



AEG HIGH EFFICIENCY SERIES

AS-M1083-MH(M10) /HV / HALF-CUT CELL TOPCON PHOTOVOLTAIC MODULE

CHARACTERISTICS



Power range: 425-435 Wp
Half-Cut cell technology, bifacial n-type cells
Suitable for: residential / commercial installations

PRODUCT NAME CODE (PNC)



AS-M1083-MH(M10)-425/430/435/HV (silver frame)
AS-M1083Z-MH(M10)-425/430/435/HV (black frame)

EXTRA PEACE OF MIND

25

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

ADVANTAGES



Optimized design for more energy output
Maximum power/efficiency thanks to bifacial n-type cells
Extra long cables for greater installation flexibility

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PRODUCT SERIES & NAMECODE (PNC)

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|--|--|
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ELECTRICAL CHARACTERISTICS AT STC^{1,2}

| | | | | |
|-----------------------------|------|-------|-------|-------|
| Nominal Power (Pmax) | [Wp] | 425 | 430 | 435 |
| Power Sorting ³ | [W] | 0-5 | 0-5 | 0-5 |
| Maximum Power Voltage (Vmp) | [V] | 32.74 | 32.87 | 32.99 |
| Maximum Power Current (Imp) | [A] | 12.98 | 13.08 | 13.18 |
| Open Circuit Voltage (Voc) | [V] | 38.96 | 39.11 | 39.26 |
| Short Circuit Current (Isc) | [A] | 13.72 | 13.85 | 13.97 |
| Module Efficiency (ηm) | [%] | 21.8 | 22.0 | 22.3 |
| Maximum System Voltage | [V] | 1500 | 1500 | 1500 |
| Series Fuse Maximum Rating | [A] | 25 | 25 | 25 |

ELECTRICAL CHARACTERISTICS AT NMOT⁴

| | | | | |
|-----------------------------|-----|-------|-------|-------|
| Maximum Power (Pmax) | [W] | 319.6 | 323.4 | 327.1 |
| Maximum Power Voltage (Vmp) | [V] | 30.82 | 30.94 | 31.06 |
| Maximum Power Current (Imp) | [A] | 10.37 | 10.45 | 10.53 |
| Open Circuit Voltage (Voc) | [V] | 37.01 | 37.15 | 37.29 |
| Short Circuit Current (Isc) | [A] | 11.08 | 11.18 | 11.28 |

MECHANICAL CHARACTERISTICS

| | | |
|---------------------|----------------------------|-------------------------|
| Solar cells | monocrystalline [pcs] | 108 |
| | Dimensions [mm] | M10 Half-cut [182 x 91] |
| Front glass | high-transparency | |
| | Thickness [mm] / [in] | 1.6 / 0.06 |
| Back glass | White | 1.6 / 0.06 |
| Encapsulant | EVA | |
| Frame | Anodized aluminum alloy | Silver or black |
| Junction box | Split type, IP68 | |
| | Bypass diodes | 3 |
| UV-resistant cables | Length [mm] / [in] | 1200 / 47.24 |
| | Section [mm ²] | 4 |
| Connectors | MC4 original | |
| 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] | 20.8 / 45.84 |
| Maximum load | Wind / Snow [Pa] | 2400 / 5400 |
| Fire Class | Class A | |

PACKAGING

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

NOTES

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|---|
| 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±5% |
| 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-NMOT: Nominal operating temperature of module, Irradiance 800 W/m ² , Wind Speed 1m/s; Ambient Temperature 20°C, Air Mass AM=1.5 |
| 5-EXTENDED / Full text of the Warranty Terms available at: https://www.solarsolutions.ag/warranty/aeg/ . The Extended Warranty is a separate offer. If not offered by your distributor, the standard warranty conditions apply. |
| 6-(HE/GG) No less than 99% of the minimum "Peak Power at STC" in the first year; power output decline no more than 0.4% per year thereafter, ending with 87.40%. |
| Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (±0.079 ") / Version 2023.06.V1.EN © Solar Solutions Group. Specifications in this datasheet are subject to change without notice. |
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CERTIFICATIONS

| | | |
|---------|--|--|
| System | ISO 9001, ISO 14001, ISO 45001 | |
| Product | IEC61215-1:2016, IEC61215-2:2016, IEC61730-1:2016, IEC61730-2:2016, EN61215-1:2016, EN61215-2:2016, EN61730-1:2018, EN61730-2:2018 | |

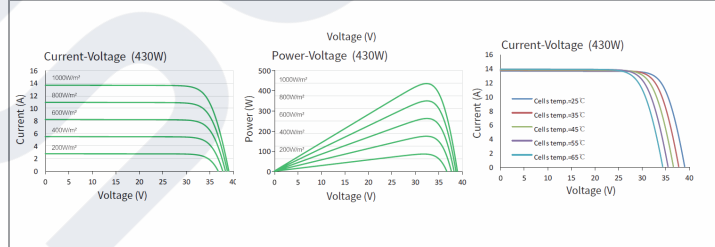
WARRANTIES

| | | |
|--|---------|----|
| Product warranty ⁵ | [years] | 25 |
| Performance warranty (linear) ⁶ | [years] | 30 |

TEMPERATURE CHARACTERISTICS

| | | |
|----------------------------|--------|---------|
| NMOT | [°C] | 41 (±2) |
| Pmax Temp. Coefficient (γ) | [%/°C] | -0.29 |
| Voc Temp. Coefficient (β) | [%/°C] | -0.25 |
| Isc Temp. Coefficient (α) | [%/°C] | 0.043 |
| Operating temperature | [°C] | -40~+85 |

I/V CURVES - IRRADIANCES



TECHNICAL DRAWINGS

