

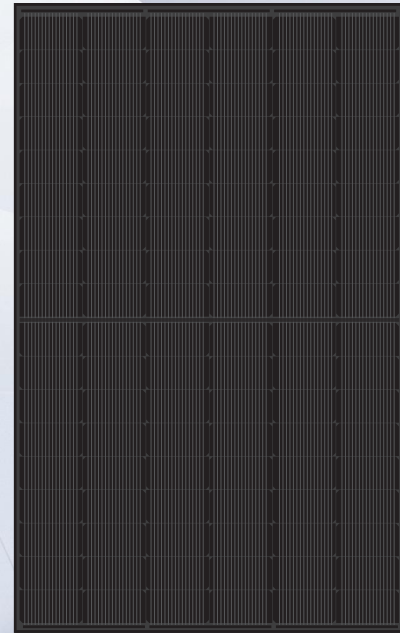
# TOPCON

**Monofacial**  
**410~440W**


SN(410~440W)-108MTF


Mono MBB **N-type** large size half cut module


**Max Cell Efficiency 24.1%**





## KEY FEATURES


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Sine Energy Topcon solar modules adopts the latest 16 bus bar technology decrease the current transverse propagation path by 50% and improve the efficiency of the modules up to 22%.
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**Low LCOE** 5-25w higher than Perc modules with the same size result in lower LCOE and O/M cost.
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**LETID LID** N type topcon modules has better reliability in harsh environment and lower LID/LETID.
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N type Topcon solar cells makes longer life span, lower degradation and better performance in weak light conditions.
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Half cut cell and optimized circuit design as well split junction box makes lower the power loss caused by shadow and mismatch.
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Lower thermal coefficient for higher power generation at higher temperature.
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Selected encapsulating materials and stringent production process controls ensures highly PID resistant.
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Ideal for usage in residential rooftops, commercial and large-scale plants.

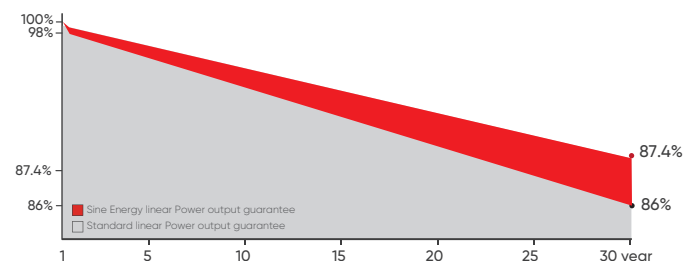
## CERTIFICATION

IEC61215 | IEC61730 | IEC 61701 | CE | INMETRO  
 ISO 9001  
 2015 Quality Management System  
 ISO 14001  
 2015 Environmental Management System  
 ISO45001  
 2018 Occupational Health and Safety Management System



## INDUSTRY LEADING WARRANTY

- 25 years** Guarantee on product material and workmanship
- 30 years** Linear power output warranty



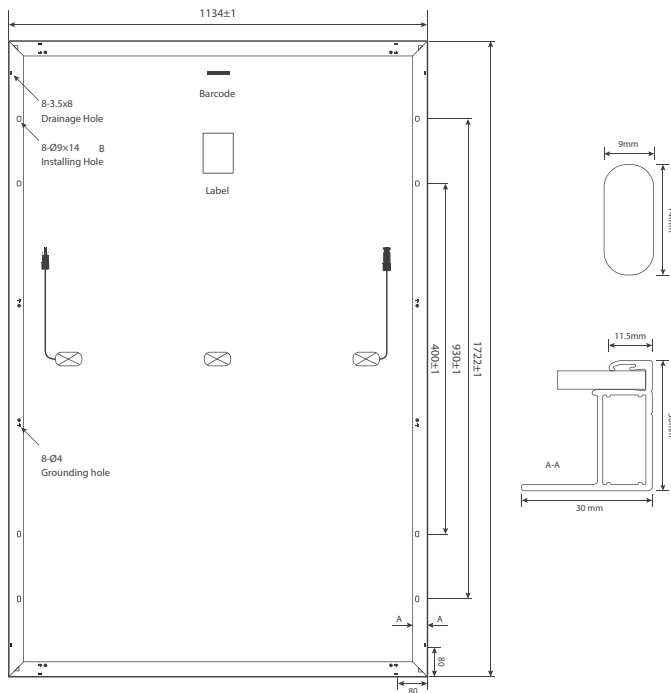
# SN(410~440W)-108MTF

Weight  
**19.5kg**

Number of Cells  
**108pcs(18×6)**

Module Size  
**1722×1134×30mm**

Packing  
**36pcs/pallet,936pcs/40HQ**



## MECHANICAL SPECIFICATIONS

Solar Cell Type	182×91mm
Glass	3.2mm tempered, high transmission ART coating
Back Sheet	White KPF
Frame	Silver Anodized Aluminium Alloy
Junction Box	IP68
No. of Diodes	3pcs
Output Cable	4.0mm <sup>2</sup> 400/400mm (custmized available)
Connector	MC4 Compatible (MC4 Original optional)
Wind/Snow Load	2400pa/5400pa

## TEMPERATURE COEFFICIENT

Nominal Operating Cell Temp(NOCT)	44±2 C
Temperature Coefficient of ISC	0.060% C
Temperature Coefficient of VOC	-0.30% C
Temperature Coefficient of Pmax	-0.39% C
Operational Temperature	-40~85 C
Maximum System Voltage	1500V DC(IEC)
Maximum Series Fuse Rating	25A

## ELECTRICAL SPECIFICATION (STC)

	410W	415W	420W	425W	440W
Maximum Power -Pmax(W)	410W	415W	420W	425W	440W
Maximum Power Voltage-Vmp(V)	31.15V	31.34V	31.53V	31.72V	31.88V
Maximum Power Current-Imp(A)	13.16A	13.24A	13.32A	13.40A	13.48A
Open Circuit Voltage -Voc(V)	37.75V	37.94V	38.13V	38.32V	38.51V
Short Circuit Current-Isc(A)	13.90A	13.98A	14.07A	14.14A	14.22A
Module Efficiency(STC) -ηm(%)	21%	21.25%	21.51%	21.76%	22.02%
Power output tolerance(W)	0~+5W				

STC:Irradiance:1000W/m<sup>2</sup>, Module Temperature:25°C,Air Mass:1.5

## Electrical Specification (NOCT)

	308W	312W	316W	320W	324W
Maximum Power -Pmax(W)	308W	312W	316W	320W	324W
Maximum Power Voltage-Vmp(V)	29.08V	29.23V	29.36V	29.52V	29.65V
Maximum Power Current-Imp(A)	10.60A	10.67A	10.75A	10.82A	10.90A
Open Circuit Voltage -Voc(V)	35.86V	36.04V	36.22V	36.40V	36.58V
Short Circuit Current-Isc(A)	11.22A	11.28A	11.35A	11.41A	11.48A

NOCT:Irradiance:800W/m<sup>2</sup>, Ambient Temperature:20°C,Air Mass:1.5,Wind Speed:1m/s

## I-V Curve

