

## AXIworldblackbiperfect GXXL 430 - 450 Wp

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



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 TOPCon-Technology
- 

PID reduced through glass/glass-Technology
- 

Increased safety through improved fire protection
- 

Positive power sorting from 0-5 Wp

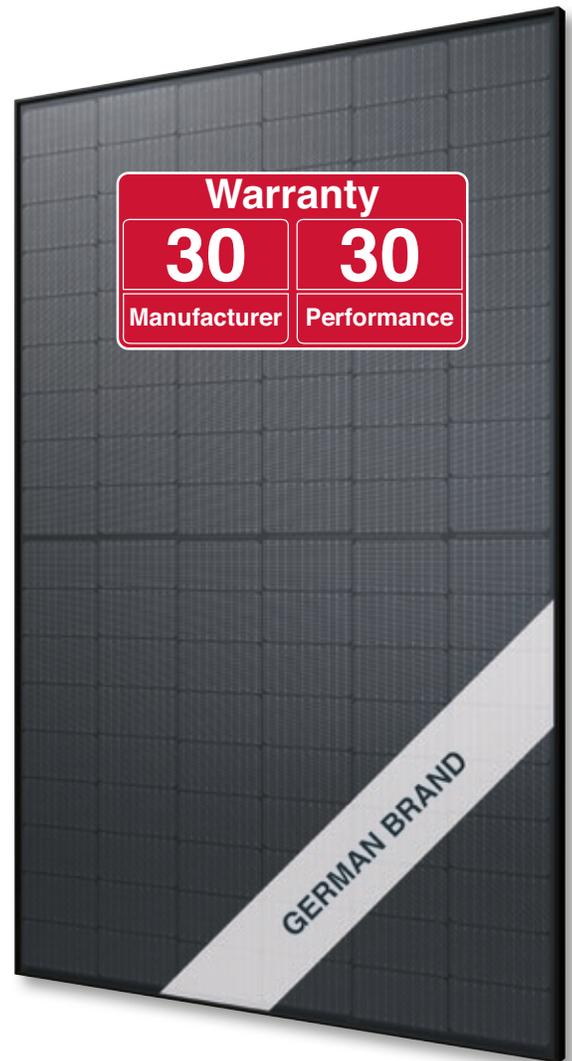
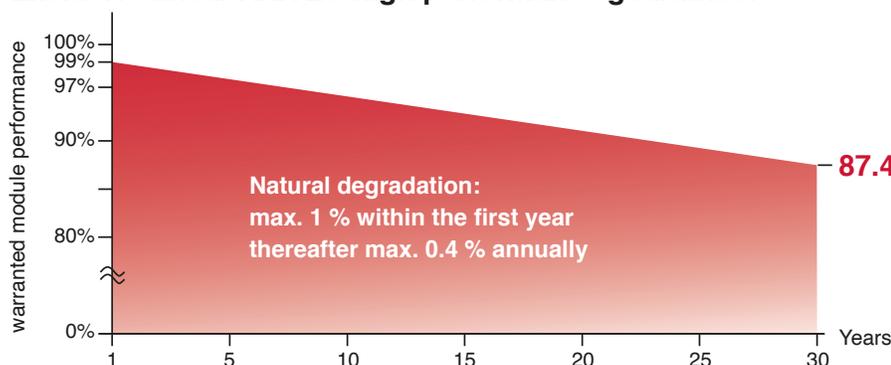


Fig. similar 108TGBUS250519M/AE-153/1

### Exclusive linear AXITEC high performance guarantee!



**87.4 % AXITEC Warranty Added Value**



**Intertek**  
5026791

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

 TOPCon N-Type Module

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**Electrical data** (at standard conditions (STC) irradiance 1000 W/m<sup>2</sup>, 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                        | <b>430 Wp</b>   | <b>435 Wp</b>   | <b>440 Wp</b>   | <b>445 Wp</b>   | <b>450 Wp</b>   |
| Nominal voltage U <sub>mpp</sub>      | 32.83 V         | 32.50 V         | 33.24 V         | 33.45 V         | 33.66 V         |
| Nominal current I <sub>mpp</sub>      | 13.10 A         | 13.55 A         | 13.24 A         | 13.31 A         | 13.38 A         |
| Short circuit current I <sub>sc</sub> | 13.88 A         | 14.29 A         | 14.02 A         | 14.09 A         | 14.16 A         |
| Open circuit voltag U <sub>oc</sub>   | 39.44 V         | 38.49 V         | 39.84 V         | 40.04 V         | 40.24 V         |
| Module conversion efficiency          | 22.02 %         | 22.28 %         | 22.53 %         | 22.79 %         | 23.04 %         |

at BNPI test conditions: irradiance frontside 1000 W/m<sup>2</sup>, backside 135 W/m<sup>2</sup>, with spectrum AM 1.5 at a cell temperature of 25°C

|                                       |         |         |         |         |         |
|---------------------------------------|---------|---------|---------|---------|---------|
| Nominal output P <sub>mpp</sub>       | 474 Wp  | 480 Wp  | 485 Wp  | 491 Wp  | 496 Wp  |
| Short circuit current I <sub>sc</sub> | 15.30 A | 15.38 A | 15.46 A | 15.54 A | 15.61 A |
| Open circuit voltag U <sub>oc</sub>   | 39.44 V | 39.64 V | 39.84 V | 40.04 V | 40.24 V |

Bifacial coefficients: φ<sub>Uoc</sub> 0.98±5%; φ<sub>Isc</sub> 0.80±10%; φ<sub>Pmpp</sub> 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   |

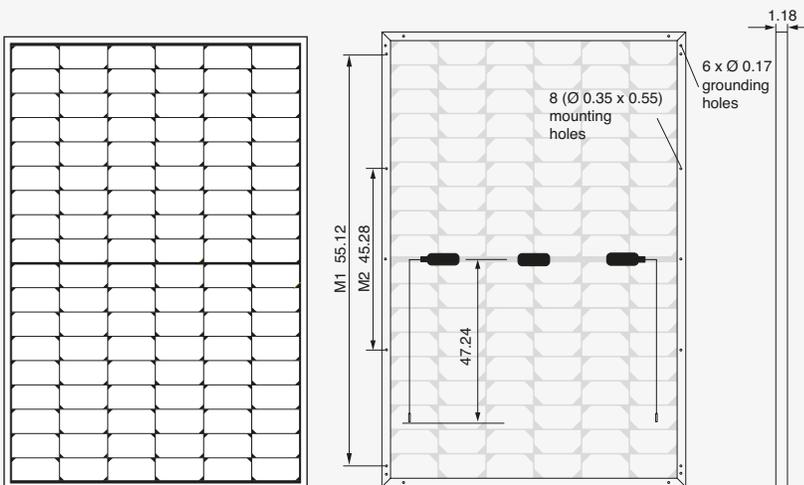


Fig. principle sketch

All dimensions in inch

### Limit values

|                         |   |
|-------------------------|---|
| System voltage          | 1500 VDC (UL) 1500 VDC (IEC)                |
| Module Fire Performance | TYPE 29 (UL 1703)<br>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<sub>o</sub> may be applied to the module)

\* NOCT, irradiance 800 W/m<sup>2</sup>; AM 1.5; wind speed 1 m/s; Temperature 20°C

### Temperature coefficients

|                         |           |
|-------------------------|-----------|
| Voltage U <sub>oc</sub> | -0.28 %/K |
| Current I <sub>sc</sub> | 0.046 %/K |
| Output P <sub>mpp</sub> | -0.31 %/K |

### Low-light performance without Bifacial-effect

(Example for AC-450TGB/108BB)

| I-U characteristic curve | Current I <sub>pp</sub> | Voltage U <sub>pp</sub> |
|--------------------------|-------------------------|-------------------------|
| 200 W/m <sup>2</sup>     | 2.73 A                  | 32.39 V                 |
| 400 W/m <sup>2</sup>     | 5.52 A                  | 32.77 V                 |
| 600 W/m <sup>2</sup>     | 8.24 A                  | 33.02 V                 |
| 800 W/m <sup>2</sup>     | 10.90 A                 | 33.31 V                 |
| 1000 W/m <sup>2</sup>    | 13.38 A                 | 33.66 V                 |

### Packaging

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