

AXIworldblackbiperfect GXXL

445 - 460 Wp

High performance bifacial solar modul

96 halfcell, glass/glass, N-Type



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-Technology



PID reduced through glass/glass-Technology



Increased safety through improved fire protection

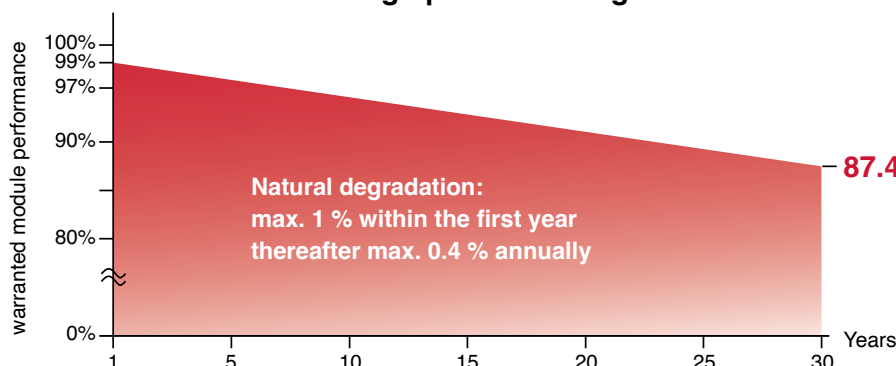


Positive power sorting from 0-5 Wp



Fig. similar 108TGBUSA260302MA-164/1

Exclusive linear AXITEC high performance guarantee!



AXIworldblackbip perfect GXXL 445 - 460 Wp

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 _{mp}	26.69 V	29.93 V	30.16 V	32.25 V	
Nominal current I _{mp}	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 voltage 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 _{mp}	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 voltage 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_{Pmp} 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

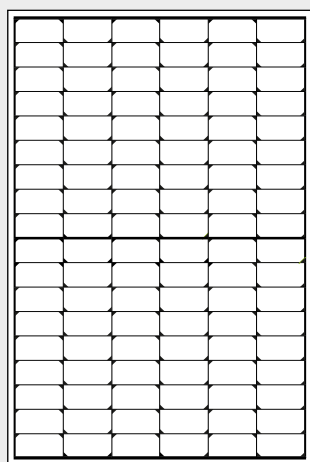
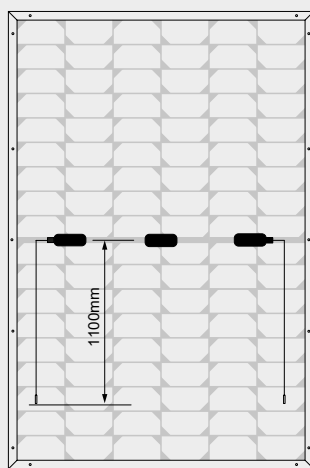


Fig. principle sketch



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 _{mp}	-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/m²	3.1 A	29.0 V
400 W/m²	6.2 A	29.5 V
600 W/m²	9.3 A	29.8 V
800 W/m²	12.2 A	30.2 V
1000 W/m²	15.1 A	30.5 V

Packaging

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