

SIRIUS



ELNSM72M-HC-BF Series



MBB HC BIFACIAL MONOCRYSTALLINE PV MODULE 440-455W



BiFacial Series

Elin redefined the high-efficiency module series by integrating 166mm silicon wafers with multi-busbar and half-cut cell technologies. Elin panel combined creative technology effectively and extremely improved the module efficiency and power output.

KEY FEATURES



Less mismatch to get more power



Less power loss by minimizing the shading impact



Competitive low light performance



Ideal choice for utility and commercial scale projects by reduced BOS and improve ROI.



In stringent environment condition :
• sand, acid, and alkali, hail stones,
• 2400pa wind load and 5400pa snow load.
• PID FREE

QUALITY SYSTEM



ISO 9001:2015, ISO 14001:2015, ISO 45001: 2018,
ISO 27001:2013, ISO 10002:2004

PRODUCT CERTIFICATION



TS EN 61215, TS EN 61730
IEC 61215, IEC 61730, IEC 62804 (PID FREE)

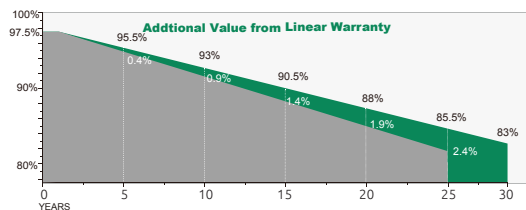
WARRANTY



Guarantee On Product



Linear Power Output Warranty

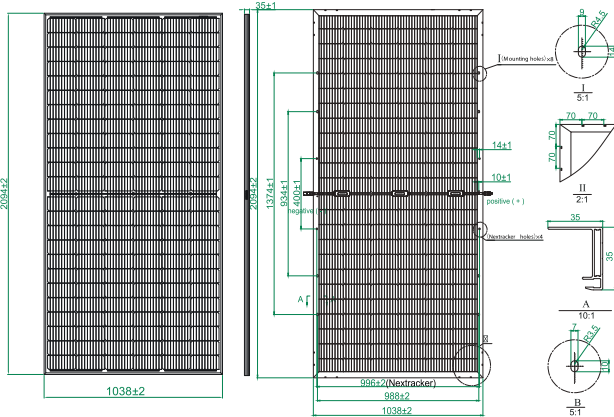




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MECHANICAL SPECIFICATIONS

External Dimension	2094 x 1038 x 35 mm
Weight	23.5 kg
Solar Cells	PERC Mono Crystalline 166 x 83 mm (144pcs)
Front / Back Glass	3.2 mm AR coating semi-tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68,3 diodes - MC4 Compatible
Output Cables*	4.0 mm ² , 350 mm - 1200 mm

*Output cable lengths should be specified at the time of order.

PACKING CONFIGURATION

Container	40'HQ
Pieces per Pallet	31
Pallets per Container	22
Pieces per Container	682

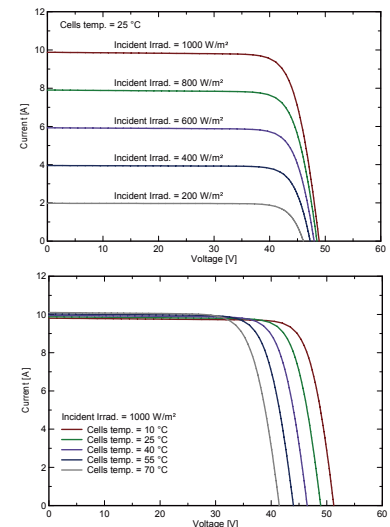
Module Type	ELNSM-440-72M-HC-BF		ELNSM-445-72M-HC-BF		ELNSM-450-72M-HC-BF		ELNSM-455-72M-HC-BF	
STC	Front	Back	Front	Back	Front	Back	Front	Back
Maximum Power -P _{mp} (W)	440	328	445	332	450	336	455	340
Open Circuit Voltage -V _{oc} (V)	49.7	45.4	49.9	45.6	50.10	45.80	50.30	46.00
Short Circuit Current -I _{sc} (A)	11.27	9.10	11.34	9.17	11.41	9.24	11.48	9.31
Maximum Power Voltage -V _{mp} (V)	41.4	38.3	41.6	38.5	41.80	38.70	42.00	38.90
Maximum Power Current -I _{mp} (A)	10.63	8.57	10.70	8.63	10.77	8.69	10.84	8.75
Module Efficiency STC-η _m (%)	20.24		20.47		20.70		20.93	
Power Tolerance(W)	(0,+4.99)							
Pmax Temperature Coefficient	-0.36 %/°C							
Voc Temperature Coefficient	-0.28 %/°C							
Isc Temperature Coefficient	+0.05 %/°C							

* Measurement Tolerance +/- 3%
 STC: Irradiance 1000 W/m² module temperature 25°C AM=1.5
 NOCT: Irradiance 800W / m², Ambient Temperature 20 °C, AM = 1.5, Wind Speed 1m /s

REAR SIDE POWER GAIN

	10%	15%	20%	25%	30%
Power Gain					
Maximum Power -P _{mp} (W)	479	500	522	544	566
Open Circuit Voltage -V _{oc} (V)	49.6	49.6	49.6	49.6	49.6
Short Circuit Current -I _{sc} (A)	12.29	12.86	13.41	13.97	14.53
Maximum Power Voltage -V _{mp} (V)	41.3	41.3	41.3	41.3	41.3
Maximum Power Current -I _{mp} (A)	11.59	12.12	12.64	13.17	13.70

I-V CURVE



APPLICATION CONDITIONS

Maximum System Voltage	1500VDC
Maximum Series Fuse Rating	20A
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature	45±2 °C
Bifaciality	70%±5%
Mechanical Load	Front side 5400Pa/ Rear side 2400Pa