

## AXIworldbiperfect GXXL

### 580 - 590 Wp

High performance bifacial solar module  
144 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

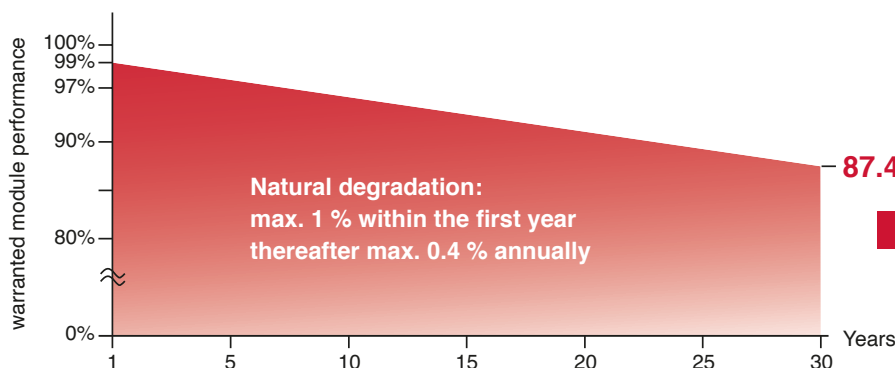


Positive power sorting from 0-5 Wp



Fig. similar 144TGBUSA250603M/A-164/1

#### Exclusive linear AXITEC high performance guarantee!



87.4 % AXITEC Warranty Added Value

TOPCon N-Type Module



## AXIworldbiperfect GXXL 580 - 590 Wp

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

Type	AC-580TGB/144TS	AC-585TGB/144TS	AC-590TGB/144TS		
Nominal output	<b>580 Wp</b>	<b>585 Wp</b>	<b>590 Wp</b>		
Nominal voltage U <sub>mpp</sub>	42.56 V	42.72 V	42.87 V		
Nominal current I <sub>mpp</sub>	13.63 A	13.70 A	13.77 A		
Short circuit current I <sub>sc</sub>	14.34 A	14.41 A	14.48 A		
Open circuit voltage U <sub>oc</sub>	51.43 V	51.58 V	51.70 V		
Module conversion efficiency	22.45 %	22.65 %	22.84 %		

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 <sub>mpp</sub>	643 Wp	649 Wp	654 Wp		
Short circuit current I <sub>sc</sub>	15.90 A	15.97 A	16.05 A		
Open circuit voltage U <sub>oc</sub>	51.45 V	51.60 V	51.72 V		

Bifacial coefficients:  $\phi U_{oc}$  0.98±5%;  $\phi I_{sc}$  0.80±10%;  $\phi P_{mpp}$  0.80±10%

### Design

Frontside	2.0 mm low-reflection white glass
Backside	2.0 mm glass, cell spaces transparent
Cells	144 N-Type TOPCon bifacial high efficiency cells
Frame	1.18 inch (30 mm) silver aluminium frame

### Mechanical data

L x W x H	89.69 x 44.65 x 1.18 inch (2278 x 1134 x 30 mm)
Weight	68.34 lbs (31.0 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	51.18 inch, AWG 12
Plug-in system	Plug/socket IP68, Stäubli MC4-EVO 2

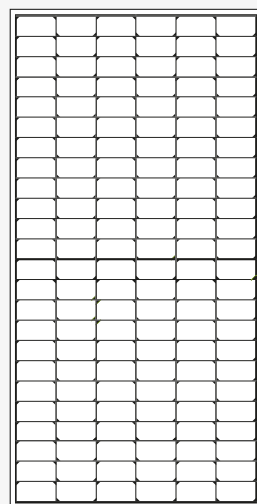
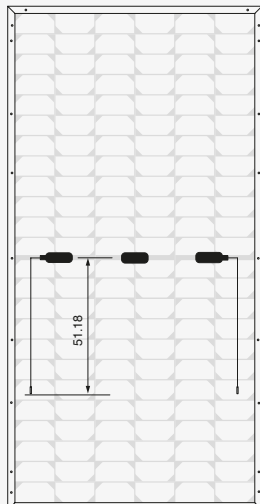


Fig. principle sketch



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<sub>o</sub> 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 <sub>oc</sub>	-0.25 %/K
Current I <sub>sc</sub>	0.046 %/K
Output P <sub>mpp</sub>	-0.30 %/K

### Low-light performance

without Bifacial-effect  
(Example for AC-590TGB/144TS)

I-U characteristic curve	Current I <sub>pp</sub>	Voltage U <sub>pp</sub>
200 W/m²	2.81 A	41.26 V
400 W/m²	5.68 A	41.73 V
600 W/m²	8.48 A	42.06 V
800 W/m²	11.21 A	42.42 V
1000 W/m²	13.77 A	42.87 V

### Packaging

Module pieces per pallet	36
Module pieces per HC-container	720

