

# TIGER Neo

## 48HL4M-DB

450-475 Watt

ALL BLACK MONO-FACIAL 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.



### Durability Against Extreme Environment

High salt mist and ammonia resistance.



### Mechanical Load Enhanced

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



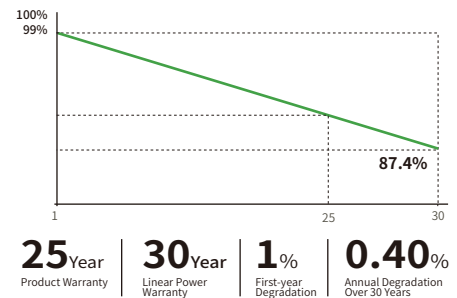
### SMBB Technology

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.



- 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



POSITIVE QUALITY™  
Continuous Quality Assurance

**JKM450-475N-48HL4M-DB-Z4-EU**

# 48HL4M-DB 450-475 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 - P <sub>max</sub> [Wp]*      | 450        | 455   | 460   | 465   | 470   | 475   |
| Maximum Power Voltage - V <sub>mp</sub> [V] | 30.25      | 30.48 | 30.71 | 30.94 | 31.17 | 31.40 |
| Maximum Power Current - I <sub>mp</sub> [A] | 14.88      | 14.93 | 14.98 | 15.03 | 15.08 | 15.13 |
| Open-circuit Voltage - V <sub>oc</sub> [V]  | 36.06      | 36.23 | 36.40 | 36.57 | 36.74 | 36.91 |
| Short-circuit Current - I <sub>sc</sub> [A] | 15.66      | 15.71 | 15.76 | 15.81 | 15.86 | 15.91 |
| Module Efficiency STC [%]                   | 22.52      | 22.77 | 23.02 | 23.27 | 23.52 | 23.77 |
| Power Sorting                               | 0 ~ + 3 %  |       |       |       |       |       |
| Temperature Coefficient of P <sub>max</sub> | -0.29 %/°C |       |       |       |       |       |
| Temperature Coefficient of V <sub>oc</sub>  | -0.25 %/°C |       |       |       |       |       |
| Temperature Coefficient of I <sub>sc</sub>  | 0.045 %/°C |       |       |       |       |       |

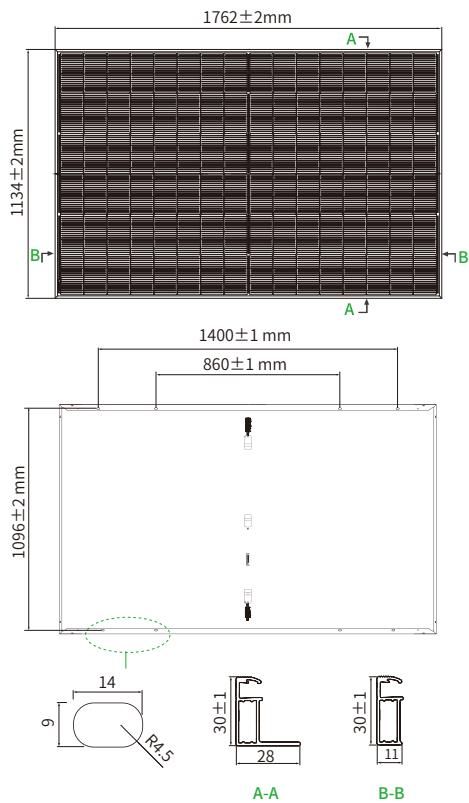
STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM=1.5.

\*Power measurement tolerance: ±3%.

## Application Conditions

|                            |                 |
|----------------------------|-----------------|
| Operating Temperature      | -40 °C ~ +70 °C |
| Maximum System Voltage     | 1500 VDC (IEC)  |
| Maximum Series Fuse Rating | 30 A            |

## Engineering Drawings



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

## Electrical Performance

