

AXIblackbiperfect GXXL 415 - 425 Wp

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

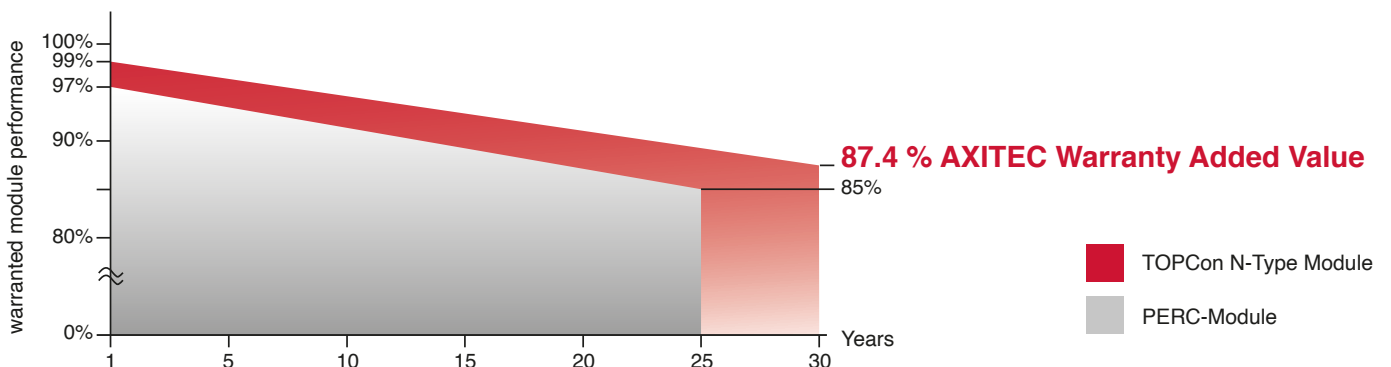
The advantages:

- 15** Years 15 years Manufacturer's warranty
- 30** Years 30 years Performance guarantee
- +30%** Up to 30 % more power output by Bifacial-Technology
- TOP** More performance through innovative TOP N-Type TOPCon-Technology
- PID less** PID reduced trough glass/glass-Technology
- Safe** Increased safety trough improved fire protection
- Wp** Guaranteed positive power tolerance from 0-5 Wp by individual measurement



Fig. similar 108TGBEN230303A

Exclusive linear AXITEC high performance guarantee!



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

Type	AC-415TGB/108BB	AC-420TGB/108BB	AC-425TGB/108BB
Nominal output	415 Wp	420 Wp	425 Wp
Nominal voltage U _{mpp}	31.80 V	32.00 V	32.20 V
Nominal current I _{mpp}	13.06 A	13.13 A	13.20 A
Short circuit current I _{sc}	13.96 A	14.04 A	14.11 A
Open circuit voltag U _{oc}	37.70 V	37.90 V	38.10 V
Module conversion efficiency	21.25 %	21.51 %	21.76 %

Bifacial output - Backside Power gain

10% Power output	456.50 Wp	462.00 Wp	467.50 Wp
Module Efficiency	23.38 %	23.66 %	23.94 %
20% Power output	498.00 Wp	504.00 Wp	510.00 Wp
Module Efficiency	25.50 %	25.81 %	26.12 %
30% Power output	539.50 Wp	539.00 Wp	552.50 Wp
Module Efficiency	27.63 %	27.96 %	28.29 %

Design

Frontside	1.6 mm hardened, low-reflection white glass
Backside	1.6 mm hardened, low-reflection white glass
Cells	108 N-Type TOPCon bifacial high efficiency cells
Film	Composite film, intercellular spaces black
Frame	30 mm black aluminium frame

Mechanical data

L x W x H	1722 x 1134 x 30 mm
Weight	22.0 kg with frame

Mechanical load

Design load (pressure/suction)	3600 Pa / 1600 Pa
Test load (pressure/suction)	5400 Pa / 2400 Pa

Power connection

Socket	Protection Class IP68
Wire	approx. 1.2 m, 4 mm ²
Plug-in system	Plug/socket IP68, Stäubli EVO2 /JM608

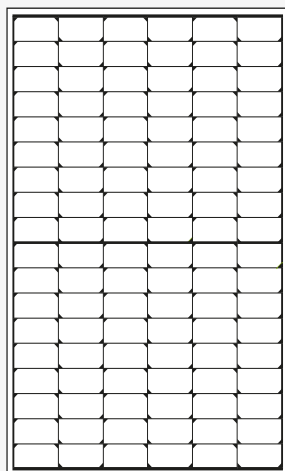
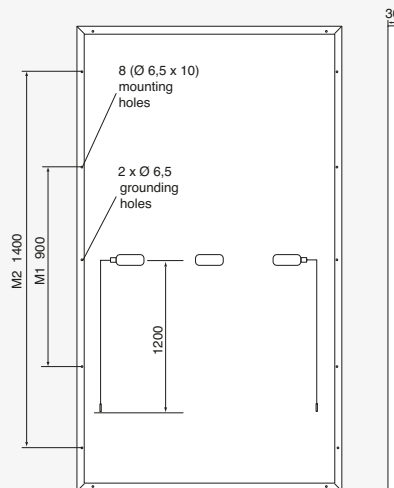


Fig. principle sketch



All dimensions in mm

Limit values

System voltage	1500 VDC
NOCT (nominal operating cell temperature)*	45°C +/-2K
Reverse current feed IR	25.0 A
Permissible operating temperature	-40°C to 85°C / -40F to 185F

Bifaciality	80 % ± 5 %
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(No external voltages greater than U_{oc} 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}	-0.26 %/K
Current I _{sc}	0.046 %/K
Output P _{mpp}	-0.31 %/K

Low-light performance without Bifacial-effect

(Example for 425TGB/108BB)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	2.70 A	30.99 V
400 W/m ²	5.44 A	31.35 V
600 W/m ²	8.18 A	31.59 V
800 W/m ²	10.75 A	31.86 V
1000 W/m ²	13.20 A	32.20 V

Packaging

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

