



TSBHNM-108HVG

425-445W

N-type TOPCon Bifacial Dual Glass Solar Module

- Natural zero LID with N-type solar cell
- Aesthetic design with unique full black appearance
- 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



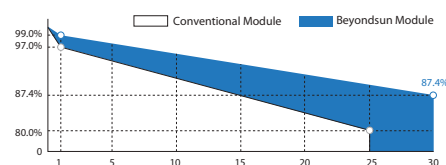
12-year Warranty for Material & Workmanship



30-year Warranty for Linear Power Output



Product & Performance Insured by LLOYD'S & PingAn



The Ideal Solution for



Residential rooftop projects



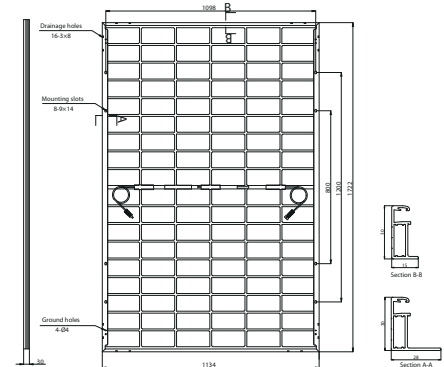
Commercial / industrial rooftop projects

POWER TSBHNM-108HVG 425-445W

Mechanical Parameters

| | |
|-------------------|--|
| Cell Type | N Type Mono |
| Cell Arrangement | 108 pcs, 2x(6x9) |
| Dimension (LxWxH) | 1722x1134x30mm |
| Weight | 25.0kg |
| Front Cover | 2.0mm AR Coating Tempered Glass |
| Back Cover | 2.0mm Heat Strengthened Glass with Black Grid |
| Frame | Black Anodized Aluminium Alloy |
| Junction Box | IP68, 3 Bypass Diodes |
| Cable | 4mm ² , +400mm, -300mm, or customizable |
| Connector | PV Connector |

Technical Drawings (mm)



Electrical Parameters

STC: 1000W/m², 25 °C, AM 1.5 NMOT: 800W/m², AM 1.5, 20°C, 1m/s Pmax tolerance 0~+3%

| Module Type | TSBHNM425-108HVG | | TSBHNM430-108HVG | | TSBHNM435-108HVG | | TSBHNM440-108HVG | | TSBHNM445-108HVG | |
|-------------------------------|------------------|-------|------------------|-------|------------------|-------|------------------|-------|------------------|-------|
| | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT | STC | NMOT |
| Max. Power Output Pmax (W) | 425 | 320 | 430 | 323 | 435 | 327 | 440 | 331 | 445 | 335 |
| Max. Power Voltage Vmp (V) | 31.77 | 29.63 | 31.90 | 29.69 | 32.04 | 29.84 | 32.17 | 29.99 | 32.30 | 30.10 |
| Max. Power Current Imp (A) | 13.38 | 10.80 | 13.48 | 10.88 | 13.58 | 10.96 | 13.68 | 11.04 | 13.78 | 11.13 |
| Open Circuit Voltage Voc (V) | 37.57 | 35.69 | 37.71 | 35.82 | 37.86 | 35.97 | 38.01 | 36.11 | 38.15 | 36.24 |
| Short Circuit Current Isc (A) | 14.26 | 11.51 | 14.36 | 11.59 | 14.46 | 11.67 | 14.56 | 11.76 | 14.66 | 11.84 |
| Module Efficiency (%) | 21.76% | | 22.02% | | 22.28% | | 22.53% | | 22.79% | |

Rear Side Power Gain

Refer. Bifaciality Factor: 70~10%

| 5% | Maximum Power (Pmax) | | 446 | | 452 | | 457 | | 462 | | 467 | |
|-----|---------------------------|--------|--------|--------|--------|--------|-----|--|-----|--|-----|--|
| | Module Efficiency STC (%) | 22.85% | 23.12% | 23.39% | 23.66% | 23.93% | | | | | | |
| 15% | Maximum Power (Pmax) | | 489 | | 495 | | 500 | | 506 | | 512 | |
| | Module Efficiency STC (%) | 25.03% | 25.32% | 25.62% | 25.91% | 26.21% | | | | | | |
| 25% | Maximum Power (Pmax) | | 531 | | 538 | | 544 | | 550 | | 556 | |
| | Module Efficiency STC (%) | 27.21% | 27.53% | 27.85% | 28.17% | 28.49% | | | | | | |

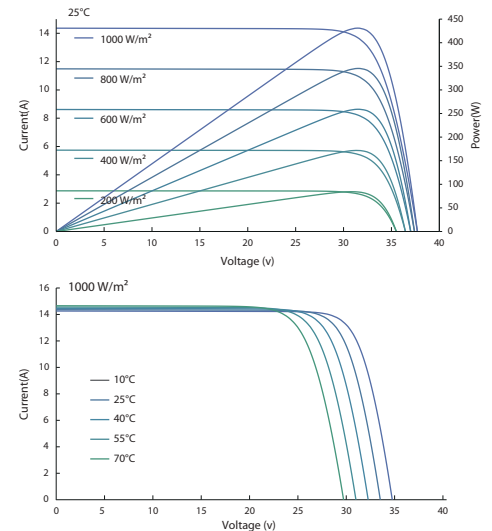
Operating Parameters

| | |
|--------------------------------|---------------|
| 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 |

I-V Curves



Package Information

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

Patner's Notes

*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.