



TOP CON N-TYPE M12

BAUER SOLARTECHNIK

SUPERBLACK

BS-132M12HBB-GG 610 - 620 W

BIFACIAL GLASS-GLASS HALF-CELL MODULE



GRADE "A" N-TYPE BIFACIAL HALF CELLS

Only Grade "A" half-cells are used in the production of all BAUER solar modules and only the blackest are selected. Up to 30% increase in yield through bifacial cells active on both sides and a glass backside.



LOW LIGHT PERFORMANCE

Stronger performance in low lighting conditions than PERC modules, such as overcast days, mornings and evenings helping to ensure a higher energy output than PERC every day.



STABILITY & DURABILITY

2 x 2 mm tempered anti-reflective solar glass; dirt-repellent, scratch-resistant, durable and shock-proof.



CERTIFICATION

Constant in-house quality controls - certified several times over by accredited inspection bodies.



FIRE CLASS A

Maximum fire protection through double glazing according to the highest security requirements.



WARRANTY & GUARANTEE

30 year product warranty and a linear performance guarantee over a period of 30 years.



GERMAN GUARANTOR

If necessary, it is guaranteed that a German company takes over any claim settlements.



REINSURANCE COVERAGE

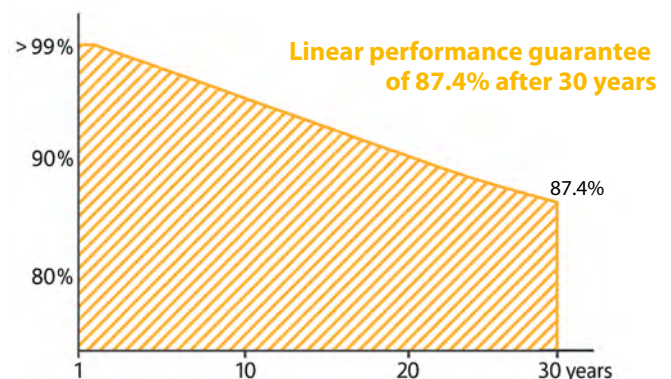
BAUER is re-insured with Munich RE for 15 years of the product warranty & 30 years of the performance guarantee.

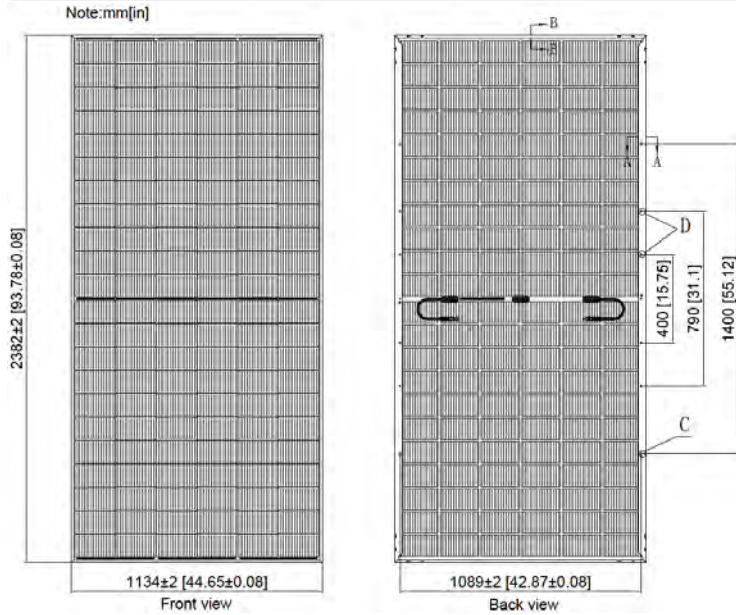


BAUER GUARANTEE +

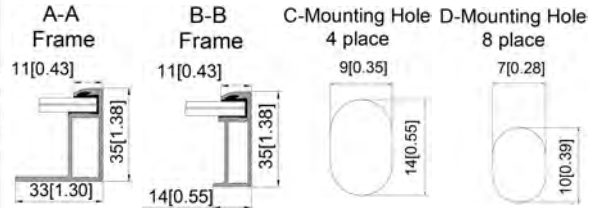
Our extended guarantee covers the module guarantee and a lump-sum compensation for the replacement of a defective module (Guarantee conditions as of 01.12.2023).

BAUER guarantees a minimum performance value of 87.4% after 30 years for the **SUPERBLACK** glass-glass solar modules.





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PHYSICAL SPECIFICATIONS

Module dimensions	2382 x 1134 x 35 mm
Weight	33.6 kg
Frame	Black anodized aluminum profile
Frontside	AR-coating semi-toughened glass, 2 mm
Embedding material	EVA
Backside	Black-glazed & semi-toughened glass, 2 mm
Solar cells	132 monocrystalline N-type bifacial half-cells
Bifaciality	80 % ± 10 %
Junction box(es)	IP68, 3 bypass diodes
Cable & connector	1x4 mm ² , 1300 mm, Stäubli MC4/EVO2A

WARRANTIES¹

- 30 year product warranty
- 30 year performance guarantee

OPERATING CONDITIONS

Operating temperature	-40 to 85°C
Static load	5400 Pa (snow/wind/ice)
Hail test	Ø 25 mm at ~ 23 m/s

CERTIFICATION

IEC 61215, 61730-1/2, 61701 (Salt mist), 62716 (Ammonia)
 CSA; Fire Class: A (USA); UL Type 29

PACKAGING

Modules per pallet	30
Pallets/modules per truck	20/600

ELECTRICAL CHARACTERISTICS²

		BS-610-132M12HBB-GG	BS-620-132M12HBB-GG
Maximum power	P _{max} (W)	610	620
Power output tolerance	P _{max} (%)	0 ~ +3	0 ~ +3
Open circuit voltage	V _{oc} (V)	48.30	48.70
Short circuit current	I _{sc} (A)	15.85	15.95
Voltage at maximum power	V _{mpp} (V)	40.83	41.23
Current at maximum power	I _{mpp} (A)	14.94	15.04
Module efficiency	η _m (%)	22.58	22.95
Bifaciality performance increase*	10 % P _{mpp} (W)	671 (+61)	682 (+62)
	20 % P _{mpp} (W)	732 (+122)	744 (+124)
	30 % P _{mpp} (W)	793 (+183)	806 (+186)
Nominal operating cell temperature	NOCT (°C)	45 +/- 2	
Temperature coefficient of Voc	Tk (Voc)	-0.26 %/°C	
Temperature coefficient of Isc	Tk (Isc)	+0.046 %/°C	
Temperature coefficient of Pmpp	Tk (Pmpp)	-0.30 %/°C	
Maximum system voltage DC (TÜV)	(V)	1500	
Maximum series fuse rating	(A)	30	

¹Nominal value is specified in the written warranty conditions. A possible light-induced degradation in performance is not taken into account.

²Values under Standard Test Conditions (STC): air pressure 1.5 AM, irradiance 1000 W/m², cell temperature 25°C. STC measuring tolerance: ±3 % (P_{max}), ±10 % (V_{mpp}, I_{mpp}, V_{OC}, I_{SC}). The beneficiary under the reinsurance policy is solely Bauer Solar Engineering GmbH. Please contact us to get information on how this insurance coverage benefits you as a customer.

Note: please read the installation manual before using this product. Subject to change.

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