



390 - 415 Wp

AXIbiprotect XXL HC BLK

High performance bifacial solar module
108 halfcell, glas/glas, monocrystalline

The advantages:








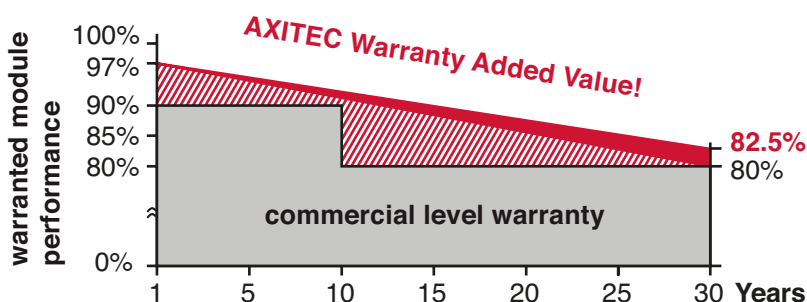
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15 years Manufacturer's warranty
- 
Up to 25 % more power output by Bifacial-Technology
- 
PID reduced through glas/glas-Technologie
- 
Guaranteed positive power tolerance from 0-5 Wp by individual measurement
- 
100% visual electroluminescence inspection in production
- 
Increased safety through improved fire protection
- 
High stability due to innovative frame design



Fig. similar 108MBEN220113A

Exclusive linear AXITEC high performance guarantee!

- 15 years manufacturer's guarantee on 90 % of the nominal performance
- 30 years manufacturer's guarantee on 82.5% of the nominal performance



AXIbiprotect XXL HC BLK 390 - 415 Wp



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

Type	AC-390MB/108V	AC-395MB/108V	AC-400MB/108V	AC-405MB/108V	AC-410MB/108V	AC-415MB/108V
Nominal output	390 Wp	395 Wp	400 Wp	405 Wp	410 Wp	410 Wp
Nominal voltage U _{mpp}	30.64 V	30.84 V	31.01 V	31.21 V	31.45 V	31.61 V
Nominal current I _{mpp}	12.73 A	12.81 A	12.90 A	12.98 A	13.04 A	13.13 A
Short circuit current I _{sc}	13.61 A	13.70 A	13.79 A	13.87 A	13.95 A	14.02 A
Open circuit voltag U _{oc}	36.85 V	36.98 V	37.07 V	37.23 V	37.32 V	37.45
Module conversion efficiency	19.97 %	20.23 %	20.49 %	20.75 %	21.00 %	21.25%

Bifacial output - Backside Power gain

10% Power output	429.00 Wp	434.50 Wp	440.00 Wp	445.50 Wp	451.00 Wp	456.50 Wp
Module Efficiency	21.97 %	22.25 %	22.53 %	22.81 %	23.10 %	23.38%
15% Power output	448.50 Wp	454.25 Wp	460.00 Wp	465.75 Wp	471.50 Wp	477.25 Wp
Module Efficiency	22.97 %	23.62 %	23.56 %	23.85 %	24.15 %	24.44 %
20% Power output	468.00 Wp	474.00 Wp	480.00 Wp	486.00 Wp	492.00 Wp	498.00 Wp
Module Efficiency	23.97 %	24.27 %	24.58 %	24.89 %	25.20 %	25.50 %
25% Power output	487.50 Wp	493.75 Wp	500.00 Wp	506.25 Wp	512.50 Wp	518.75 Wp
Module Efficiency	24.96 %	25.28 %	25.60 %	25.93 %	26.25 %	26.57 %

Design

Frontside	2.0 mm hardened, low-reflection white glass
Backside	2.0 mm hardened, low-reflection white glass
Cells	108 monocrystalline high efficiency cells
Film	Composite film (transparent)
Frame	30 mm black aluminium frame

Mechanical data

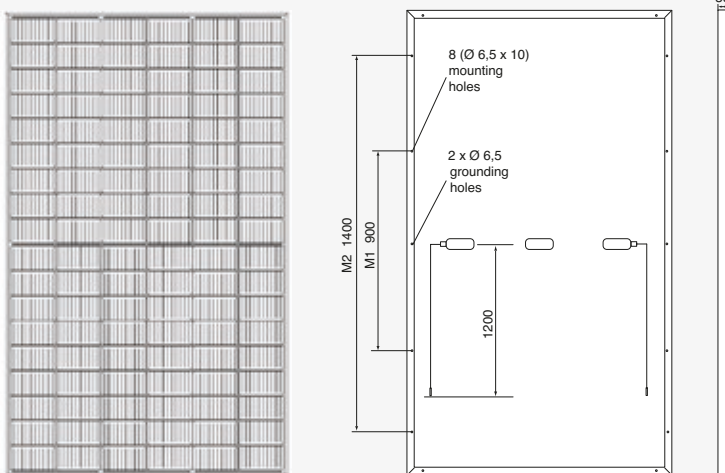
L x W x H	1722 x 1134 x 30 mm
Weight	26.0 kg with frame

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 / EVO2 pluggable



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	70 % ± 10 %
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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}	-0.29 %/K
Current I _{sc}	0.048 %/K
Output P _{mpp}	-0.35 %/K

Low-light performance without Bifacial-effect

(Example for AC-415MB/108V)

I-U characteristic curve	Current I _{pp}	Voltage U _{pp}
200 W/m ²	2.68 A	30.42 V
400 W/m ²	5.41 A	30.77 V
600 W/m ²	8.09 A	31.01 V
800 W/m ²	10.69 A	31.28 V
1000 W/m ²	13.13 A	31.61 V

Packaging

Module pieces per pallet	35
Module pieces per HC-container	910