

AEG

AEG PREMIUM SERIES

BACK CONTACT
TECHNOLOGY,
SUPERIOR EFFICIENCY

EFFICIENCY UP TO
23.6%

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

TECHNICAL CHARACTERISTICS



Power range: 450-460 Wp
Single glass Photovoltaic Module,
N-type back-contact technology
Efficiency 23.6%

PRODUCT NAME CODE (PNC)

AS-M1089B-A(M10)-450/455/460/HV
(black frame, white module back side)



EXTRA PEACE OF MIND

30

Extensive certifications and rigorous Quality Control
15 years product warranty
30 years performance warranty

ADVANTAGES

+

Superior efficiency (up to 23.6%)
thanks to 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-A(M10) / HV / N-TYPE BACK CONTACT PHOTOVOLTAIC MODULE

PRODUCT SERIES & NAMECODE (PNC)

AEG PREMIUM SERIES	
AS-M1089B-A(M10)-450/455/460/HV	
black frame, white module back side	

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]	33.70	33.80	33.90
Maximum Power Current (Imp)	[A]	13.36	13.47	13.58
Open Circuit Voltage (Voc)	[V]	40.70	40.80	40.90
Short Circuit Current (Isc)	[A]	13.92	13.98	14.04
Module Efficiency (ηm)	[%]	23.0	23.3	23.6
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]	31.82	31.92	32.01
Maximum Power Current (Imp)	[A]	10.66	10.75	10.84
Open Circuit Voltage (Voc)	[V]	38.44	38.53	38.63
Short Circuit Current (Isc)	[A]	11.26	11.31	11.36

MECHANICAL CHARACTERISTICS

Solar cells	monocrystalline [pcs]	108
	Dimensions [mm]	M10 Half-cut BC [182 x 91]
Front glass	Tempered glass, AR coating	
	Thickness [mm] / [in]	3.2 / 1.25
Backsheet	White module back side	
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]	4
Connectors	MC4 EVO2	
Dimensions	H x L x W [mm]	1722 x 1134 x 30
	H x L x W [in]	67.80 x 44.65 x 1.18
Weight	[kg] / [lbs]	20.5 / 45.19
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

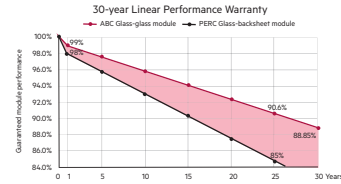
- Standard Test Conditions (STC): Irradiance 1000 W/m², Air Mass AM = 1.5, Cell Temperature 25°C
 - Measurement tolerances (IEC 61215:2016): Pmax±3%, Voc±3%, Isc±3%
 - AEG photovoltaic modules are classified according to a principle of positive power tolerance: the Power Output measured at STC of the delivered modules exceeds their assigned Nameplate Nominal Power
 - NOCT: Nominal operating cell temperature, Irradiance 800 W/m², Wind Speed 1m/s, Ambient Temperature 20°C, Air Mass AM=1.5
 - Full text of the Warranty Terms available at: www.aeg-solar.com.
 - (PRE/GB) 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%.
- Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (±0.079 ") / Version 2023.08.VZ.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	IEC 61730, IEC 61215

WARRANTIES

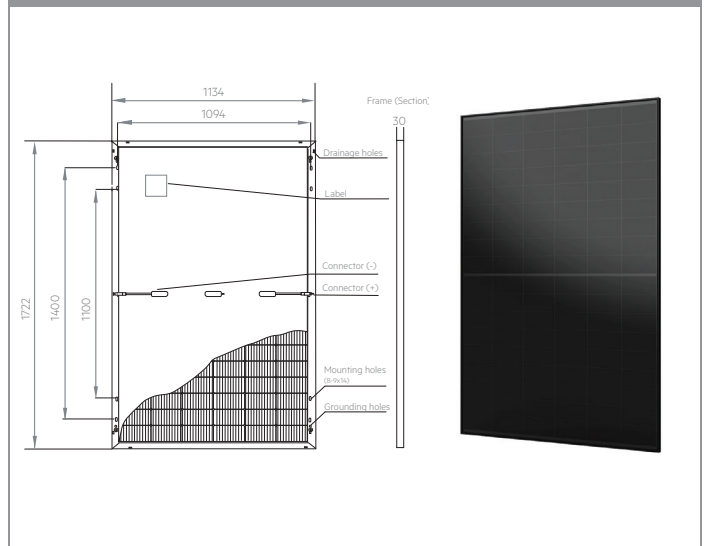
Product warranty ⁵	[years]	15
Performance warranty (linear) ⁶	[years]	30



TEMPERATURE CHARACTERISTICS

NOCT	[°C]	45 (±2)
Pmax Temp. Coefficient (γ)	[%/°C]	-0.29
Voc Temp. Coefficient (β)	[%/°C]	-0.24
Isc Temp. Coefficient (α)	[%/°C]	0.05
Operating temperature	[°C]	-40~+85

TECHNICAL DRAWINGS



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