

## ELNSM60M-HC-HV Series



## MBB HC BIFACIAL PV MODULE 435-450W



### Bifacial Series

Elin redefined the high-efficiency module series by integrating 182mm silicon wafers with multi-busbar and half-cut cell technologies. Sirius 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: 2018, ISO 26000:2021, ISO 37001:2016, ISO 50001:2018

### PRODUCT CERTIFICATION



TS EN 61215, TS EN 61730  
IEC 61215, IEC 61730, IEC 62804 (PID FREE)  
UL 61730-1, UL 61730-2

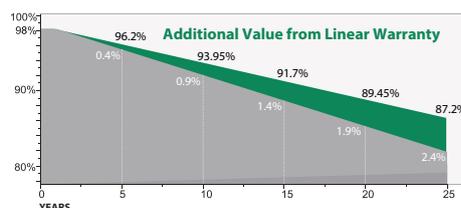
### WARRANTY



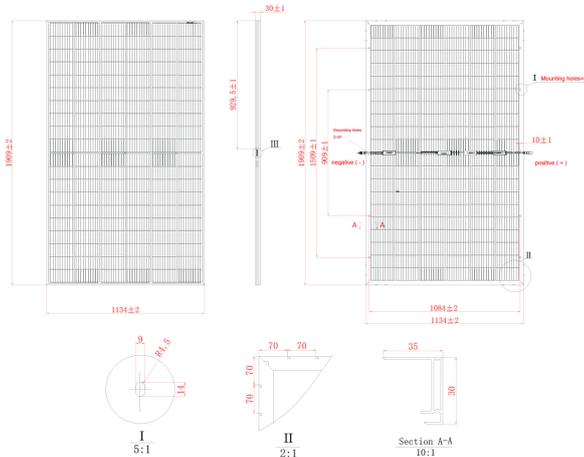
**12 YEARS** Guarantee On Product



**25 YEARS** Linear Power Output Warranty



## ELNSM60M-HC-HV Series



### MECHANICAL SPECIFICATIONS

External Dimension	1909 x 1134 x 35 mm
Weight	27.3 kg
Solar Cells	PERC Mono crystalline(120 pcs)
Front Glass	3.2mm AR coating tempered glass, low iron
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Output Cables*	4.0mm <sup>2</sup> , 350mm(+)/350mm(-) or Customized Length

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

### PACKING CONFIGURATION

Container	20'GP	40'HQ
Pieces per Pallet	31	31
Pallets per Container	5	24
Pieces per Container	155	744

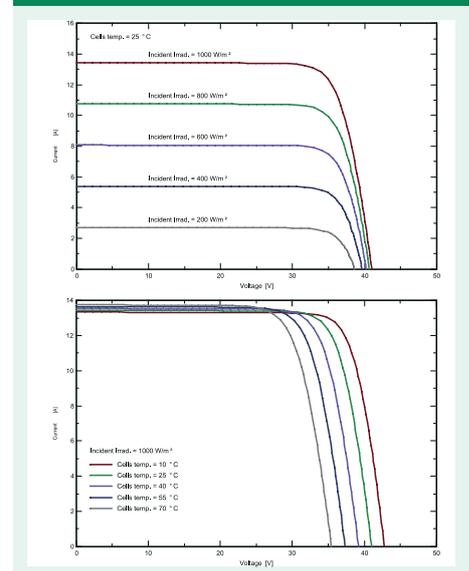
Module Type	ELNSM60M-445-HC-HV			ELNSM60M-450-HC-HV			ELNSM60M-455-HC-BF			ELNSM60M-460-HC-HV		
STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC	Front STC	Front NOCT	Back STC
Maximum Power -P <sub>mp</sub> (W)	445	333	312	450	337	315	455	341	319	460	445	322
Open Circuit Voltage -V <sub>oc</sub> (V)	41.22	38.41	41.20	41.32	38.57	41.30	41.42	38.67	41.40	41.52	38.77	41.50
Short Circuit Current -I <sub>sc</sub> (A)	13.66	11.04	9.63	13.76	11.12	9.70	13.86	11.20	9.77	13.96	11.28	9.84
Maximum Power Voltage -V <sub>mp</sub> (V)	34.18	31.82	34.22	34.28	31.98	34.29	34.38	32.06	34.42	34.48	32.18	34.49
Maximum Power Current -I <sub>mp</sub> (A)	13.03	10.48	9.12	13.13	10.56	9.19	13.24	10.64	9.27	13.34	10.73	9.34
Module Efficiency STC-η <sub>m</sub> (%)	20.56			20.79			21.02			21.25		
Power Tolerance(W)							(0, 4.99W)					
Pmax Temperature Coefficient							-0.34 %/°C					
Voc Temperature Coefficient							-0.26 %/°C					
Isc Temperature Coefficient							+0.05 %/°C					

STC: Irradiance 1000 W/m<sup>2</sup> module temperature 25 °C AM=1.5  
Power measurement tolerance: +/-3%

### REAR SIDE POWER GAIN

Power Gain	10%	15%	20%	25%	30%
Maximum Power -P <sub>mp</sub> (W)	495	518	540	563	585
Open Circuit Voltage -V <sub>oc</sub> (V)	41.32	41.32	41.32	41.32	41.32
Short Circuit Current -I <sub>sc</sub> (A)	15.14	15.82	16.51	17.20	17.89
Maximum Power Voltage -V <sub>mp</sub> (V)	34.28	34.28	34.28	34.28	34.28
Maximum Power Current -I <sub>mp</sub> (A)	14.44	15.10	15.76	16.41	17.07

### I-V CURVE



### APPLICATION CONDITIONS

Maximum System Voltage	1500VDC
Maximum Series Fuse Rating	25A
Operating Temperature	-40~+85 °C
Nominal Operating Cell Temperature	45±2 °C
Bifaciality	70%±10%
Mechanical Load	Front side 5400Pa/ Rear side 2400Pa

ELiN A.Ş. reserves the right to change the technical specifications and design data in the catalog without prior notice.  
Made in Türkiye.