

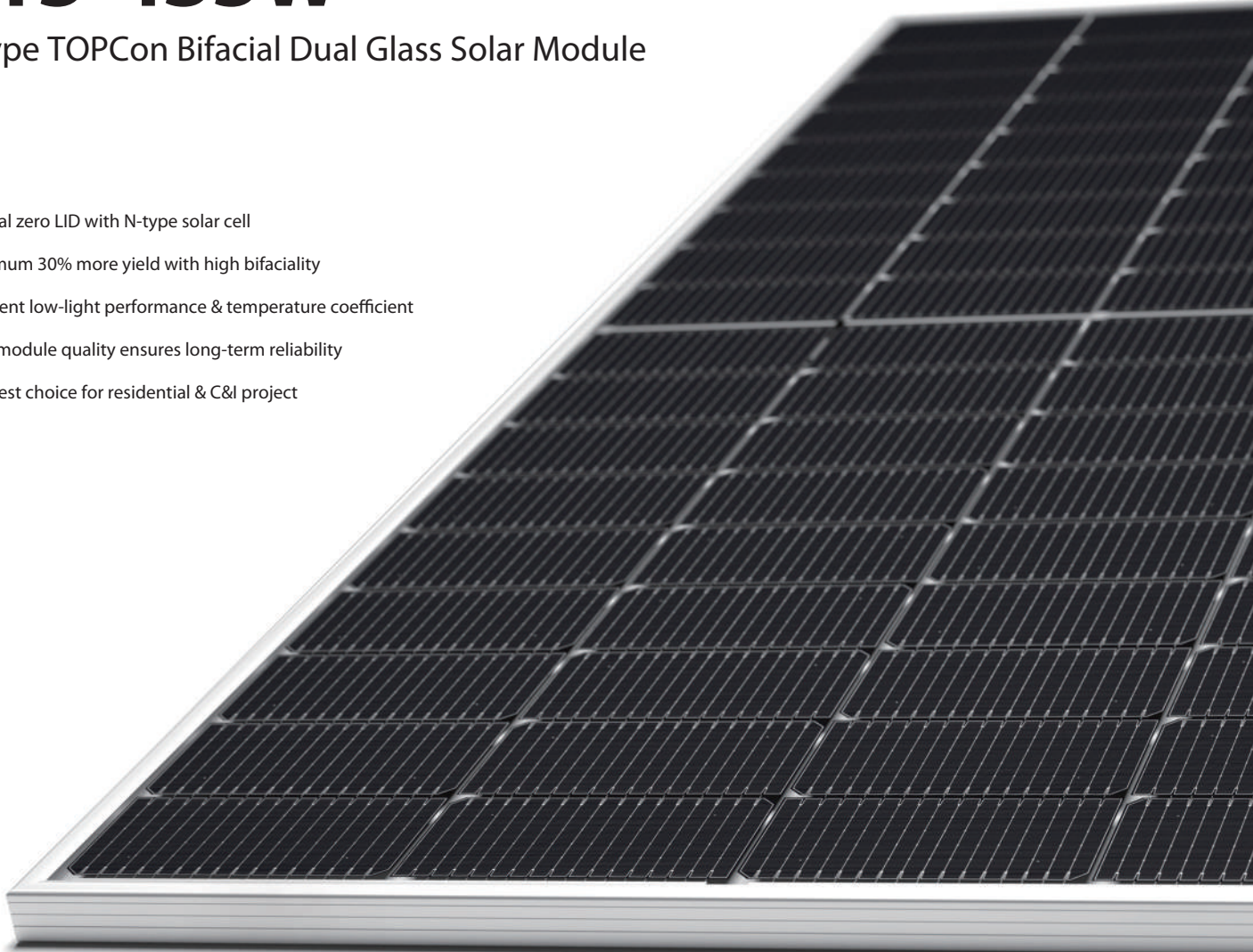


# TSBHNM-108HVG

# 415-435W

## N-type TOPCon Bifacial Dual Glass Solar Module

- Natural zero LID with N-type solar cell
- Maximum 30% more yield with high bifaciality
- Excellent low-light performance & temperature coefficient
- High module quality ensures long-term reliability
- The best choice for residential & C&I project



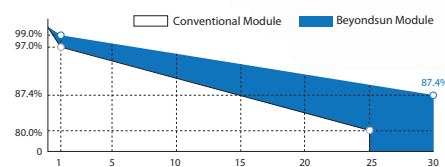
### System & Product Certifications

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

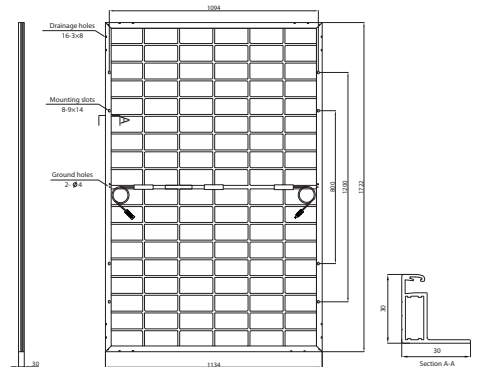
 Commercial / industrial rooftop projects

# POWER TSBHNM-108HVG 415-435W

## Mechanical Parameters

Cell Type	N type Mono 182×91mm
Cell Arrangement	108 pcs, 2x(6x9)
Dimension (L×W×H)	1722×1134×30mm
Weight	25.0kg
Front Cover	2.0mm AR Coating Tempered Glass
Back Cover	2.0mm Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Cable	4mm <sup>2</sup> , +400mm, -300mm, or customizable
Connector	PV Connector

## Technical Drawings (mm)



## Electrical Parameters

STC: 1000W/m<sup>2</sup>, 25 °C, AM 1.5 NMOT: 800W/m<sup>2</sup>, AM 1.5, 20°C, 1m/s Pmax tolerance 0~+3%

Module Type	TSBHNM415-108HVG		TSBHNM420-108HVG		TSBHNM425-108HVG		TSBHNM430-108HVG		TSBHNM435-108HVG	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Max. Power Output Pmax (W)	415	312	420	316	425	320	430	323	435	327
Max. Power Voltage Vmp (V)	31.49	29.33	31.63	29.48	31.77	29.63	31.90	29.69	32.04	29.84
Max. Power Current Imp (A)	13.18	10.64	13.28	10.72	13.38	10.80	13.48	10.88	13.58	10.96
Open Circuit Voltage Voc (V)	37.27	35.41	37.42	35.55	37.57	35.69	37.71	35.82	37.86	35.97
Short Circuit Current Isc (A)	14.06	11.35	14.16	11.43	14.26	11.51	14.36	11.59	14.46	11.67
Module Efficiency (%)	21.25%		21.51%		21.76%		22.02%		22.28%	

## Rear Side Power Gain

Refer. Bifaciality Factor: 70~10%

5%	Maximum Power (Pmax)	436	441	446	452	457
	Module Efficiency STC (%)	22.31%	22.58%	22.85%	23.12%	23.39%
15%	Maximum Power (Pmax)	477	483	489	495	500
	Module Efficiency STC (%)	24.44%	24.73%	25.03%	25.32%	25.62%
25%	Maximum Power (Pmax)	519	525	531	538	544
	Module Efficiency STC (%)	26.57%	26.89%	27.21%	27.53%	27.85%

## 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)	30

## Temperature Coefficients

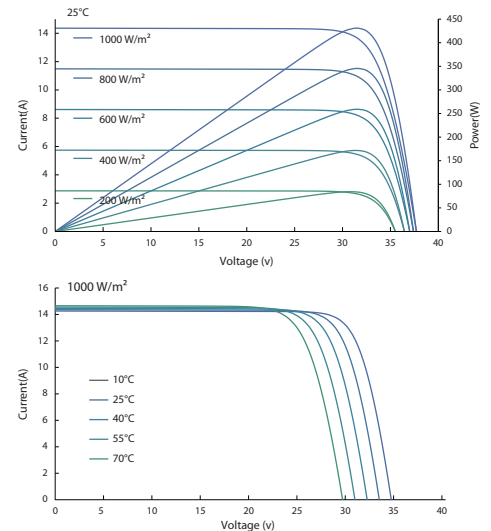
Temperature Coefficients of Pmp	-0.30%/°C
Temperature Coefficients of Voc	-0.25%/°C
Temperature Coefficients of Isc	+0.046%/°C
NMOT	45°C±2°C

## Package Information

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

## 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.