

AEG

PHOTOVOLTAIC MODULE AS-M4147-BS (G12)/SHINGLED



645 - 655 Wp
**414 MONOCRYSTALLINE BIFACIAL
SHINGLED CELLS**

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



**SHINGLE TECHNOLOGY
FOR MAXIMUM EFFICIENCY**

The shingle technology used in AEG solar modules covers larger portions of the module with cells, eliminating the need for interconnecting ribbons and reducing resistive losses. This in turns maximizes power output and module efficiency



**EXTENSIVE WARRANTIES,
EXTRA PEACE OF MIND**

Thanks to their outstanding manufacturing quality, AEG High Efficiency modules are covered by 15 years warranty on the product and 30 years warranty on performance. For extra peace of mind, product warranty can optionally be extended to 30 years.

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 ISO 45001. AEG solar products are certified among others by:



www.aeg-industrialsolar.de

PREMIUM SERIES



PRODUCT NAMECODE (PNC)

AS-M4147-BS(G12)-645/650/655/HV (silver frame)
AS-M4147Z-BS(G12)-645/650/655/HV (black frame)

PRODUCT SERIES & NAMECODE (PNC)			
AEG PREMIUM SERIES			
AS-M4147-BS(G12)-645/650/655/HV, silver frame			
AS-M4147Z-BS(G12)-645/650/655/HV, black frame			

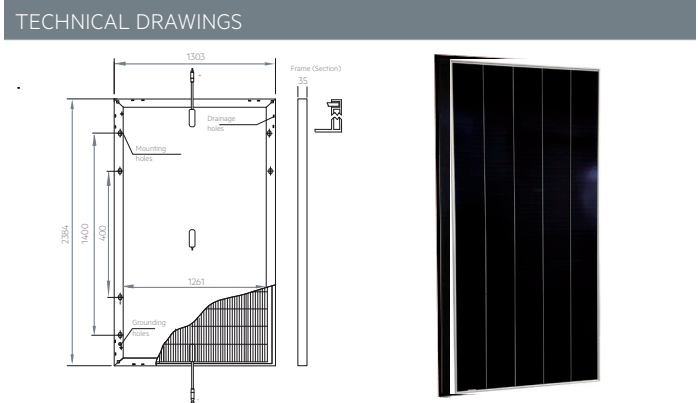
ELECTRICAL CHARACTERISTICS AT STC ^{1,2}				
Power rating (Front)		645	650	655
Power Sorting ³	[Wp]	645	650	655
Maximum Power Voltage (Vmp)	[V]	38.7	38.8	38.8
Maximum Power Current (Imp)	[A]	16.68	16.77	16.86
Open Circuit Voltage (Voc)	[V]	46.6	46.7	46.8
Short Circuit Current (Isc)	[A]	17.74	17.84	17.94
Module Efficiency (ηm)	[%]	20.8	20.9	21.1
Maximum System Voltage	[V]	1500	1500	1500
Series Fuse Maximum Rating	[A]	30	30	30

ELECTRICAL VALUES AT NMOT				
Maximum Power (Pmax)	[W]	486	489	493
Maximum Power Voltage (Vmp)	[V]	36.9	37	37
Maximum Power Current (Imp)	[A]	13.17	13.25	13.32
Open Circuit Voltage (Voc)	[V]	44.3	44.4	44.5
Short Circuit Current (Isc)	[A]	14.29	14.37	14.45

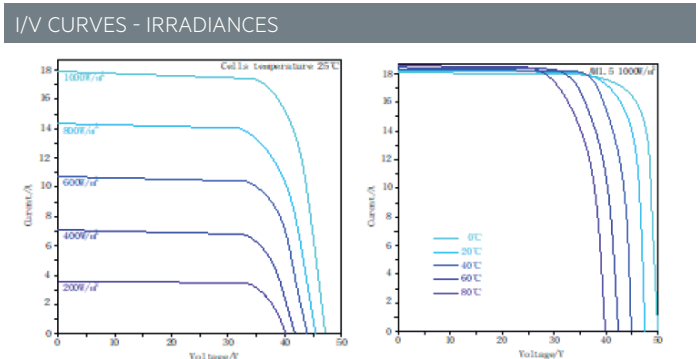
MECHANICAL CHARACTERISTICS		
Solar cells	monocrystalline [pcs]	414
	Dimensions [mm]	shingles based on G12 cells
Front glass	high-transparency	Transparent
	Thickness [mm] / [in]	2 / 0.08
Back glass	White	2 / 0.08
Encapsulant	EVA	Transparent
Frame	Anodized aluminum alloy	Silver or black
Junction box	Split-type	IP68
	Bypass diodes	3
UV-resistant cables	Length [mm] / [in]	1500 / 59.06
	Section [mm ²]	4
Connectors	MC4	compatible
Dimensions	H x L x W [mm]	2384 x 1303 x 35
	H x L x W [in]	93.86 x 51.30 x 1.38
Weight	[kg] / [lbs]	39
Maximum load	Wind / Snow [Pa]	2400 / 5400
Fire Rating Class	Class C	

PACKAGING		
Packing configuration	[pcs/pallet]	31
Loading capacity	[pcs/40 ft container]	558

CERTIFICATIONS	
System	ISO 9001, ISO 14001, ISO 45001
Product	IEC / EN 61215-1:2016; IEC / EN 61215-1-1:2016; IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018; IEC 61730-1:2016 / EN IEC 61730-1:2018 + AC:2018; IEC 61730-2:2016 / EN IEC 61730-2:2018 + AC:2018



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



ELECTRICAL SPECIFICATIONS - REAR SIDE POWER GAIN ⁴							
Pmax Gain	[%]	5	10	15	20	25	30
Maximum Power (Pmax)	[W]	693	726	759	792	825	858
Maximum Power Voltage (Vmp)	[V]	38.9	38.9	38.9	39	39	39
Maximum Power Current (Imp)	[A]	17.80	18.65	19.50	20.35	21.19	22.04
Open Circuit Voltage (Voc)	[V]	46.9	46.9	46.9	47	47	47
Short Circuit Current (Isc)	[A]	18.94	19.84	20.74	21.64	22.55	23.45
Reference: 660 Wp front / Bifaciality: Glazing 70% ±5%							

WARRANTIES		
Product warranty	[years]	15 (opt. ext. to 30)
Performance warranty (linear) ⁵	[years]	30

CONTACT US

Solar Solutions GmbH

Brückenstrasse 94, 60594 Frankfurt am Main, Germany

+49 (0)69 400500810 | info@aeg-industrialsolar.de

www.aeg-industrialsolar.de

¹Standard Test Conditions (STC). Irradiance 1000 W/m², Air Mass AM = 1.5, Cell Temperature 25°C

²Measurement tolerances (IEC 61215:2016): Pmax±3%, Voc±4%, Isc±4%

³AEG 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

⁴Electrical characteristics with different rear power gain

⁵(PRE/GG) No less than 98% of the minimum "Peak Power at STC" in the first year; power output decline no more than 0.45% per year thereafter, ending with 85.0%. Full text of the Warranty Terms available at: www.aeg-industrialsolar.de

⁶Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (±0.079")

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