

AEG

AEG PREMIUM SERIES



AS-M3057U-S(G12) / ULTRA BLACK SHINGLED PHOTOVOLTAIC MODULE

Characteristics



Power range: 410-420 Wp
Shingled-cell technology
Suitable for: residential / commercial installations

Product Name Code (PNC)



AS-M3057U-S(G12)-410/415/420/HV
(black backsheets, black frame)

Extra peace of mind



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

Advantages



More converting surface, more energy outputs
Outstanding sleek optics (Ultra Black)
Extra long cables for greater installation flexibility

AS-M3057U-S(G12) / ULTRA BLACK SHINGLED PHOTOVOLTAIC MODULE

| PRODUCT SERIES & NAMECODE (PNC) | | | |
|---------------------------------|--|--|--|
| AEG PREMIUM SERIES | | | |
| AS-3057U-S(G12)-410/415/420/HV | | | |
| Black frame, Black backsheet | | | |

| ELECTRICAL CHARACTERISTICS AT STC ^{1,2} | | | | |
|--|------|-------|-------|-------|
| Nominal Power (Pmax) | [Wp] | 410 | 415 | 420 |
| Power Sorting ³ | [W] | 0-5 | 0-5 | 0-5 |
| Maximum Power Voltage (Vmp) | [V] | 34.4 | 34.4 | 34.5 |
| Maximum Power Current (Imp) | [A] | 11.97 | 12.08 | 12.19 |
| Open Circuit Voltage (Voc) | [V] | 41.4 | 41.5 | 41.6 |
| Short Circuit Current (Isc) | [A] | 12.65 | 12.80 | 12.92 |
| Module Efficiency (ηm) | [%] | 20.6 | 20.9 | 21.1 |
| Maximum System Voltage | [V] | 1500 | 1500 | 1500 |
| Series Fuse Maximum Rating | [A] | 25 | 25 | 25 |

| ELECTRICAL CHARACTERISTICS AT NMOT ⁴ | | | | |
|---|-----|-------|-------|-------|
| Maximum Power (Pmax) | [W] | 309 | 312 | 316 |
| Maximum Power Voltage (Vmp) | [V] | 32.8 | 32.8 | 32.9 |
| Maximum Power Current (Imp) | [A] | 9.41 | 9.53 | 9.62 |
| Open Circuit Voltage (Voc) | [V] | 39.5 | 39.6 | 39.7 |
| Short Circuit Current (Isc) | [A] | 10.19 | 10.31 | 10.41 |

| MECHANICAL CHARACTERISTICS | | |
|----------------------------|----------------------------|-----------------------------|
| Solar cells | monocrystalline [pcs] | 305 |
| | Dimensions [mm] | shingles based on G12 cells |
| Front glass | high-transparency | |
| | Thickness [mm] / [in] | 3.2 / 0.126 |
| Backsheet | Black | |
| Encapsulant | EVA | |
| Frame | Anodized aluminum alloy | Black |
| Junction box | Split-type, IP68 | |
| | Bypass diodes | 2 |
| UV-resistant cables | Length [mm] / [in] | 1300 / 51.18 |
| | Section [mm ²] | 4 |
| Connectors | MC4-compatible | |
| Dimensions | H x L x W [mm] | 1812 x 1096 x 30 |
| | H x L x W [in] | 71.34 x 43.15 x 1.18 |
| Weight | [kg] / [lbs] | 20.8±0.3 / 45.84±0.66 |
| Maximum load | Wind / Snow [Pa] | 2400 / 5400 |
| Fire Class | Class C | |

| PACKAGING | | |
|-----------------------|-----------------------|----------------------------------|
| Packing configuration | [pcs/pallet] | 36 (24 pallets) + 30 (2 pallets) |
| Loading capacity | [pcs/40 ft container] | 924 |

| 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-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-Full text of the Warranty Terms available at: www.aeg-industrialsolar.de . If not offered by your distributor, the standard warranty conditions apply. | |
| 6-(PRE/GB) No less than 98% of the minimum "Peak Power at STC" in the first year; power output decline no more than 0.55% per year thereafter, ending with 84.8%. | |
| Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (±0.079 ") / Version 2022.08.01EN © 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 | IEC / EN 61215-1:2016/IEC / EN 61215-1:2016/IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018; IEC 61730-1:2016 / EN IEC 61730-1:2016 + AC:2018; IEC 61730-2:2016 / EN IEC 61730-2:2016 + AC:2018 |

| WARRANTIES | | |
|--|---------|----|
| Product warranty ⁵ | [years] | 15 |
| Performance warranty (linear) ⁶ | [years] | 25 |

| TEMPERATURE CHARACTERISTICS | | |
|-----------------------------|--------|-----------|
| NMOT | [°C] | 42.3 (±2) |
| Pmax Temp. Coefficient (γ) | [%/°C] | -0.34 |
| Voc Temp. Coefficient (β) | [%/°C] | -0.27 |
| Isc Temp. Coefficient (α) | [%/°C] | 0.04 |
| Operating temperature | [°C] | -40~+85 |

