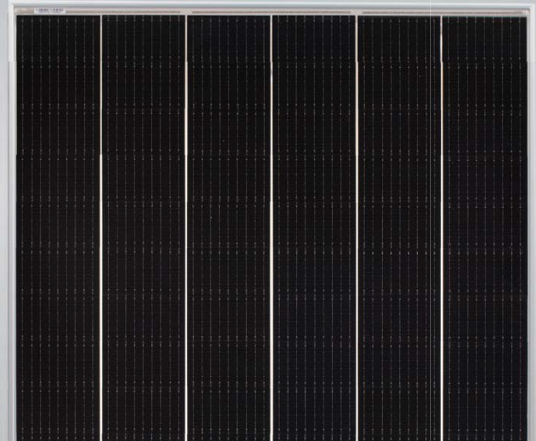


# Tiger Mono-facial 450-470 Watt

Tiling Ribbon (TR) Technology

Positive power tolerance of 0~+3%

N-Type



## KEY FEATURES



### TR technology + Half Cell

TR technology with Half cell aims to eliminate the cell gap to increase module efficiency (mono-facial up to 20.93%)



### Low Light Induced Degradation

The N-type cell shows extremely low light induced degradation (LID) performance when comparing with the P-type cell.



### 9BB instead of 5BB

9BB technology decreases the distance between bus bars and finger grid line which is benefit to power increase.



### Higher lifetime Power Yield

1% first year degradation,  
0.4% linear degradation



### Best Warranty

15 year product warranty,  
30 year linear power warranty



### Better low-light performance

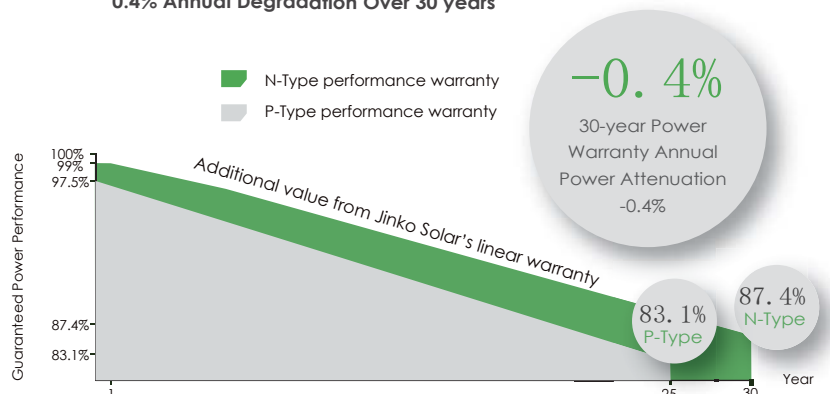
Excellent performance in low-light environments (e.g. early morning, dusk, and cloud, etc.)



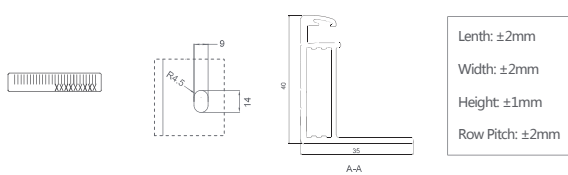
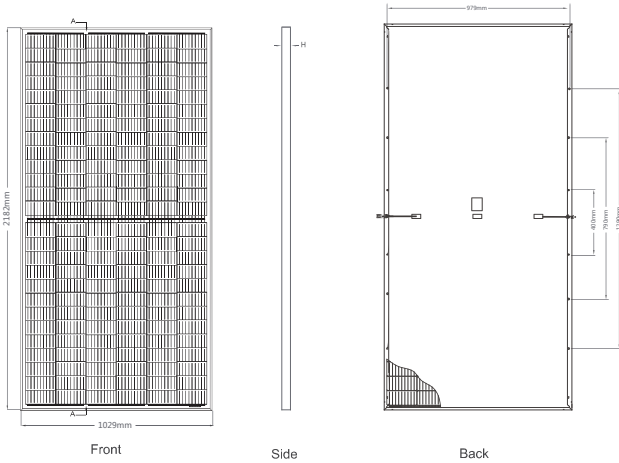
- ISO9001:2015, ISO14001:2015, OHSAS18001 certified factory
- IEC61215, IEC61730 certified product

## LINEAR PERFORMANCE WARRANTY

15 Year Product Warranty 30 Year Linear Power Warranty  
0.4% Annual Degradation Over 30 years



## Engineering Drawings

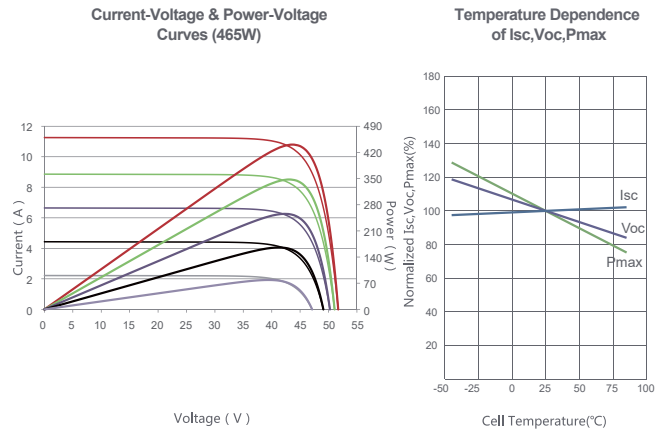


## Packaging Configuration

( Two pallets = One stack )

27pcs/pallets, 54pcs/stack, 540pcs/ 40'HQ Container

## Electrical Performance & Temperature Dependence



## Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	156 (2×78)
Dimensions	2182×1029×40mm (85.91×40.51×1.57 inch)
Weight	26.1 kg (57.54 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP67 Rated
Output Cables	TUV 1×4.0mm <sup>2</sup> (+): 290mm, (-): 145 mm or Customized Length

## SPECIFICATIONS

Module Type	JKM450N-7RL3		JKM455N-7RL3		JKM460N-7RL3		JKM465N-7RL3		JKM470N-7RL3	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	450Wp	336Wp	455Wp	339Wp	460Wp	343Wp	465Wp	347Wp	470Wp	350Wp
Maximum Power Voltage (Vmp)	42.90V	39.29V	43.01V	39.40V	43.12V	39.51V	43.22V	39.67V	43.32V	39.78V
Maximum Power Current (Imp)	10.49A	8.54A	10.58A	8.61A	10.67A	8.68A	10.76A	8.74A	10.85A	8.81A
Open-circuit Voltage (Voc)	51.50V	48.61V	51.60V	48.70V	51.70V	48.80V	51.90V	48.99V	52.10V	49.18V
Short-circuit Current (Isc)	11.32A	9.14A	11.41A	9.22A	11.50A	9.29A	11.59A	9.36A	11.68A	9.43A
Module Efficiency STC (%)	20.04%		20.26%		20.49%		20.71%		20.93%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1000/1500VDC (IEC)									
Maximum series fuse rating	20A									
Power tolerance	0~+3%									
Temperature coefficients of Pmax	-0.34%/°C									
Temperature coefficients of Voc	-0.28%/°C									
Temperature coefficients of Isc	0.048%/°C									
Nominal operating cell temperature (NOCT)	45±2°C									

\* STC: ☀ Irradiance 1000W/m<sup>2</sup> 📏 Cell Temperature 25°C ☁ AM=1.5

NOCT: ☀ Irradiance 800W/m<sup>2</sup> 📏 Ambient Temperature 20°C ☁ AM=1.5 🌀 Wind Speed 1m/s

\* Power measurement tolerance: ± 3%

# Tiger Neo N-type 60HL4-(V) 460-480 Watt MONO-FACIAL MODULE

## N-Type

Positive power tolerance of 0~+3%

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018

Occupational health and safety management systems



## Key Features



### SMBB Technology

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



### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



### Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



### Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.

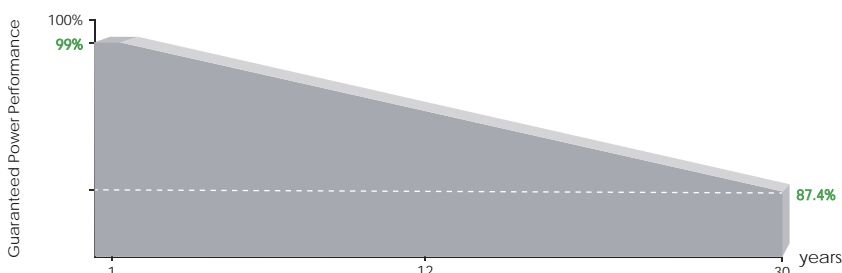


### Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



## LINEAR PERFORMANCE WARRANTY

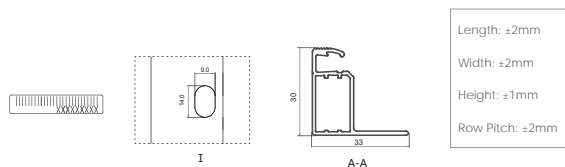
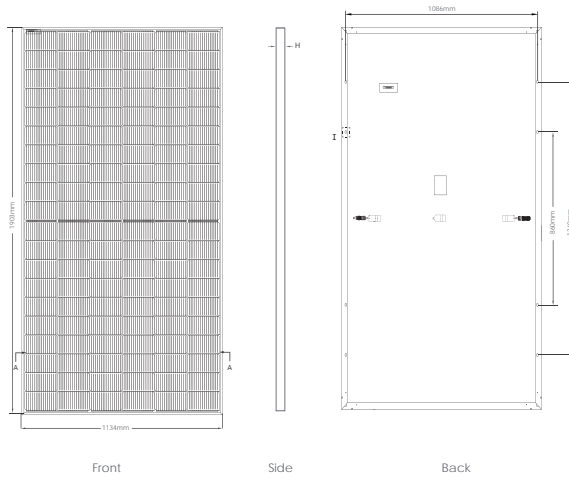


12 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years

## Engineering Drawings

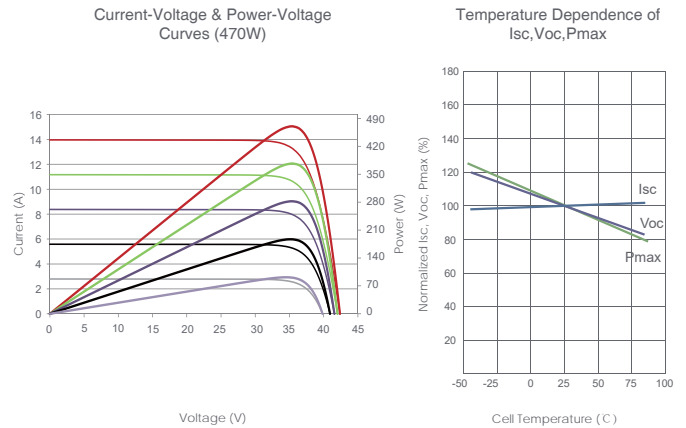


## Packaging Configuration

(Two pallets = One stack)

36pcs/pallets, 72pcs/stack, 864pcs/ 40'HQ Container

## Electrical Performance & Temperature Dependence



## Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	120 (6×20)
Dimensions	1903×1134×30mm (74.92×44.65×1.18 inch)
Weight	24.2 kg (53.35 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm <sup>2</sup> (+): 400mm, (-): 200mm or Customized Length

## SPECIFICATIONS

Module Type	JKM460N-60HL4		JKM465N-60HL4		JKM470N-60HL4		JKM475N-60HL4		JKM480N-60HL4	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	460Wp	346Wp	465Wp	350Wp	470Wp	353Wp	475Wp	357Wp	480Wp	361Wp
Maximum Power Voltage (Vmp)	34.72V	32.60V	34.89V	32.77V	35.05V	32.94V	35.21V	33.10V	35.38V	33.27V
Maximum Power Current (Imp)	13.25A	10.61A	13.33A	10.67A	13.41A	10.73A	13.49A	10.79A	13.57A	10.85A
Open-circuit Voltage (Voc)	42.05V	39.94V	42.22V	40.10V	42.38V	40.25V	42.54V	40.41V	42.71V	40.57V
Short-circuit Current (Isc)	13.99A	11.29A	14.07A	11.36A	14.15A	11.42A	14.23A	11.49A	14.31A	11.55A
Module Efficiency STC (%)	21.32%		21.55%		21.78%		22.01%		22.24%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1000/1500VDC (IEC)									
Maximum series fuse rating	25A									
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									
Nominal operating cell temperature (NOCT)	45±2°C									

\*STC: Irradiance 1000W/m<sup>2</sup> Cell Temperature 25°C AM=1.5  
 NOCT: Irradiance 800W/m<sup>2</sup> Ambient Temperature 20°C AM=1.5 Wind Speed 1m/s

# Tiger Neo N-type 54HL4-B 400-420 Watt ALL-BLACK MODULE

## N-Type

Positive power tolerance of 0~+3%

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System

ISO14001:2015: Environment Management System

ISO45001:2018

Occupational health and safety management systems



## Key Features



### SMBB Technology

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



### PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



### Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance.



### Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.

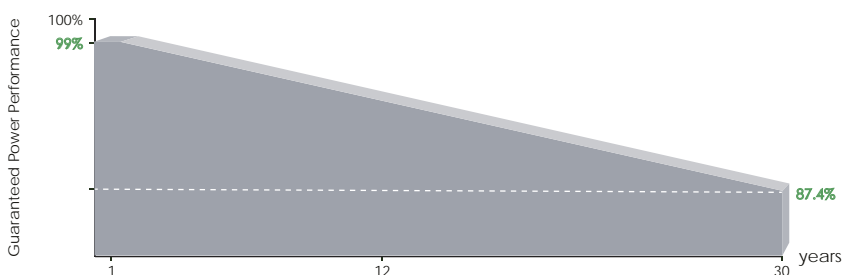


### Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



## LINEAR PERFORMANCE WARRANTY

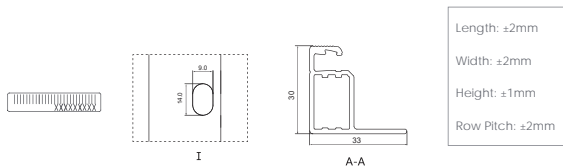
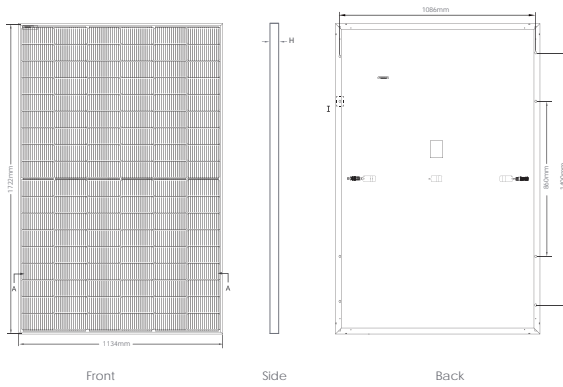


25 Year Product Warranty

30 Year Linear Power Warranty

0.40% Annual Degradation Over 30 years

## Engineering Drawings

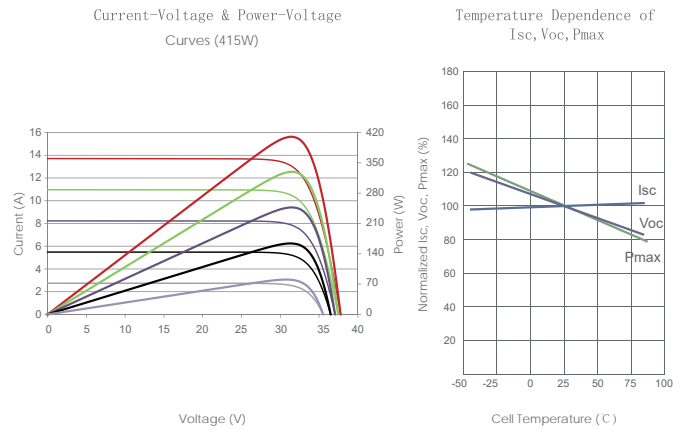


## Packaging Configuration

(Two pallets = One stack)

36pcs/pallets, 72pcs/stack, 936pcs/ 40'HQ Container

## Electrical Performance & Temperature Dependence



## Mechanical Characteristics

Cell Type	N type Mono-crystalline
No. of cells	108 (6×18)
Dimensions	1722×1134×30mm (67.79×44.65×1.18 inch)
Weight	22 kg (48.50 lbs)
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 Rated
Output Cables	TUV 1×4.0mm (+): 400mm, (-): 200mm or Customized Length

## SPECIFICATIONS

Module Type	JKM400N-54HL4-B		JKM405N-54HL4-B		JKM410N-54HL4-B		JKM415N-54HL4-B		JKM420N-54HL4-B	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	400Wp	301Wp	405Wp	305Wp	410Wp	308Wp	415Wp	312Wp	420Wp	316Wp
Maximum Power Voltage (Vmp)	31.28V	28.89V	31.47V	29.08V	31.66V	29.59V	31.85V	29.78V	32.04V	29.97V
Maximum Power Current (Imp)	12.79A	10.30A	12.87A	10.36A	12.95A	10.42A	13.03V	10.48A	13.11A	10.54A
Open-circuit Voltage (Voc)	37.38V	35.50V	37.58V	35.69V	37.77V	35.88V	37.96V	36.06V	38.15V	36.24V
Short-circuit Current (Isc)	13.55A	10.94A	13.62A	11.00A	13.68A	11.04A	13.74A	11.09A	13.80A	11.14A
Module Efficiency STC (%)	20.48%		20.74%		21.00%		21.25%		21.51%	
Operating Temperature(°C)	-40°C~+85°C									
Maximum system voltage	1000VDC (IEC)									
Maximum series fuse rating	25A									
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									
Nominal operating cell temperature (NOCT)	45±2°C									

\*STC: Irradiance 1000W/m<sup>2</sup> Cell Temperature 25°C AM=1.5  
 NOCT: Irradiance 800W/m<sup>2</sup> Ambient Temperature 20°C AM=1.5 Wind Speed 1m/s

# TIGER Neo

## 54HL4R-BDB

425-450 Watt

ALL BLACK 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



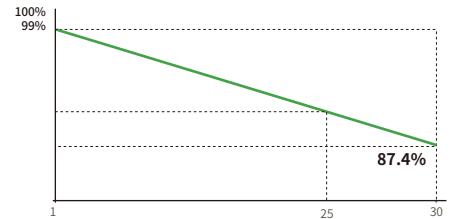
### SMBB Technology

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.



**25 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



JKM425-450N-54HL4R-BDB-F3-EN



# 54HL4R-BDB 425-450 Watt

## Mechanical Characteristics

Cell Type	N- type Mono-crystalline
No. of cells	108 (54×2)
Dimensions	1762×1134×30 mm
Weight	24.5 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/MC4/Others
Output Cables	4.0 mm <sup>2</sup> (+): 400 mm , (-): 200 mm or Customized Length

## Packaging Configuration

Pallet Dimentions	1792×1140×1249 mm
Packing Detail (Two pallets = One stack)	37 pcs/pallets, 74 pcs/stack, 962 pcs/40'HQ Container

## Specifications (STC)

Maximum Power - Pmax [Wp]	425	430	435	440	445	450
Maximum Power Voltage - Vmp [V]	32.90	33.08	33.26	33.44	33.61	33.79
Maximum Power Current - Imp [A]	12.92	13.00	13.08	13.16	13.24	13.32
Open-circuit Voltage - Voc [V]	39.23	39.43	39.63	39.83	40.03	40.23
Short-circuit Current - Isc [A]	13.77	13.84	13.91	13.98	14.05	14.12
Module Efficiency STC [%]	21.27	21.52	21.77	22.02	22.27	22.52
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)

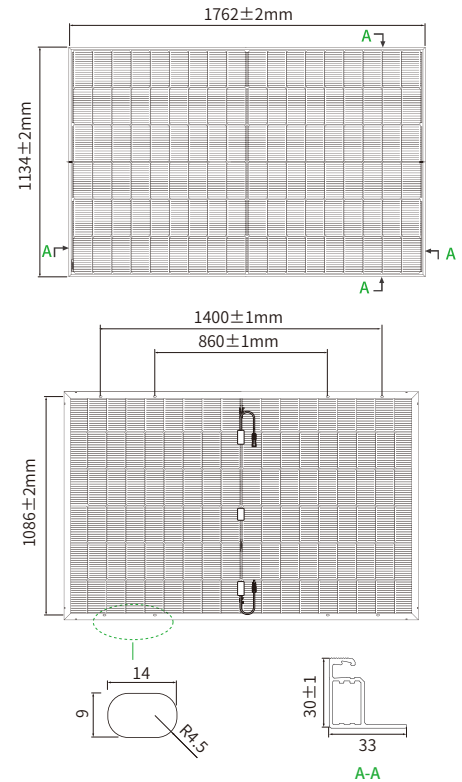
Maximum Power - Pmax [Wp]	469	474	480	485	491	496
Maximum Power Voltage - Vmp [V]	32.91	33.06	33.26	33.41	33.61	33.76
Maximum Power Current - Imp [A]	14.25	14.34	14.43	14.52	14.60	14.69
Open-circuit Voltage - Voc [V]	39.23	39.43	39.63	39.83	40.03	40.23
Short-circuit Current - Isc [A]	15.16	15.24	15.32	15.40	15.48	15.56

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	30 A
Bifaciality Coefficient	φVoc: 98±5 %, φIsc: 80±5 %, φPmax: 80±5 %

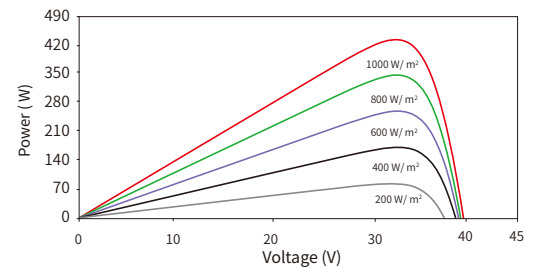
## Engineering Drawings



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

## Electrical Performance

Power-Voltage Curves (54HL4R-BDB 440W)



Current-Voltage Curves (54HL4R-BDB 440W)

