

# TIGER Neo

## 48HL4M-BDV

445-470 Watt

BIFACIAL MODULE WITH DUAL GLASS

N-type



### N-type Technology

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer lower LID/LeTID degradation and better low light performance.



### HOT 3.0 Technology

N-type modules with JinkoSolar's HOT 3.0 technology offer better reliability and efficiency.



### Dual-Sided Power Generation

Dual-sided power generation gain increases with backside exposure to light, significantly reducing LCOE.



### Mechanical Load Enhanced

Certified to withstand:  
6000 Pa front side max static test load  
4000 Pa rear side max static test load



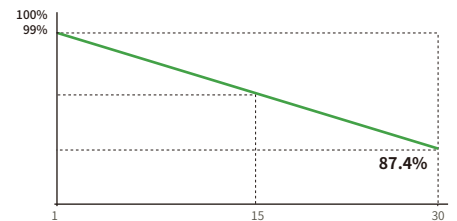
### SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



### Anti-PID Guarantee

Minimizes the chance of degradation caused by PID phenomena through optimization of cell production technology and material control.



**15 Year**  
Product Warranty

**30 Year**  
Linear Power Warranty

**1%**  
First-year Degradation

**0.40%**  
Annual Degradation Over 30 Years

- IEC61215:2021 / IEC61730:2023
- IEC61701 / IEC62716 / IEC60068 / IEC62804
- ISO9001:2015: Quality Management System
- ISO14001:2015: Environment Management System
- ISO45001:2018: Occupational health and safety management systems



**JKM445-470N-48HL4M-BDV-Z1-EN**

# 48HL4M-BDV 445-470 Watt

## Mechanical Characteristics

|                                        |                                                                       |
|----------------------------------------|-----------------------------------------------------------------------|
| Cell Type                              | N- type Mono-crystalline                                              |
| No. of cells                           | 96 (48×2)                                                             |
| Dimensions                             | 1762×1134×30 mm                                                       |
| Weight                                 | 24.0 kg                                                               |
| Front Glass                            | 2.0 mm, Anti-reflection Coating                                       |
| Back Glass                             | 2.0 mm, Heat Strengthened Glass                                       |
| Frame                                  | Anodized Aluminium Alloy                                              |
| Junction Box                           | IP68 Rated                                                            |
| Protection Class                       | Class II                                                              |
| IEC Fire Type                          | Class C                                                               |
| Connector Type                         | JK03M/JK03M2/Others*                                                  |
| Output Cables<br>(Including Connector) | 4.0 mm <sup>2</sup><br>(+): 400 mm , (-): 200 mm or Customized Length |

\* MC4 and MC4-EVO2 available upon request and subject to availability

## Packaging Configuration

|                                             |                                                           |
|---------------------------------------------|-----------------------------------------------------------|
| Pallet Dimensions                           | 1792×1140×1249 mm                                         |
| Packing Detail<br>(Two pallets = One stack) | 37 pcs/pallets, 74 pcs/stack,<br>962 pcs/ 40'HQ Container |

## Specifications (STC)

|                                  |            |       |       |       |       |       |
|----------------------------------|------------|-------|-------|-------|-------|-------|
| Maximum Power - Pmax [Wp]        | 445        | 450   | 455   | 460   | 465   | 470   |
| Maximum Power Voltage - Vmp [V]  | 30.30      | 30.53 | 30.77 | 31.00 | 31.23 | 31.46 |
| Maximum Power Current - Imp [A]  | 14.69      | 14.74 | 14.79 | 14.84 | 14.89 | 14.94 |
| Open-circuit Voltage - Voc [V]   | 36.02      | 36.19 | 36.36 | 36.53 | 36.70 | 36.87 |
| Short-circuit Current - Isc [A]  | 15.60      | 15.65 | 15.70 | 15.75 | 15.80 | 15.85 |
| Module Efficiency STC [%]        | 22.27      | 22.52 | 22.77 | 23.02 | 23.27 | 23.52 |
| Power Tolerance                  | 0 ~ +3 %   |       |       |       |       |       |
| Temperature Coefficients of Pmax | -0.29 %/°C |       |       |       |       |       |
| Temperature Coefficients of Voc  | -0.25 %/°C |       |       |       |       |       |
| Temperature Coefficients of Isc  | 0.045 %/°C |       |       |       |       |       |

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## Specifications (BNPI)

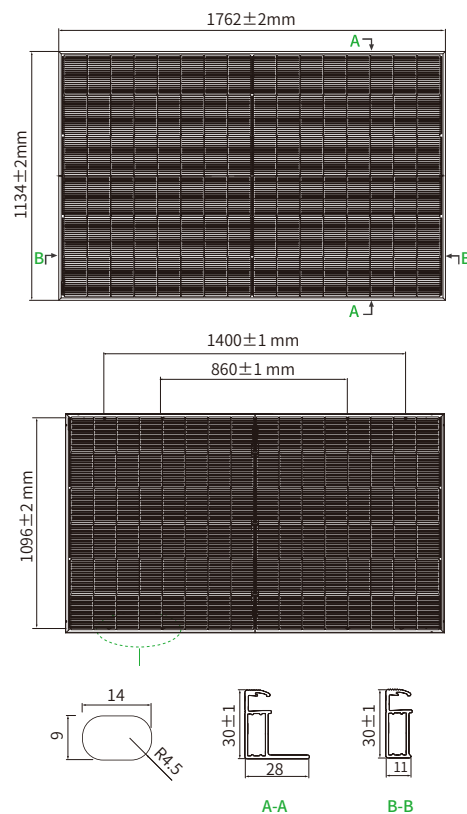
|                                 |       |       |       |       |       |       |
|---------------------------------|-------|-------|-------|-------|-------|-------|
| Maximum Power - Pmax [Wp]       | 493   | 498   | 504   | 509   | 515   | 520   |
| Maximum Power Voltage - Vmp [V] | 30.30 | 30.53 | 30.77 | 31.00 | 31.23 | 31.46 |
| Maximum Power Current - Imp [A] | 16.26 | 16.32 | 16.37 | 16.43 | 16.48 | 16.54 |
| Open-circuit Voltage - Voc [V]  | 36.02 | 36.19 | 36.36 | 36.53 | 36.70 | 36.87 |
| Short-circuit Current - Isc [A] | 17.27 | 17.32 | 17.38 | 17.44 | 17.49 | 17.55 |

BNPI: Irradiance: front 1000W/m<sup>2</sup>, rear 135W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5

## Application Conditions

|                            |                                           |
|----------------------------|-------------------------------------------|
| Operating Temperature      | -40 °C ~ +70 °C                           |
| Maximum System Voltage     | 1500 VDC (IEC)                            |
| Maximum Series Fuse Rating | 35 A                                      |
| Bifaciality Coefficient    | φVoc: 98±5 %, φIsc: 80±5 %, φPmax: 80±5 % |

## Engineering Drawings



\*Note: For specific dimensions and tolerance ranges, please refer to the corresponding detailed module drawings.

## Electrical Performance

