

AEG

AEG PREMIUM SERIES

BACK CONTACT
TECHNOLOGY,
SUPERIOR EFFICIENCY

EFFICIENCY UP TO

23.1%

AS-M1089B-GA(M10)/ HV / N-TYPE BACK CONTACT GLASS-GLASS PHOTOVOLTAIC MODULE

TECHNICAL CHARACTERISTICS



Power range: 450-460 Wp
Double Glass bifacial Photovoltaic Module,
N-type back-contact technology
Efficiency upto 23.1%

PRODUCT NAME CODE (PNC)

AS-M1089B-GA(M10)-450/455/460/HV
(black rear glass, black frame)



EXTRA PEACE OF MIND



Extensive certifications and rigorous Quality Control
25 years product warranty
30 years performance warranty
*40 years of free exchange or refund service

ADVANTAGES



Superior efficiency (up to 23.1%)
thanks to Back Contact N-type back-contact technology
Sleek full black look, premium aesthetics
Higher sustainability thanks to silver-free metallization
Outstanding performance / low degradation over product
lifetime

AS-M1089B-GA(M10) / HV / N-TYPE BACK CONTACT GLASS-GLASS PHOTOVOLTAIC MODULE

PRODUCT SERIES & NAMECODE (PNC)	
AEG PREMIUM SERIES	
AS-M1089B-GA(M10)/HV-450/455/460/HV	
black frame, black rear glass	

ELECTRICAL CHARACTERISTICS AT STC ^{1,2}				
Nominal Power (Pmax)	[Wp]	450	455	460
Power Sorting ³	[W]	0-5	0-5	0-5
Maximum Power Voltage (Vmp)	[V]	33.8	33.9	34.0
Maximum Power Current (Imp)	[A]	13.32	13.43	13.54
Open Circuit Voltage (Voc)	[V]	40.81	40.93	41.06
Short Circuit Current (Isc)	[A]	14.05	14.15	14.25
Module Efficiency (ηm)	[%]	22.6	22.8	23.1
Maximum System Voltage	[V]	1500	1500	1500
Series Fuse Maximum Rating	[A]	25	25	25

ELECTRICAL CHARACTERISTICS AT NOCT				
Maximum Power (Pmax)	[W]	339	343	346
Maximum Power Voltage (Vmp)	[V]	31.92	32.01	32.11
Maximum Power Current (Imp)	[A]	10.63	10.72	10.80
Open Circuit Voltage (Voc)	[V]	38.54	38.65	38.78
Short Circuit Current (Isc)	[A]	11.36	11.44	11.52


MECHANICAL CHARACTERISTICS		
Solar cells	monocrystalline [pcs]	108
	Dimensions [mm]	M10 Half-cut BC [182 x 91]
Front glass	Coated semi-tempered glass	
	Thickness [mm] / [in]	2.0 / 0.08
Back glass	2.0 / 0.08	Black
Frame	Anodized aluminum alloy	Black
Junction box	Split-type, IP68	
	Bypass diodes	3
UV-resistant cables	Length [mm] / [in]	1200 / 47.24
	Section [mm ²]/[AWG]	4/12
Connectors	MC4 Original	
Dimensions	H x L x W [mm]	1757 x 1134 x 30
	H x L x W [in]	69.17 x 44.65 x 1.18
Weight	[kg] / [lbs]	24.5 / 54.00
Maximum load	Wind / Snow [Pa]	2400 / 5400
Fire Class	Class C	

PACKAGING		
Packing configuration	[pcs/pallet]	36
Loading capacity	[pcs/40 ft container]	936

NOTES
1-Standard Test Conditions (STC): Irradiance 1000 W/m ² , Air Mass AM = 1.5, Cell Temperature 25°C
2-Measurement tolerances (IEC 61215:2016): Pmax±3%, Voc±3%, Isc±3%
3-AEG photovoltaic modules are classified according to a principle of positive power tolerance: the Power Output measured at STC of the delivered modules exceeds their assigned Nameplate Nominal Power
4-NOCT: Nominal operating cell temperature, Irradiance 800 W/m ² , Wind Speed 1m/s; Ambient Temperature 20°C, Air Mass AM=1.5
5-Full text of the Warranty Terms available at: www.aeg-solar.com
6-(PRE/GG) No less than 99% of the minimum "Peak Power at STC" in the first year; power output decline no more than 0.35% per year thereafter, ending with at least 88.85%.
7+-Terms and conditions apply. For more information please check aeg-solar.com/exchangeservice
Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (±0.079 ") / Version 2023.08.V2.EN © Solar Solutions AG. Specifications in this datasheet are subject to change without notice.
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CERTIFICATIONS	
System	ISO 9001, ISO 14001, ISO 45001
Product	EN IEC / IEC 61215-1:2021, EN IEC / IEC 61215-2:2021, EN IEC / IEC 61215-1-1:2021, IEC 61730-1:2016, IEC 61730-2:2016, EN IEC 61730-1:2016, EN IEC 61730-2:2016

WARRANTIES		
Product warranty ⁵	[years]	25
Performance warranty (linear) ⁶	[years]	30
Exchange/refund service*	[years]	40



The graph illustrates the 30-year linear performance warranty. The y-axis represents 'Output module performance' from 84.0% to 100.0%. The x-axis represents 'Years' from 0 to 30. Two lines are shown: a red line for the 'MC Glass-glass module' and a black line for the 'PERC Glass-backsheet module'. Both lines start at 100% at year 0. The red line ends at 88.85% at year 30, and the black line ends at 88.85% at year 30. A shaded area between the lines indicates the warranty range.

TEMPERATURE CHARACTERISTICS		
NOCT	[°C]	45 (±2)
Pmax Temp. Coefficient (γ)	[%/°C]	-0.26
Voc Temp. Coefficient (β)	[%/°C]	-0.22
Isc Temp. Coefficient (α)	[%/°C]	0.05
Operating temperature	[°C]	-40~+85

