

AXIworldblackbiperfect GXXL 430 - 450 Wp

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



German-American-Engineering

The advantages:



30 years Manufacturer's warranty
and Performance guarantee



Up to 30 % more power output by
Bifacial-Technology



More performance through innovative
N-Type TOPCon-Technology



PID reduced through glass/glass-Technology



Increased safety through improved
fire protection

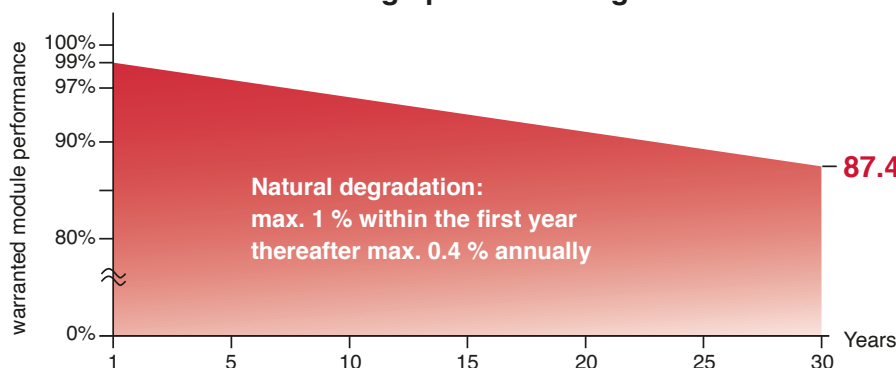


Positive power sorting from 0-5 Wp



Fig. similar 108TGBUS250519MUA-153/1

Exclusive linear AXITEC high performance guarantee!



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

87.4 % AXITEC Warranty Added Value

TOPCon N-Type Module

AXIworldblackbip perfect GXXL 430 - 450 Wp

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

Type	AC-440TGB/108BB	AC-445TGB/108BB	AC-450TGB/108BB		
Nominal output	440 Wp	445 Wp	450 Wp		
Nominal voltage U _{mpp}	32.50 V	33.45 V	33.66 V		
Nominal current I _{mpp}	13.55 A	13.31 A	13.38 A		
Short circuit current I _{sc}	14.29 A	14.09 A	14.16 A		
Open circuit voltage U _{oc}	38.49 V	40.04 V	40.24 V		
Module conversion efficiency	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}	485 Wp	491 Wp	496 Wp		
Short circuit current I _{sc}	15.46 A	15.54 A	15.61 A		
Open circuit voltage U _{oc}	39.84 V	40.04 V	40.24 V		

Bifacial coefficients: ϕU_{oc} 0.98±5%; ϕI_{sc} 0.80±10%; ϕP_{mpp} 0.80±10%

Design

Frontside	2.0 mm low-reflection white glass
Backside	2.0 mm glass, cell spaces black
Cells	108 N-Type TOPCon 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	52.47 lbs (23.8 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

Limit values

System voltage	1500 VDC (UL) 1500 VDC (IEC)
Module Fire Performance	TYPE 29 (UL 1703) or CLASS C (IEC 61730)
Protection class	C (UL790) / 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/m²	2.73 A	32.39 V
400 W/m²	5.52 A	32.77 V
600 W/m²	8.24 A	33.02 V
800 W/m²	10.90 A	33.31 V
1000 W/m²	13.38 A	33.66 V

Packaging

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

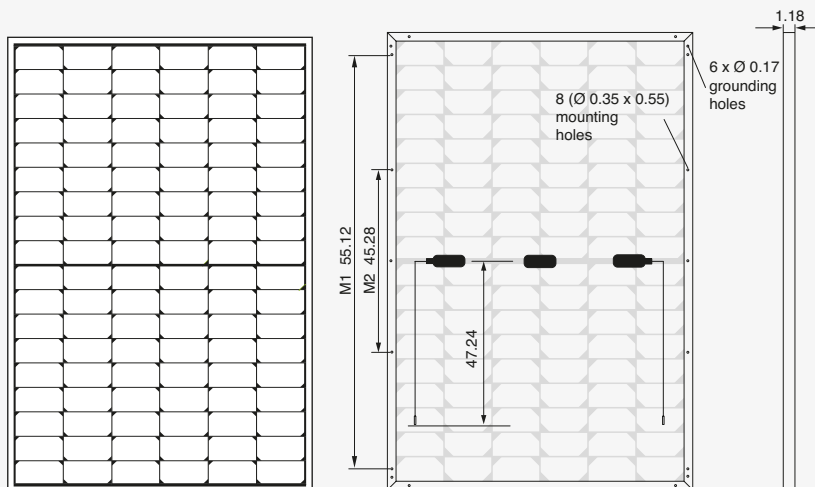


Fig. principle sketch

All dimensions in inch