

AXIworldblackbiperfect GXXL

445 - 460 Wp

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



German-American-Engineering

The advantages:







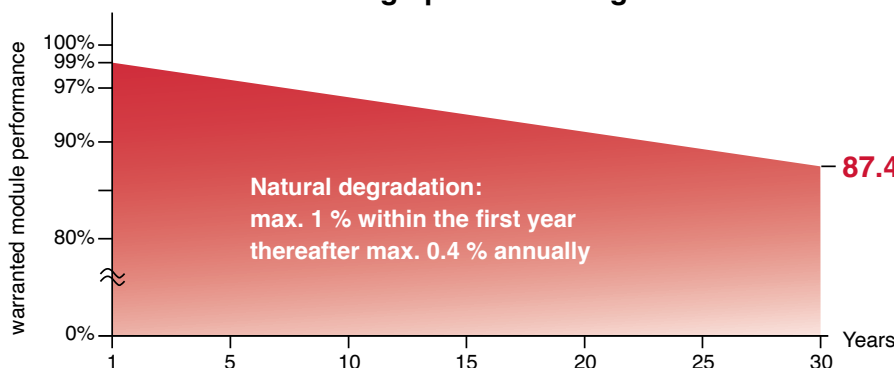
- 
30 Years
30 years Manufacturer's warranty and Performance guarantee
- 
+30%
Up to 30 % more power output by Bifacial-Technology
- 
TOP
More performance through innovative N-Type-Technology
- 
PID less
PID reduced through glass/glass-Technology
- 
Safe
Increased safety through improved fire protection
- 
Wp
Positive power sorting from 0-5 Wp




Fig. similar 108TGBUSA260302M/A-164/1

Exclusive linear AXITEC high performance guarantee!



87.4 % AXITEC Warranty Added Value

 N-Type Module



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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-445TGB/96BB	AC-450TGB/96BB	AC-455TGB/96BB	AC-460TGB/96BB
Nominal output	445 Wp	450 Wp	455 Wp	460 Wp
Nominal voltage U _{mpp}	26.69 V	29.93 V	30.16 V	32.25 V
Nominal current I _{mpp}	14.99 A	15.04 A	15.09 A	13.80 A
Short circuit current I _{sc}	15.86 A	15.90 A	15.94 A	14.53 A
Open circuit voltag U _{oc}	35.54 V	35.80 V	36.06 V	38.64 V
Module conversion efficiency	22.27 %	22.52 %	22.77 %	23.02 %

at BNPI test conditions 15% Rear Side Power Gain: 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}	511 Wp	517 Wp	523 Wp	529 Wp
Short circuit current I _{sc}	18.24 A	18.29 A	18.33 A	18.39 A
Open circuit voltag U _{oc}	35.54 V	35.80 V	36.06 V	36.30 V

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

Design

Frontside	2.0 mm low-reflection white glass
Backside	2.0 mm glass, cell spaces black
Cells	96 N-Type bifacial high efficiency cells
Frame	1.18 inch (30 mm) black aluminium frame

Mechanical data

L x W x H	1762 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 2

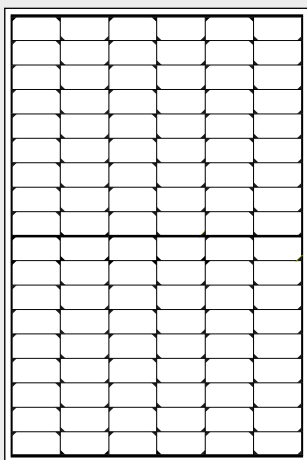
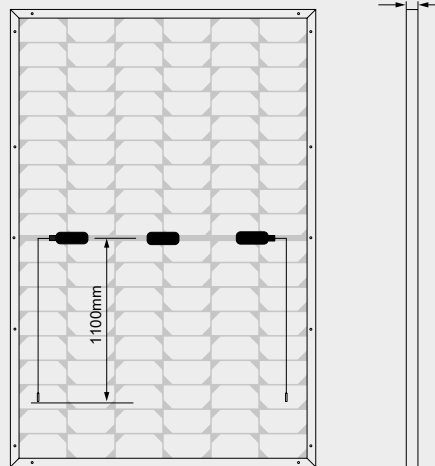


Fig. principle sketch



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}	-0.25 %/K
Current I _{sc}	0.045 %/K
Output P _{mpp}	-0.30 %/K

Low-light performance without Bifacial-effect (Example for AC-460TGB/96BB)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	3.1 A	29.0 V
400 W/m ²	6.2 A	29.5 V
600 W/m ²	9.3 A	29.8 V
800 W/m ²	12.2 A	30.2 V
1000 W/m ²	15.1 A	30.5 V

Packaging

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