

# 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  
\*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 <sup>1,2</sup> |      |       |       |       |
|--|------|-------|-------|-------|
| Nominal Power (Pmax)                             | [Wp] | 450   | 455   | 460   |
| Power Sorting <sup>3</sup>                       | [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 <sup>2</sup> ]/[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 <sup>2</sup> , 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 <sup>2</sup> , Wind Speed 1m/s; Ambient Temperature 20°C, Air Mass AM=1.5   |
| 5-Full text of the Warranty Terms available at: <a href="http://www.aeg-solar.com">www.aeg-solar.com</a>   |
| 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 <a href="http://aeg-solar.com/exchangeservice">aeg-solar.com/exchangeservice</a>  |
| 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 <sup>5</sup>              | [years] | 25 |
| Performance warranty (linear) <sup>6</sup> | [years] | 30 |
| Exchange/refund service*                   | [years] | 40 |

30-year Linear Performance Warranty

IC Glass-glass module (red line), PERC Glass-backsheet module (blue line)

At 30 years, IC Glass-glass module is at 88.85% and PERC Glass-backsheet module is at 88.85%.

| 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 |

