

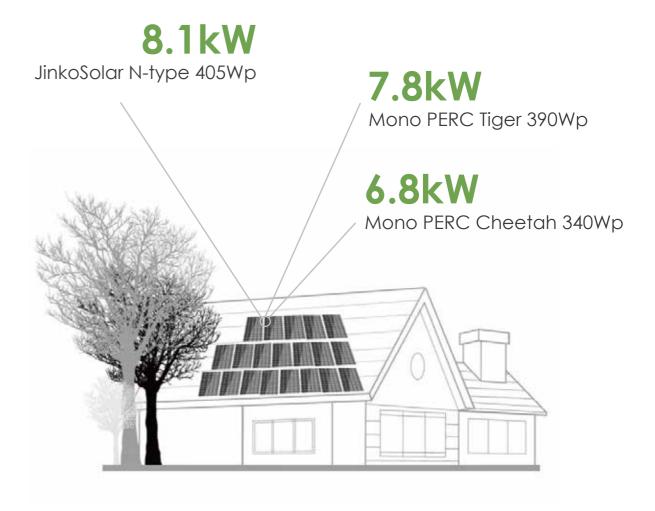
# N-Type Series High Efficiency Module



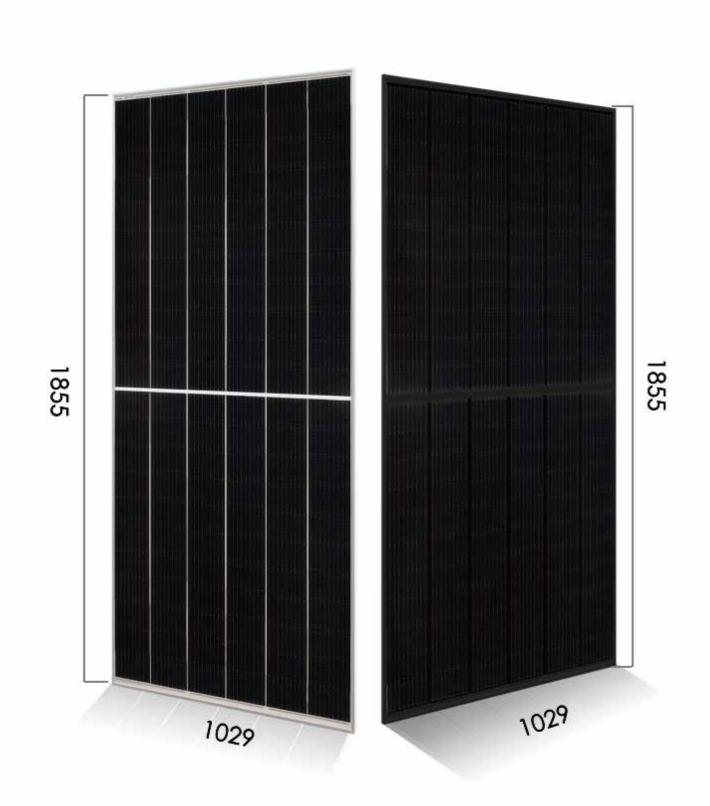


# For Rooftop Market

\* Nameplate power of a sample 20 panel system



The high efficiency of JinkoSolar N-type modules saves on space and labour costs, delivering class leading power whilst still allowing for the complex layouts required in rooftop projects.



## **Product Introduction**

**405 WP** 

21.22%

Power

Efficiency



### **Linear Power Warranty**

1st year: 1% 2-30 years: 0.4%



## Working Temp.

Lower than P-type



Better Temp. Coefficient

-0.34%



## **Product Warranty**

Black backsheet: 25 years White backsheet: 15 years



**Higher Module Efficiency** 

Up to 21.22 %



All Black appearance

## N-Type Series

N-type Monofacial 66 cell

405 Wp Power

15 YEAR Product Warranty

30 YEAR Power Warranty

### **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 21.22%).



### **Reduced Light Induced Degradation**

N-type cells deliver exceptional Light Induced Degradation (LID) performance when compared to more common P-type cells.



### 9BB instead of 5BB

9BB technology reduces the distance between busbars and finger grid lines, improving reliability and increasing output.



### **Higher lifetime Power Yield**

1% first year degradation, 0.4% linear degradation



### **Class Leading 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.)



### **Mechanical Characteristics**

Cell Type N type Mono-crystalline No.of cells 132 (2×66)

1855×1029×35mm (73.03×40.51×1.37 inch) Dimensions

Weight

22.1 kg (48.72 lbs) 3.2mm,Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass Front Glass

Frame Anodized Aluminium Alloy

IP67 Rated Junction Box TUV 1×4.0mm<sup>2</sup>

**Output Cables** (+): 290mm, (-): 145 mm or Customized Length

## N-Type Series

N-type Monofacial All black 66 cell

395 Wp Power

25 YEAR Product Warranty

30 YEAR Power Warranty

### **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 20.69%).



#### **Low Light Induced Degradation**

N-type cells deliver exceptional Light Induced Degradation (LID) performance when compared to more common P-type cells.



### 9BB instead of 5BB

9BB technology reduces the distance between busbars and finger grid lines, improving reliability and increasing output.



### **Higher lifetime Power Yield**

1% first year degradation, 0.4% linear degradation



### **Class Leading Warranty**

25 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.)



### **Mechanical Characteristics**

N type Mono-crystalline Cell Type 132 (2×66) No.of cells

1855×1029×35mm (73.03×40.51×1.37 inch) Dimensions

Weight 22.1 kg (48.72 lbs) Front Glass 3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass Anodized Aluminium Alloy Frame

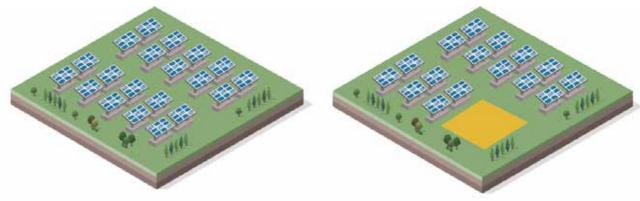
Junction Box TUV 1×4.0mm<sup>2</sup>

**Output Cables** (+): 290mm, (-): 145 mm or Customized Length



# For Utility Market

\*Example: Australia - 164MW Project



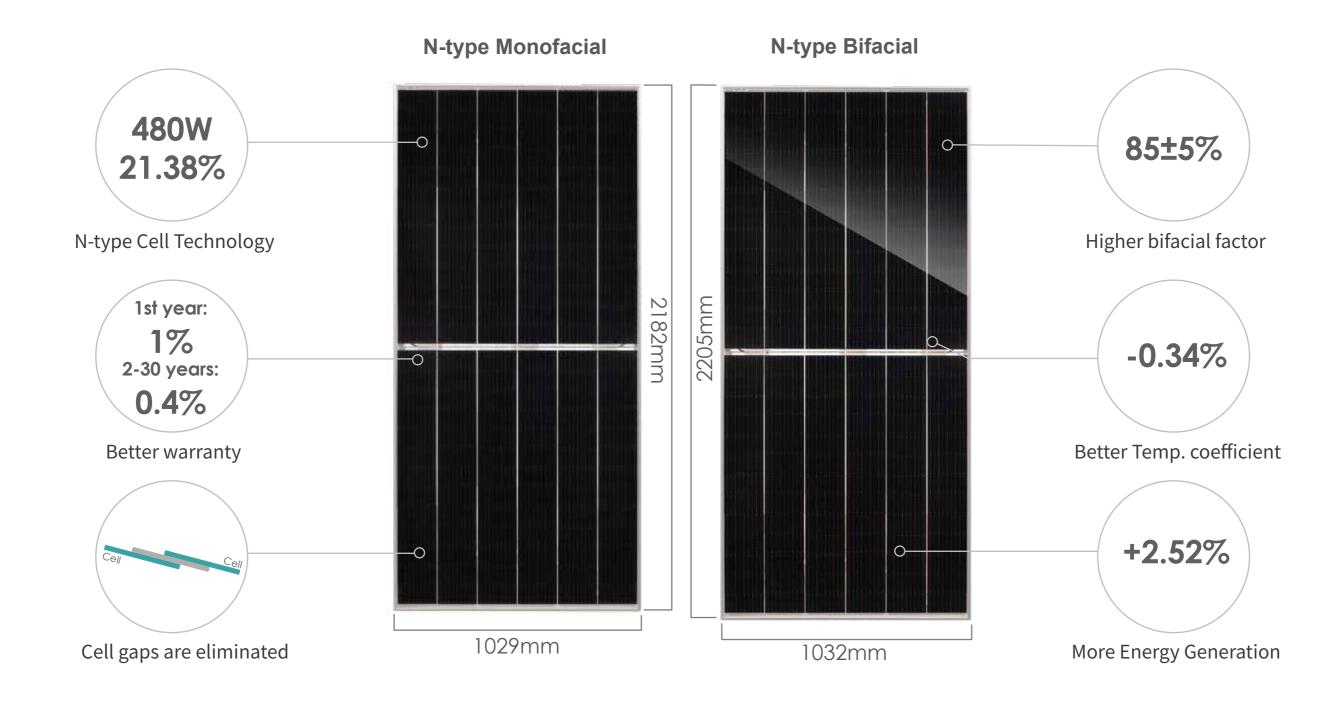
P-type 455W 20.00%

N-type 475W 20.87%

LCOE Analysis		
Module	P-type Module-455W	N-type Module-475W
1 <sup>st</sup> Degradation	2.5%	1%
Linear Degradation	0.55%	0.4%
Bifacial Energy gain	9%	10.9%
1st Year Generation	392783(MWh)	406483(MWh)
	Result	
LCOE(US cents/kWh)	2.42	2.27
IRR	12.34%	13.19%

Compared with 455Wp P-type modules, using JinkoSolar 475Wp N-type modules provides your project with a lower LCOE and a higher IRR. The result of heavy investment in R&D, such as new cell technologies and innovative cell doping to improve longevity, JinkoSolar N-type series is the panel of the future.

## **Product Introduction**

















## N-Type Series

## N-type Monofacial 78 cell

480 Wp Power

15 YEAR Product Warranty

30 YEAR Power Warranty

### **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 21.38%)



### Reduced Light Induced Degradation

N-type cells deliver exceptional Light Induced Degradation (LID) performance when compared to more common P-type cells.



#### 9BB instead of 5BB

9BB technology reduces the distance between busbars and finger grid lines, improving reliability and increasing output.



#### **Higher lifetime Power Yield**

1% first year degradation, 0.4% linear degradation



### **Class Leading 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.)



### **Mechanical Characteristics**

N type Mono-crystalline Cell Type 156 (2×78) No.of cells

2182×1029×40mm (85.91×40.51×1.57 inch) Dimensions

Weight Front Glass

Frame

26.1 kg (57.54 lbs) 3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass Anodized Aluminium Alloy

Junction Box IP67 Rated

TUV 1×4.0mm<sup>2</sup> **Output Cables** (+): 290mm, (-): 145 mm or Customized Length

# N-Type Series

N-type Bifacial 78 cell

475 Wp

**15 YEAR** 

Product Warranty

30 YEAR

Power Warranty

### **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 20.87%)



### **Reduced Light Induced Degradation**

N-type cells deliver exceptional Light Induced Degradation (LID) performance when compared to more common P-type cells.



#### 9BB instead of 5BB

9BB technology reduces the distance between busbars and finger grid lines, improving reliability and increasing output.



### **Higher lifetime Power Yield**

1% first year degradation, 0.4% linear degradation



### **Class Leading 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.)



### **Mechanical Characteristics**

Cell Type N type Mono-crystalline No.of cells 156 (2×78)

2205×1032×40mm (86.81×40.63×1.57 inch) Dimensions

26.5 kg (58.42 lbs) Weight 3.2mm, Anti-Reflection Coating, Front Glass

High Transmission, Low Iron, Tempered Glass Frame Anodized Aluminium Alloy IP67 Rated Junction Box

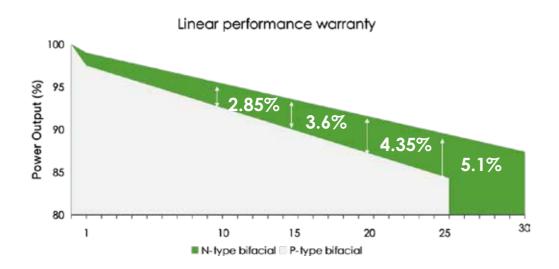
TUV 1×4.0mm<sup>2</sup> **Output Cables** (+): 250mm, (-): 150 mm or Customized Length

# N-Type Technology

### **Linear performance Warranty**

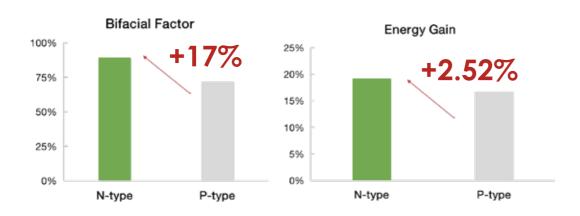
15-year Product Warranty30-year Warranty for Extra Linear Power Output

- -1.00% 1st-year Degradation
- -0.4% Annual Degradation



### Better Bi-facial Factor

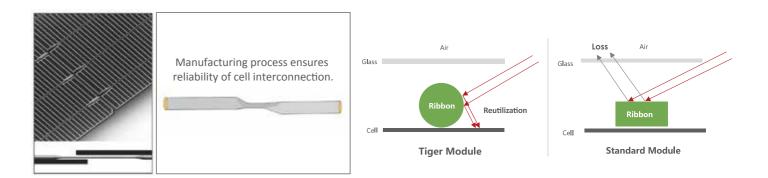
N-type bifacial generates **2.52%** more energy than p-type bifacial mainly because of a higher bifacial factor (89% vs 72%).



### Tiling Ribbon (TR) Technology

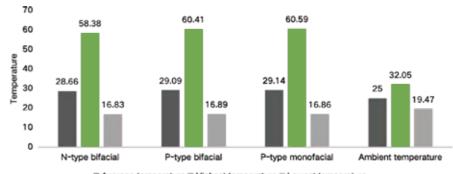
Inter-cell connection ribbons are more flexible, and as a result of a unique stamping process, excellent reliability is achieved.

Tiger series uses circular buswire technology, which has been developed by Jinko R&D, to enhance the absorption of reflected light and increase energy generation.



### **Lower Operating Temperature**

Although P-type bifacial panels already show some operational temperature benefits compared to standard P-type monofacial options, the N-type bifacial delivers even lower operational temperatures. This provides an incremental benefit to reliability and increases the operational voltage, enhancing output.



Location: Qionghai, China

Tilt: +/-60°

Installation height: 1.5m Ground type: Sand

Albedo: 20.41%

Test period: 2019.10.23~2019.11.13

■ Average temperature ■ Highest temperature ■ Lowest temperature