

AEG

N-TYPE TOPCON BIFACIAL MODULE

AS-M1082B-BH(RM10)/HV

CHARACTERISTICS

Power range: 445-460 Wp
Double glass bifacial Photovoltaic Module
Half-Cut N-Type TOPCON cell technology
Efficiency up to 23.00%

2.0 mm glass thickness

2 mm

ADVANTAGES

Extra converting surface on the module back thanks to bifaciality
Outstanding sleek optics
PFAS-free and recyclable components
Extra power thanks to rectangular solar cells



**30 YEARS PRODUCT WARRANTY AND
30 YEARS PERFORMANCE WARRANTY
30 YEARS EXCHANGE AND REFUND SERVICE**

N-TYPE TOPCON BIFACIAL MODULE | AS-M1082B-BH(RM10)/HV

PRODUCT SERIES & NAMECODE (PNC)	
AEG HIGH EFFICIENCY SERIES	
AS-M1082B-BH(RM10)-445/450/455/460/HV	
Black glass, Black frame	

ELECTRICAL CHARACTERISTICS AT STC ^{1,2}					
Nominal Power (Pmax)	[Wp]	445	450	455	460
Power Sorting ³	[W]	0-5	0-5	0-5	0-5
Maximum Power Voltage (Vmp)	[V]	33.71	33.91	34.11	34.31
Maximum Power Current (Imp)	[A]	13.20	13.27	13.34	13.41
Open Circuit Voltage (Voc)	[V]	40.05	40.25	40.45	40.65
Short Circuit Current (Isc)	[A]	14.10	14.17	14.24	14.31
Module Efficiency (ηm)	[%]	22.3	22.5	22.8	23.0
Maximum System Voltage	[V]	1500	1500	1500	1500
Series Fuse Maximum Rating	[A]	30	30	30	30

ELECTRICAL CHARACTERISTICS AT NMOT ⁵					
Maximum Power (Pmax)	[W]	335	339	343	347
Maximum Power Voltage (Vmp)	[V]	31.49	31.68	31.86	32.05
Maximum Power Current (Imp)	[A]	10.68	10.73	10.79	10.84
Open Circuit Voltage (Voc)	[V]	37.94	38.13	38.32	38.51
Short Circuit Current (Isc)	[A]	11.36	11.41	11.47	11.53

ELECTRICAL SPECIFICATIONS - INTEGRATED POWER / POWER GAIN ⁶					
Bifaciality Factor		85 ± 5 %			
Pmpp Gain		10%	15%	20%	25%
Maximum Power (Pmax)	[W]	506	529	552	575
Maximum Power Voltage (Vmp)	[V]	38.00	39.45	41.17	43.00
Maximum Power Current (Imp)	[A]	15.00	15.42	16.09	17.00
Open Circuit Voltage (Voc)	[V]	45.00	47.00	49.00	51.00
Short Circuit Current (Isc)	[A]	16.00	16.45	17.17	18.00

MECHANICAL CHARACTERISTICS		
Solar cells	monocrystalline [pcs]	108
	Dimensions [mm]	RM10 Bifacial Half-cut [182 x199]
Front glass	high-transparency	
	Thickness [mm] / [in]	2.0 / 0.08
Back glass	heat strengthened glass	2.0 / 0.08
Encapsulant	EVA	transparent
Frame	Anodized aluminum alloy	black color
Junction box	Split-type, IP68	
	Bypass diodes	3
UV-resistant cables	Length [mm] / [in]	1100 / 43.31
	Section [mm ²]	4
Connectors	MC4 Original	
Dimensions	H x L x W [mm]	1762x 1134 x 30
	H x L x W [in]	69.37 x 44.64 x 1.18
Weight	[kg] / [lbs]	24.5 / 54.00
Maximum load	Wind / Snow [Pa]	2400 / 5400
Hail Class ⁴	HW3	
Fire Class	Class A or C	

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

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±3.0%, Voc±3.0%, Isc±4.0%	
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- Ice ball Ø (VKF) 50mm, Ice ball temperature -20°C	
5-NMOT: Nominal operating temperature of module, Irradiance 800 W/m ² , Wind Speed 1m/s; Ambient Temperature 20°C, Air Mass AM=1.5	
6-Electrical characteristics with different rear power gain. Reference to 450 W	
7- Full text of the Warranty Terms available at: www.aeg-solar.com	
8-(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 87.4%.	
Dimensions in the technical picture are expressed in mm with tolerance ±2 mm (=+0.079 ") / Version 2025.02.V2EN © 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 IEC 61709-1:2021, IEC/EN IEC 61709-1:2021; IEC/ EN IEC 61709-2:2021; IEC 61709-1:2021 / EN IEC 61709-1:2021+AC:2018; IEC 61709-2:2021 / EN IEC 61709-2:2021+AC:2018	

WARRANTIES		
Product warranty ⁷	[years]	30
Performance warranty (linear) ⁸	[years]	30

TEMPERATURE CHARACTERISTICS		
NMOT	[°C]	42 (±2)
Pmax Temp. Coefficient (γ)	[%/°C]	-0.29
Voc Temp. Coefficient (β)	[%/°C]	-0.25
Isc Temp. Coefficient (α)	[%/°C]	0.048
Operating temperature	[°C]	-40~+85

