

Stand the Test of Time



Official website

2025  
product manual

# 24 Years

Experience in manufacturing PV modules

# 55 GW+

Global cumulative shipments of PV products

# 100+ Countries

Worldwide business footprints

# 1500+

Global leading partners

# 600+

Authorized patents

## Global Leading PV Manufacturer

Wuxi Suntech, founded in 2001, as a famous photovoltaic manufacturer in the world, is devoted to the R&D and the production of crystalline silicon solar cells and modules for 24 years. The company has its sales areas spread all over more than 100 countries and regions in the world, and the cumulative historical shipments exceeded 55 GW.

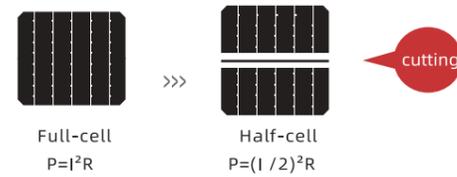
We aim to become the most trusted PV company through continuous innovation and excellent management.



# Half-cell Technology

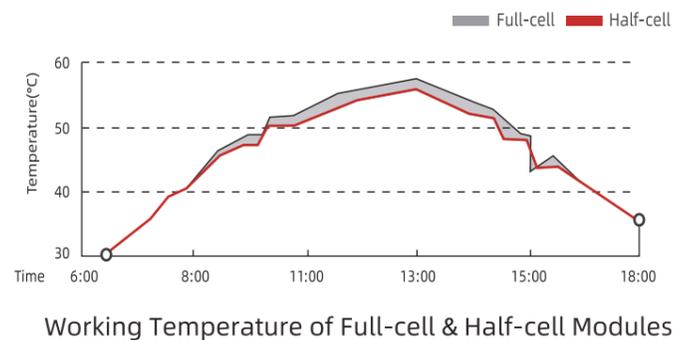
## Reducing current and loss:

Current density is reduced by 50%, internal power loss is reduced by 25%, and rated output power is increased.



## Lower working temperature:

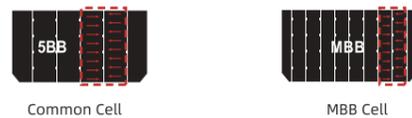
The working temperature of the half-cell modules is 2-3°C lower than the full-cell modules, improving the reliability of the module and the energy yield.



# MBB Technology

## Reducing string and increasing energy:

An increase in the number of busbar shortens the lateral current collection path, decreases the component  $R_s$  (series resistance), and increases the output power.



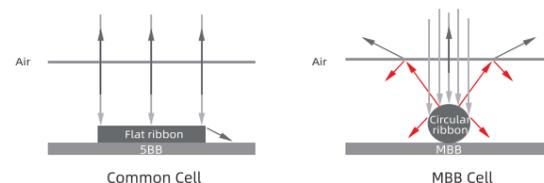
## Reducing busbar loss:

The busbars are more densely distributed, reducing loss.



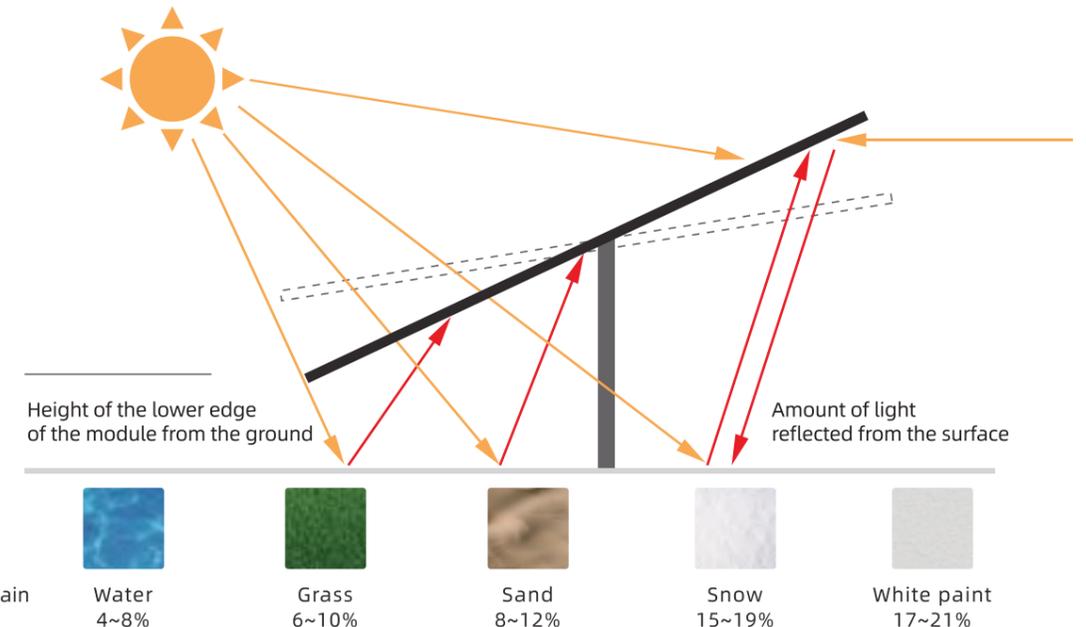
## Improving efficiency:

The circular ribbon reduces the shading area and repeatedly reflects the incident light to enhance the power generation.



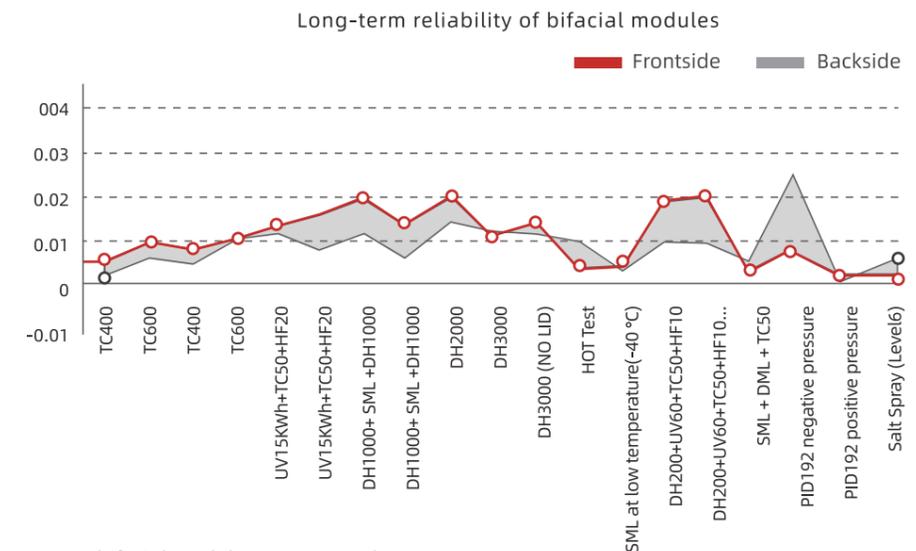
# Bifacial Technology

**Double-sided generation, powerful energy boost:** To make the most of reflection and scattering of light, modules should be placed in high reflective environments such as water, sand, grass and white painted ground. With various types of brackets, more power is obtained, under lower kilowatt-hour costs.



Note: Using the tracker as an example

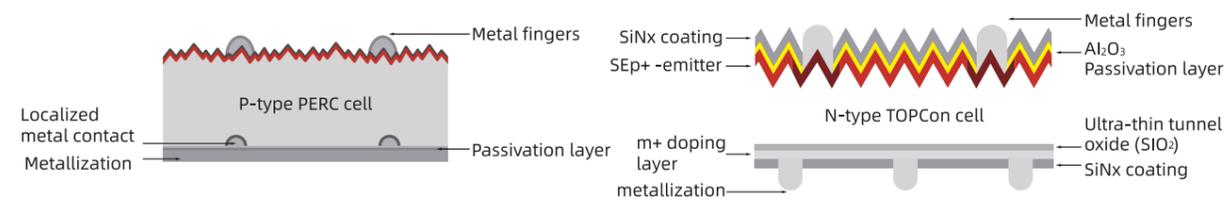
**High reliability:** Bifacial modules demonstrate superior long-term reliability, higher quality, and create more value.



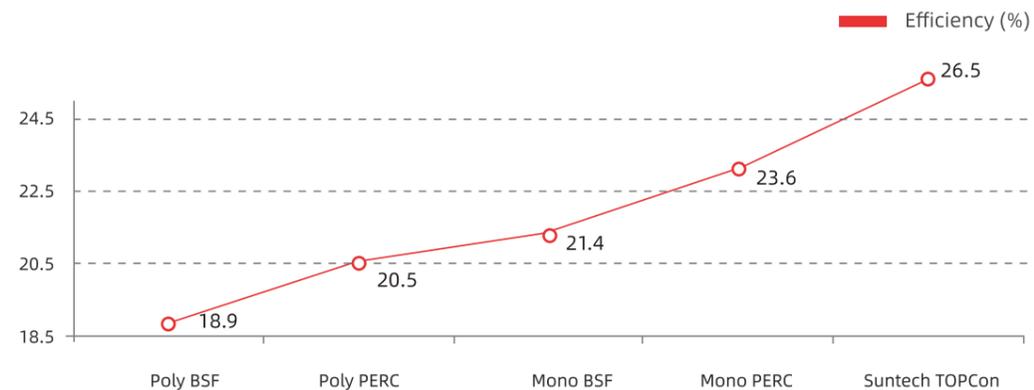
Note: Using the 182 mm bifacial module as an example

# N-type TOPCon Technology

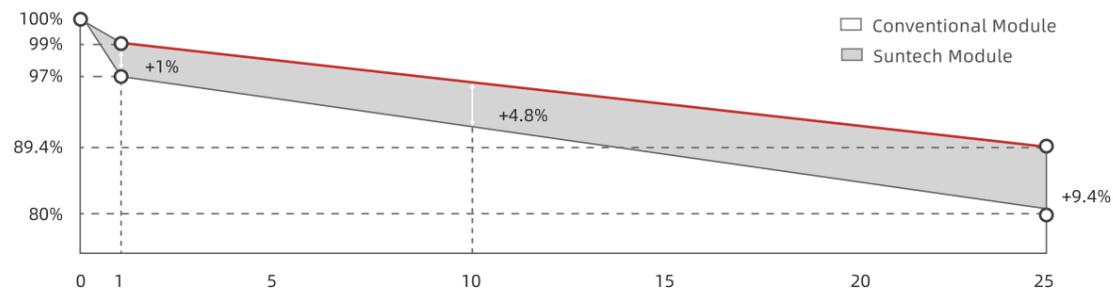
**Multi-layer energy enhancement and efficiency iteration:** TOPCon cell adopts a new surface passivation technology, which effectively reduces surface compound and metal contact compound, and enables improved efficiency. The efficiency of Suntech N-type cell exceeded 26.5%.



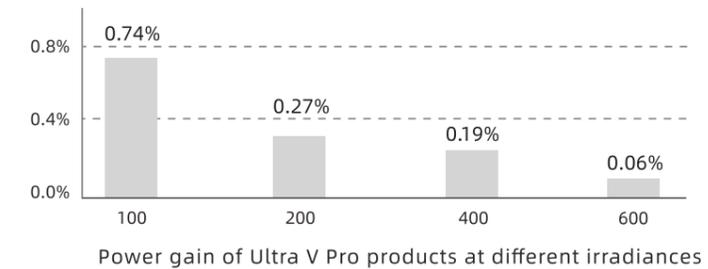
Efficiencies of different cell technologies



**Excellent warranty:** TOPCon modules have 1% lower first-year attenuation and 0.40% annual attenuation, resulting in higher power generation and higher revenue for customers.



**Excellent weak light performance:** Higher derived resistance, higher life expectancy, more power output gain in weak light condition, such as in the morning and evening or on cloudy days.

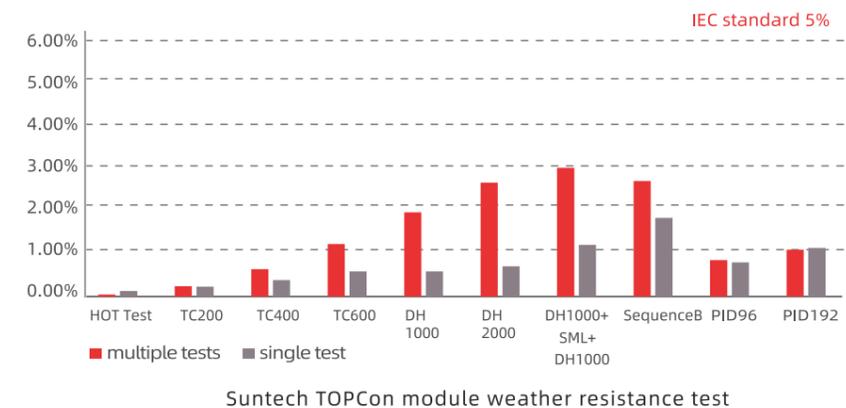


**Higher gain of double-sided power generation:** In terms of double-sided power generation performance, Suntech Power optimizes the bifaciality of N-type TOPCon modules to about 80% by combining a variety of efficiency enhancement technologies for modules and batteries, a jump from the previous 70% of traditional PERC ones.

Comparison of Module Bifaciality



**Excellent weather resistance performance:** Professional and comprehensive evaluation and selection of packaging auxiliary materials to further improve product reliability. By the climatic resistance tests, according to IEC standards, the power attenuation is less than 2%. By multiple times tests, after the test sequence the power attenuation is less than 5%.



# Suntech Products

## Utility Solar Power Plant

Helping the world achieve carbon neutrality goals

## Distribution Commercial & Industrial

Helping industrial and commercial enterprises save energy & reduce consumption, for an environmentally oriented energy transition

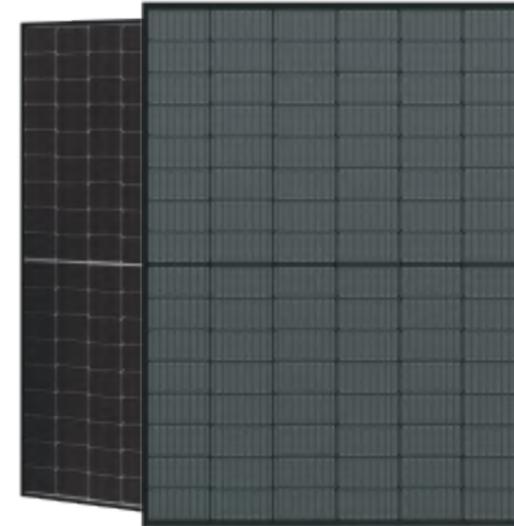
## Distribution Residential

Providing stable green electricity and increasing residents' income



# Distribution

Commercial/Industrial/Residential



Higher Power Output



Lower BOS Cost



Zero LID



Lowest Temperature Coefficient



Lower Working Temperature



Bifacial Gain

## Basic Products

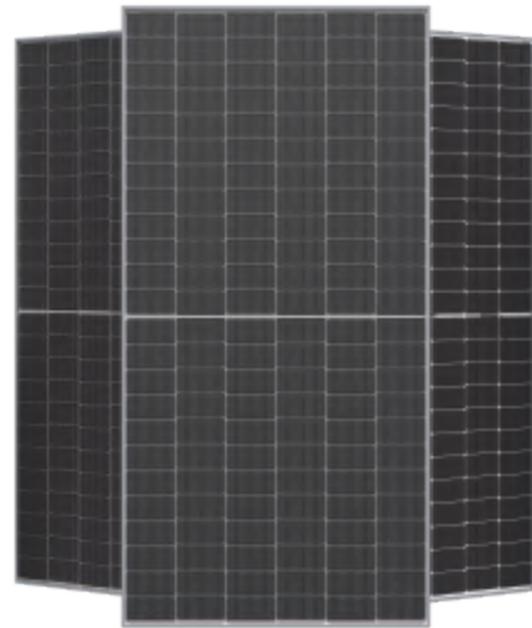
	Module type	Power (w)	Dimensions (mm)	Weight (kg)
<b>Ultra VPro mini</b> First year power degradation 1% Annual degradation 0.40%	※ <b>H48-Nkh+</b>	440-460	1762x1134x30	21.5
	※ <b>H48-Nfb+</b>	435-455	1762x1134x30	21.5
<b>Ultra VPro</b> First year power degradation 1% Annual degradation 0.40%	※ <b>H54-Nkh+</b>	495-515	1961x1134x30	23.5
	※ <b>H54-Nfb+</b>	490-510	1961x1134x30	23.5
	※ <b>H66-Nsh+</b>	605-625	2382x1134x30	32.5

※ Glass-glass module  
 TOPCon module in red

Note: See datasheet for details

# Distribution

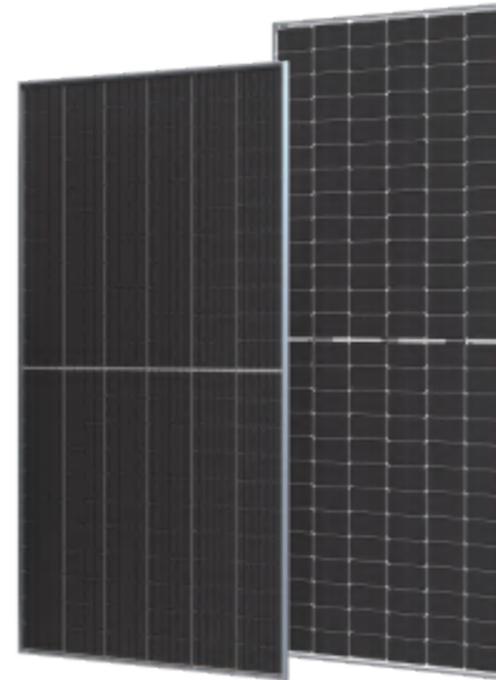
Commercial/Industrial/Residential



- Higher Power Output
- Lower BOS Cost
- Zero LID
- Lowest Temperature Coefficient
- Lower Working Temperature
- Bifacial Gain

# Utility

Solar Power Plant



- Higher Power Output
- Lower BOS Cost
- Optimize Circuit And Decrease Internal Loss
- Weak Light
- Ageing Resistance
- Distributed Junction Box

## Basic Products

	Module type	Power (w)	Dimensions (mm)	Weight (kg)
<b>Ultra V Pro mini</b> First year power degradation 1% Annual degradation 0.40%	C54/Nshm	430-450	1722x1134x30	21.0
	C54/Nshb	430-450	1722x1134x30	21.0
	※ C54/Nshkm+	430-450	1722x1134x30	21.0
	※ C54/Nshtb+	430-450	1722x1134x30	21.0
<b>Ultra V Pro</b> First year power degradation 1% Annual degradation 0.40%	※ C72/Nsh+	580-600	2278x1134x30	32.0

## Basic Products

	Module type	Power (w)	Dimensions (mm)	Weight (kg)
<b>Ultra X</b> First year power degradation 2% Annual degradation 0.45%/0.55%	※ D66/Pmh+	650-670	2384x1303x35	37.5
	D66/Wmh	655-675	2384x1303x35	33.5
<b>Ultra X Pro Plus</b> First year power degradation 1% Annual degradation 0.40%	※ D66-Nsh+	700-720	2384x1303x33	37.3