fire Performance	TYPE 29 (UL 1703) or CLASS C (IEC 61730)
Protection class	II
NOCT (nominal operating cell temperature)*	45°C +/-2K
Reverse current feed IR	30.0 A

Permissible operating temp. -40°C to 85°C / -40F to 185F

(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}	-0.28 %/K
Current I _{sc}	0.046 %/K
Output P _{mpp}	-0.31 %/K

Low-light performance without Bifacial-effect

(Example for AC-450TGB/108BB)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	2.71 A	32.64 V
400 W/m ²	5.47 A	33.02 V
600 W/m ²	8.17 A	33.28 V
800 W/m ²	10.81 A	33.56 V
1000 W/m ²	13.27 A	33.92 V

Packaging

Module pieces per pallet	36
Module pieces per HC-container	936