

# TIGER Neo

## 48HL4M-DB

460-480 Watt

ALL BLACK MONO-FACIAL MODULE  
WITH DUAL GLASS

N-type



### HOT 3.0 Technology

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

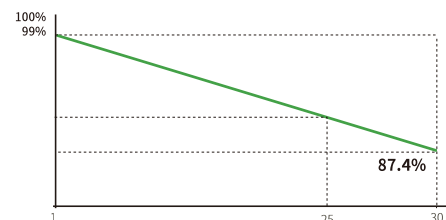


### Mechanical Load Enhanced

Certified to withstand:

5400 Pa front side max static test load

2400 Pa rear side max static test load



**25**Year  
Product Warranty

**30**Year  
Linear Power  
Warranty

**1%**  
First-year  
Degradation

**0.40%**  
Annual Degradation  
Over 30 Years

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



POSITIVE QUALITY™  
Continuous Quality Assurance

JKM460-480N-48HL4M-DB-Z1C2-OC

# JKMxxxN-48HL4M-DB (xxx=460-480, in steps of 5)

## Mechanical Characteristics

|                                        |                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------|
| Cell Type                              | N- type Mono-crystalline                                                          |
| No. of cells                           | 96 (48×2)                                                                         |
| Dimensions                             | 1762×1134×30 mm                                                                   |
| Weight                                 | 20.0 kg                                                                           |
| Front Glass                            | 1.6 mm, Anti-reflection Coating                                                   |
| Back Glass                             | 1.6 mm, Heat Strengthened Glass                                                   |
| Frame                                  | Anodized Aluminium Alloy                                                          |
| Junction Box                           | IP68 Rated                                                                        |
| Protection Class                       | Class II                                                                          |
| IEC Fire Type                          | Class C                                                                           |
| Connector Type                         | PV-JK03M/xy,PV-JK03M2/xy (JinkO) ;<br>PV-KST4-EVO2A/xy,PV-KBT4-EVO2A/xy (Staubli) |
| 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)

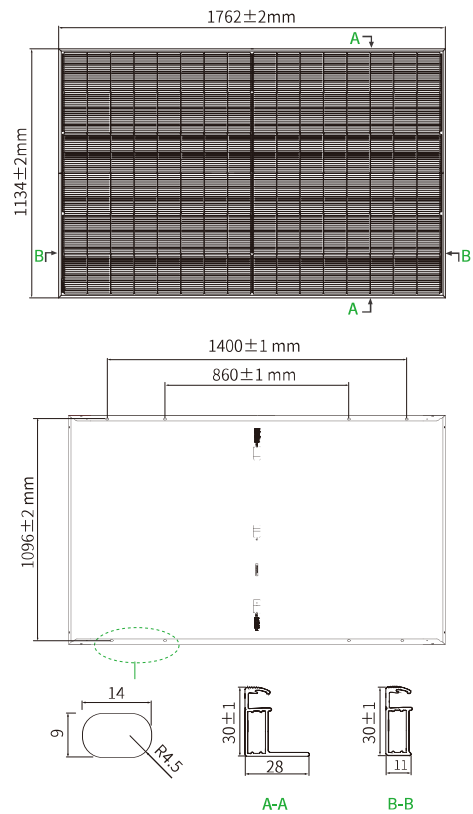
|                                              |            |       |       |       |       |
|----------------------------------------------|------------|-------|-------|-------|-------|
| Maximum Power - P <sub>max</sub> [Wp]        | 460        | 465   | 470   | 475   | 480   |
| Maximum Power Voltage - V <sub>mp</sub> [V]  | 30.71      | 30.94 | 31.17 | 31.40 | 31.63 |
| Maximum Power Current - I <sub>mp</sub> [A]  | 14.98      | 15.03 | 15.08 | 15.13 | 15.18 |
| Open-circuit Voltage - V <sub>oc</sub> [V]   | 36.38      | 36.55 | 36.72 | 36.89 | 37.06 |
| Short-circuit Current - I <sub>sc</sub> [A]  | 15.86      | 15.91 | 15.96 | 16.01 | 16.06 |
| Module Efficiency STC [%]                    | 23.02      | 23.27 | 23.52 | 23.77 | 24.02 |
| Power Measurement Tolerance                  | ± 3%       |       |       |       |       |
| Power Sorting                                | -5W ~ +15W |       |       |       |       |
| Temperature Coefficients of P <sub>max</sub> | -0.29 %/°C |       |       |       |       |
| Temperature Coefficients of V <sub>oc</sub>  | -0.25 %/°C |       |       |       |       |
| Temperature Coefficients of I <sub>sc</sub>  | 0.045 %/°C |       |       |       |       |

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

## Application Conditions

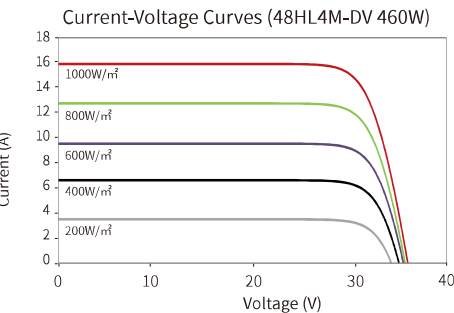
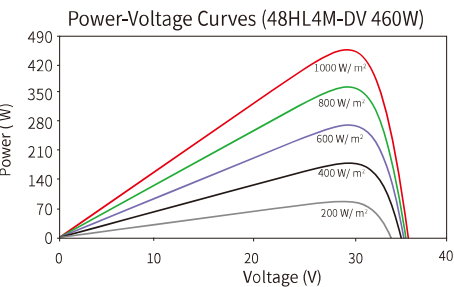
|                            |                 |
|----------------------------|-----------------|
| Operating Temperature      | -40 °C ~ +70 °C |
| Maximum System Voltage     | 1500 VDC (IEC)  |
| Maximum Series Fuse Rating | 30 A            |

## Engineering Drawings



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

## Electrical Performance



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**Note:** Please read the safety and installation manual before using the product. We reserve the right of final interpretation. The specifications in this datasheet are subject to change without notice.

Made in China

JKM460-480N-48HL4M-DB-Z1C2-OC

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# TIGER Neo

## 60HL4-V

### 490-510 Watt

MONO-FACIAL MODULE

### N-type



## N-type Technology

N-type modules with Tunnel Oxide Passivating Contacts (TOPCon) technology offer better low light performance.



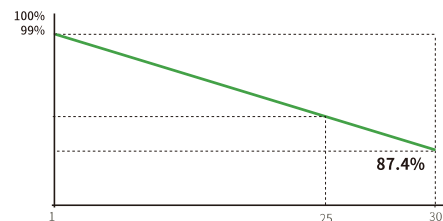
## HOT 3.0 Technology

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



## Mechanical Load Enhanced

Certified to withstand:  
5400 Pa front side max static test load;  
2400 Pa rear side max static test load



**25 Year**  
Product Warranty

**30 Year**  
Linear Power  
Warranty

**1%**  
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- IEC61215:2021 / IEC61730:2023
- ISO9001:2015: Quality Management System
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- ISO45001:2018: Occupational health and safety management systems



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Continuous Quality Assurance

**JKM490-510N-60HL4-V-Z1C1-OC**

# 60HL4-V 490-510 Watt

## Mechanical Characteristics

|                  |                                                                                |
|------------------|--------------------------------------------------------------------------------|
| Cell Type        | N -type Mono-crystalline                                                       |
| No. of cells     | 120 (60×2)                                                                     |
| Dimensions       | 1906×1134×30 mm                                                                |
| Weight           | 22.5 kg                                                                        |
| Front Glass      | 3.2mm, Anti-reflection Coating,<br>High Transmission, Low Iron, Tempered Glass |
| Frame            | Anodized Aluminium Alloy                                                       |
| Junction Box     | IP68 Rated                                                                     |
| Protection Class | Class II                                                                       |
| IEC Fire Type    | Class C                                                                        |
| Connector Type   | JK03M,JK03M2(JinKO)/MC4-EVO2(Staubli)                                          |
| Output Cables    | 4.0 mm <sup>2</sup><br>(+): 400 mm , (-): 200 mm or Customized Length          |

## Packaging Configuration

|                                           |                                                           |
|-------------------------------------------|-----------------------------------------------------------|
| Pallet Dimensions                         | 1936×1140×1249 mm                                         |
| Packing detail<br>(Two pallets=One stack) | 37 pcs/pallets, 74 pcs/stack,<br>888 pcs/ 40'HQ Container |

## Specifications (STC)

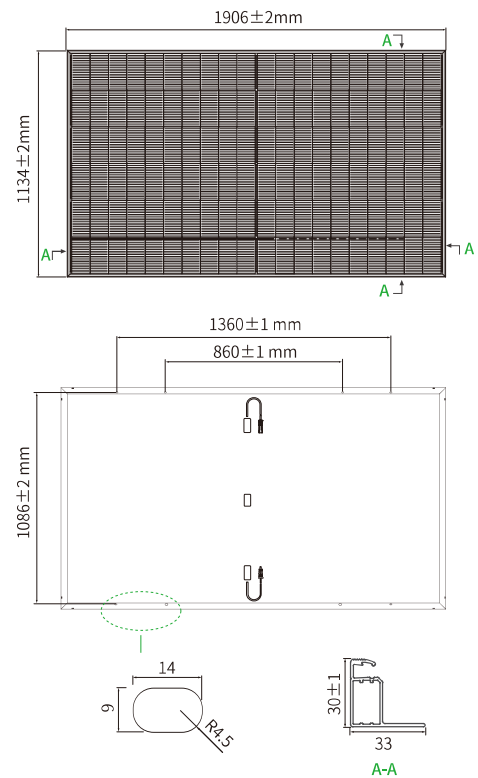
|                                  |            |       |       |       |       |
|----------------------------------|------------|-------|-------|-------|-------|
| Maximum Power – Pmax [Wp]        | 490        | 495   | 500   | 505   | 510   |
| Maximum Power Voltage – Vmp [V]  | 36.43      | 36.62 | 36.79 | 36.97 | 37.15 |
| Maximum Power Current – Imp [A]  | 13.45      | 13.52 | 13.59 | 13.66 | 13.73 |
| Open-circuit Voltage – Voc [V]   | 43.91      | 44.07 | 44.21 | 44.36 | 44.51 |
| Short-circuit Current – Isc [A]  | 14.01      | 14.09 | 14.17 | 14.25 | 14.33 |
| Module Efficiency STC [%]        | 22.67      | 22.90 | 23.13 | 23.36 | 23.60 |
| Power Measurement Tolerance      | ± 3%       |       |       |       |       |
| Power Sorting                    | -5W ~ +15W |       |       |       |       |
| 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

## Application Conditions

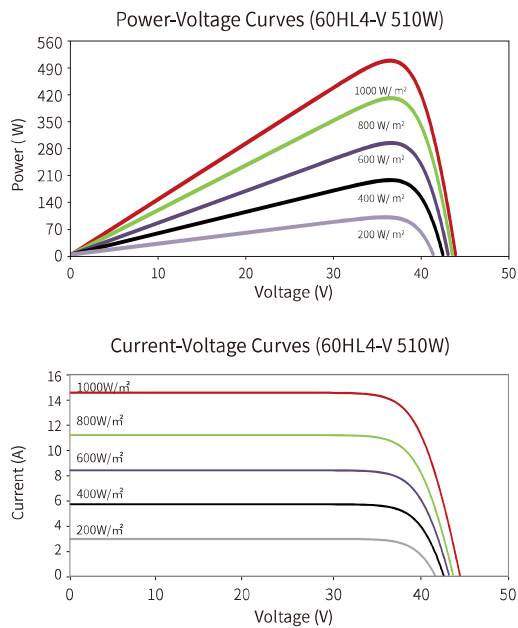
|                            |                |
|----------------------------|----------------|
| Operating Temperature      | -40 °C ~ +70°C |
| Maximum System Voltage     | 1500 VDC (IEC) |
| Maximum Series Fuse Rating | 25 A           |

## Engineering Drawings



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

## Electrical Performance



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