



TSHNM-108HV

**415-435W**

N-type TOPCon Monofacial Solar Module

- Natural zero LID with N-type solar cell
- Aesthetic design with unique full black appearance
- Excellent low-light performance & temperature coefficient
- High module quality ensures long-term reliability
- The best choice for residential & C&I project



### System & Product Certifications

IEC 61215 / IEC 61730

ISO 9001: Quality Management System

ISO 14001: Environment Management System

ISO 45001: Occupational Health and Safety

amfori BSCI Corporate Social Responsibility



### Product Warranty & Insurance



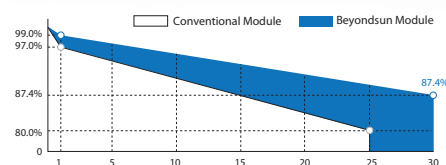
12-year Warranty for Material & Workmanship



30-year Warranty for Linear Power Output



Product & Performance Insured by LLOYD'S & PingAn



### The Ideal Solution for



Residential rooftop projects



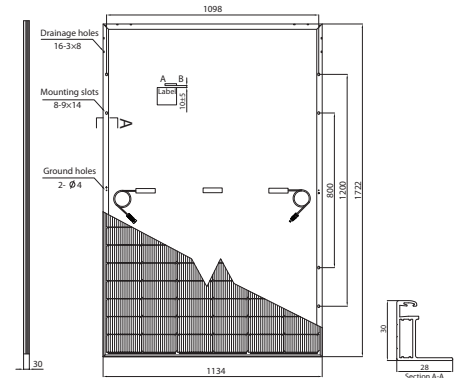
Commercial / industrial rooftop projects

# POWER TSHNM-108HV 415-435W

## Mechanical Parameters

Cell Type	N-type Mono 182x91mm
Cell Arrangement	108pcs (2x(6x9))
Dimension (LxWxH)	1722x1134x30mm
Weight	21.0kg
Front Cover	3.2mm AR Coating Tempered Glass
Back Cover	Black Back Sheet
Frame	Black Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Length of Cable	4mm <sup>2</sup> , +400mm, -300mm, or customizable
Connector	PV Connector

## Technical Drawings (mm)



## Electrical Parameters @STC

Module Type	TSHNM415-108HV	TSHNM420-108HV	TSHNM425-108HV	TSHNM430-108HV	TSHNM435-108HV
Max. Power Output Pmax (W)	415	420	425	430	435
Max. Power Voltage Vmp (V)	31.49	31.63	31.77	31.90	32.04
Max. Power Current Imp (A)	13.18	13.28	13.38	13.48	13.58
Open Circuit Voltage Voc (V)	37.27	37.42	37.57	37.71	37.86
Short Circuit Current Isc (A)	14.06	14.16	14.26	14.36	14.46
Module Efficiency (%)	21.25%	21.51%	21.76%	22.02%	22.28%

STC: 1000W/m<sup>2</sup>, 25 °C, AM 1.5 Pmax tolerance 0~+3%

## Electrical Parameters @NMOT

Module Type	TSHNM415-108HV	TSHNM420-108HV	TSHNM425-108HV	TSHNM430-108HV	TSHNM435-108HV
Max. Power Output Pmax (W)	312	316	320	323	327
Max. Power Voltage Vmp (V)	29.33	29.48	29.63	29.69	29.84
Max. Power Current Imp (A)	10.64	10.72	10.80	10.88	10.96
Open Circuit Voltage Voc (V)	35.41	35.55	35.69	35.82	35.97
Short Circuit Current Isc (A)	11.35	11.43	11.51	11.59	11.67

NMOT: 800W/m<sup>2</sup>, AM 1.5, 20°C, 1m/s

## Operating Parameters

Maximum System Voltage(V)	1500(DC)
Operating Temperature(°C)	-40°C ~ +85°C
Max. Wind Load / Snow Load(Pa)	2400/5400
Max. Over Current(A)	25

## Temperature Coefficients

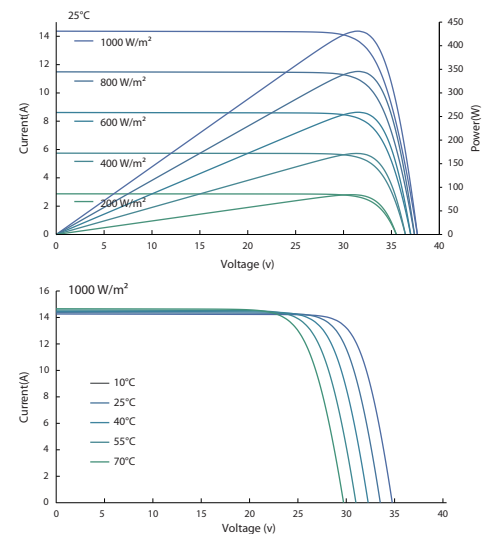
Temperature Coefficients of Pmp	-0.30%/°C
Temperature Coefficients of Voc	-0.25%/°C
Temperature Coefficients of Isc	+0.046 %/°C
NMOT	45°C±2°C

## Package Information

Quantity / Pallet	36 pcs
Container 40'HQ	26pallets, 936pcs

## Partner's Notes

## I-V Curves



\*The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, Zhejiang Beyondsun Green Energy Technology Co., Ltd. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.