



# PHOTOVOLTAIC MODULE AS-M1442 (M10 CELLS)



## 535- 550 Wp 144 MONOCRYSTALLINE HALF-CUT CELLS

AEG solar modules combine the most advanced technology with high reliability in manufacture to offer you a product meant for high achievements.



## OPTIMIZED DESIGN MAXIMUM EFFICIENCY

AEG solar modules with half-cut cells (M10) and multibusbar technology are designed to maximize efficiency and plant performance. The extra-long cables allow more installation flexibility and comfort.



## EXTENSIVE WARRANTIES, EXTRA PEACE OF MIND

Thanks to their outstanding manufacturing quality, AEG High Efficiency modules (glass-backsheet) are covered by 25 years warranty on the product and 25 years warranty on performance.

## COMPREHENSIVELY CERTIFIED

AEG solar modules and production facilities are compliant with the the latest standards to guarantee safety and reliability. Production facilities are certified according to ISO 9001, ISO 14001 and OHSAS 18001. AEG solar products are certified among others by:



[www.aeg-industrialsolar.de](http://www.aeg-industrialsolar.de)

## HIGH EFFICIENCY SERIES



## PRODUCT NAMECODE (PNC)

AS-M1442-H(M10)-445/450/455, silver frame  
AS-M1442Z-H(M10)-445/450/455, black frame

(optionally available also as 1500 VDC with PNC:  
AS-M1442-H(M10)/HV and AS-M1442Z-H(M10)/HV)

| PRODUCT SERIES & NAMECODE (PNC)                 |  |  |  |
|-------------------------------------------------|--|--|--|
| AEG HIGH EFFICIENCY SERIES                      |  |  |  |
| AS-M1442-H(M10)-535/540/545/550 (silver frame)* |  |  |  |
| AS-M1442Z-H(M10)-535/540/545/550 (black frame)* |  |  |  |

\*As 1500 VDC variant: AS-M1442-H(M10)-xxx/HV (silver frame) and AS-M1442Z-H(M10)-xxx/HV (black frame), xxx=535/540/545/550

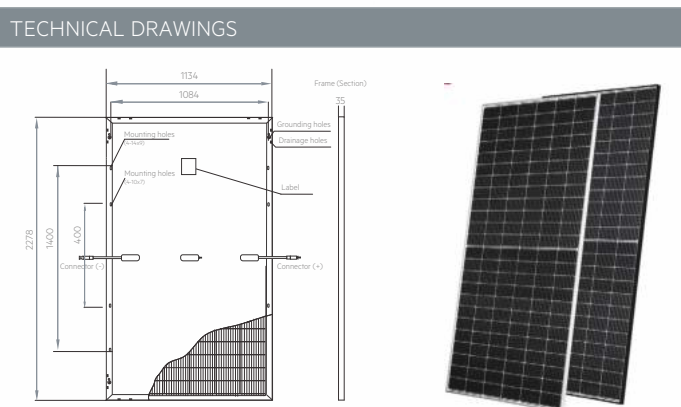
| ELECTRICAL CHARACTERISTICS AT STC <sup>1,2</sup> |      |       |       |       |       |
|--------------------------------------------------|------|-------|-------|-------|-------|
| Nominal Power (Pmax)                             | [Wp] | 535   | 540   | 545   | 550   |
| Power Sorting <sup>3</sup>                       | [Wp] | -0/+5 | -0/+5 | -0/+5 | -0/+5 |
| Maximum Power Voltage (Vmp)                      | [V]  | 40.53 | 40.69 | 40.85 | 41.01 |
| Maximum Power Current (Imp)                      | [A]  | 13.21 | 13.28 | 13.35 | 13.42 |
| Open Circuit Voltage (Voc)                       | [V]  | 49.65 | 49.77 | 49.89 | 50.01 |
| Short Circuit Current (Isc)                      | [A]  | 13.61 | 13.68 | 13.75 | 13.82 |
| Module Efficiency (ηm)                           | [%]  | 20.71 | 20.9  | 21.10 | 21.29 |
| Maximum System Voltage**                         | [V]  | 1000  | 1000  | 1000  | 1000  |
| Series Fuse Maximum Rating                       | [A]  | 25    | 25    | 25    | 25    |

\*\*Also optionally available for 1500 VDC Maximum System Voltage

| MECHANICAL CHARACTERISTICS |                            |                         |
|----------------------------|----------------------------|-------------------------|
| Solar cells                | monocrystalline [pcs]      | 144                     |
|                            | Dimensions [mm]            | M10 Half-cut [182 x 91] |
| Front glass                | high-transparency          | Transparent             |
|                            | Thickness [mm] / [in]      | 3.2 / 0.126             |
| Backsheet                  | White                      |                         |
| Encapsulant                | EVA                        | Transparent             |
| Frame                      | Anodized aluminum alloy    | Silver or black         |
| Junction box               | Split-type                 |                         |
|                            | Bypass diodes              | 3                       |
| UV-resistant cables        | Length [mm] / [in]         | 1400 / 55.12            |
|                            | Section [mm <sup>2</sup> ] | 4                       |
| Connectors                 | MC4                        | compatible              |
| Dimensions                 | H x L x W [mm]             | 2278 x 1134 x 35        |
|                            | H x L x W [in]             | 89.68 x 44.65 x 1.38    |
| Weight                     | [kg] / [lbs]               | 29 / 63.916             |
| Maximum load               | Wind / Snow [Pa]           | 2400 / 5400             |

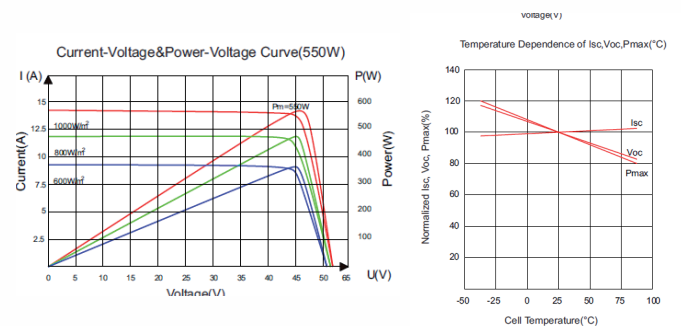
| PACKAGING             |                       |     |
|-----------------------|-----------------------|-----|
| Packing configuration | [pcs/pallet]          | 31  |
| Loading capacity      | [pcs/40 ft container] | 620 |

| CERTIFICATIONS |                                                                                                                                                                            |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System         | ISO 9001, ISO 14001, OHSAS 18001                                                                                                                                           |
| Product        | IEC 61215-1:2016, IEC 61215-1-1:2016, IEC 61215-2:2016, IEC 61730-1/-2:2016, EN 61215-1:2016, EN 61215-1-1:2016, EN IEC 61730-1/-2:2018, EN IEC 61730-1/-2:2018/AC:2018-06 |



| TEMPERATURE CHARACTERISTICS |        |         |
|-----------------------------|--------|---------|
| Pmax Temp. Coefficient (γ)  | [%/°C] | -0.33   |
| Voc Temp. Coefficient (β)   | [%/°C] | -0.246  |
| Isc Temp. Coefficient (α)   | [%/°C] | 0.0448  |
| Operating temperature       | [°C]   | -40~+85 |

## I/V CURVES - IRRADIANCES



| WARRANTIES                                 |         |    |
|--------------------------------------------|---------|----|
| Product warranty                           | [years] | 25 |
| Performance warranty (linear) <sup>4</sup> | [years] | 25 |

## CONTACT US

|                                                                                                                                                                                                                                                                                        |                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|
| 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±4% |
| 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-(HE/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. Full text of the Warranty Terms available at: <a href="http://www.solarsolutions.ag/aeg/warranty">www.solarsolutions.ag/aeg/warranty</a> |                         |
| 5-Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (±0.079") Version 202110V0.EN                                                                                                                                                                           |                         |
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