Electrolux

Bifacial Photovoltaic module

ES-M1082B-BH(RM10)/HV

435-450 Wp
108 monocrystalline
half-cut N-Type cells
TOPCON technology

Extra converting surface
on the module back
thanks to bifaciality
Extra Power thanks to
N-Type, rectangular cells

30

Comprehensively certified
30 year product warranty
30 year power warranty

ES-M1082B-BH(RM10) / HV / BIFACIAL GLASS-GLASS PHOTOVOLTAIC MODULE

PRODUCT SERIES & NAMECODE (PNC)
ELECTROLUX PREMIUM SERIES
ES-M1082B-BH(RM10)-435/440/445/450/HV
Black glass, Black frame

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	

ELECTRICAL CHARACTERISTICS AT STC[1,2]					
Nominal Power (Pmax)	[Wp]	435	440	445	450
Power Sorting[3]	[W]	0-5	0-5	0-5	0-5
Maximum Power Voltage (Vmp)	[V]	32.64	32.84	33.04	33.24
Maximum Power Current (Imp)	[A]	13.33	13.40	13.47	13.54
Open Circuit Voltage (Voc)	[V]	39.20	39.40	39.60	39.8
Short Circuit Current (Isc)	[A]	13.83	13.90	13.97	14.04
Module Efficiency (ηm)	[%]	21.8	22.0	22.3	22.5
Maximum System Voltage	[V]	1500	1500	1500	1500
Maximum Series Fuse	[A]	30	30	30	30

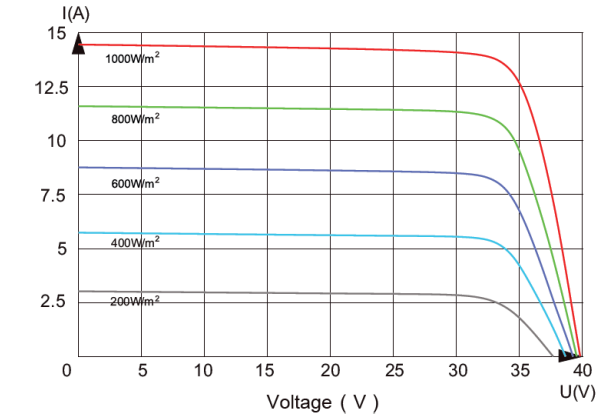
WARRANTIES		
Product warranty[6]	[years]	30
Performance warranty (linear)[7]	[years]	30

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

ELECTRICAL CHARACTERISTICS AT NMOT[4]					
Maximum Power (Pmax)	[W]	327	331	335	339
Maximum Power Voltage (Vmp)	[V]	30.49	30.67	30.86	31.05
Maximum Power Current (Imp)	[A]	10.78	10.83	10.89	10.95
Open Circuit Voltage (Voc)	[V]	37.13	37.32	37.51	37.7
Short Circuit Current (Isc)	[A]	11.14	11.19	11.25	11.31

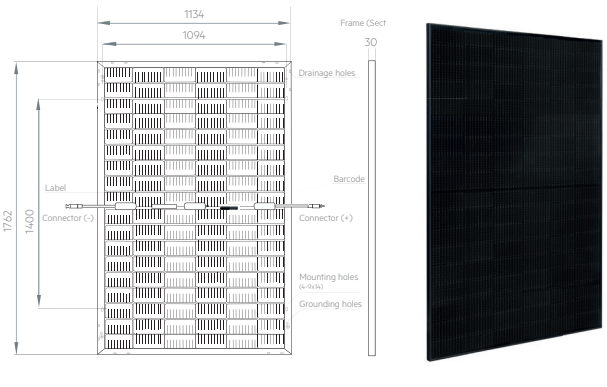
ELECTRICAL SPECIFICATIONS - INTEGRATED POWER / POWER GAIN[5]					
Bifaciality factor	80 ± 10%				
Pmax Gain		10%	15%	20%	25%
Maximum Power (Pmax)	[W]	495	518	540	563
Maximum Power Voltage (Vmp)	[V]	37.00	38.22	40.00	42.00
Maximum Power Current (Imp)	[A]	15.00	16.00	16.24	17.00
Open Circuit Voltage (Voc)	[V]	44.00	46.00	48.00	50.00
Short Circuit Current (Isc)	[A]	15.44	16.14	17.00	18.00

I/V CURVES - IRRADIANCES



MECHANICAL CHARACTERISTICS		
Solar cells	monocrystalline [pcs]	108
	Dimensions [mm]	RM10 Half-cut [182 x 199]
Front glass	high-transparency	
	Thickness [mm] / [in]	2.0 / 0.08
Back glass	High 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 [mm²] / [AWG]	4.0/12.0
Connectors	MC4 Original	
Dimensions	H x L x W [mm]	1762 x 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
Fire Class	Class A	

TECHNICAL DRAWINGS



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

NOTES

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

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

3-Electrolux 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 the Module, Irradiance 800 W/m², Wind Speed 1m/s; Ambient Temperature 20°C, Air Mass AM=1.5

5-Electrical characteristics with different rear power gain. Reference to 450 W

6-Full text of the Warranty Terms available at: www.electroluxsolar.com..

7-(PRE/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 2024.2.01.EN

CONTACT US

info@electroluxsolar.com

www.electroluxsolar.com