SUNTECH

Stand the Test of Time

2024
product manual

Official website

EN-STP-Product Mannual-No.1-Rev 2024

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 23 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 50 GW.

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

23 Years
Experience in manufacturing PV modules

50 GW+
Global cumulative shipments of PV products

100+ Countries
Worldwide business footprints

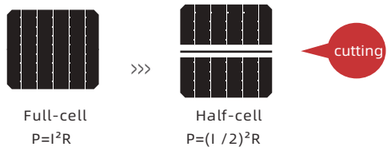
1500+
Global leading partners

600+
Authorized patents

Half-cell Technology

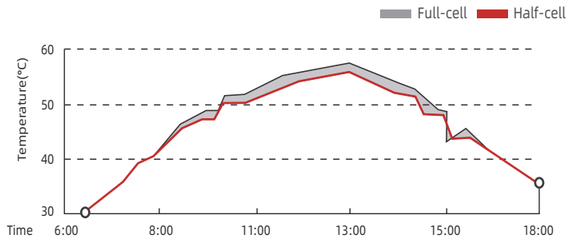
Reducing current and loss:

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℃ lower than the full-cell modules, improving the reliability of the module and the energy yield.



Working Temperature of Full-cell & Half-cell Modules

MBB Technology

Reducing string and increasing energy:

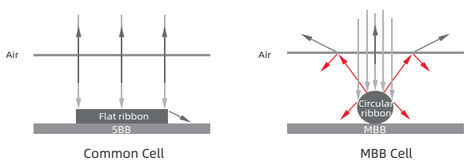
An increase in the number of busbar shortens the lateral current collection path, decreases the component Rs (series resistance), and increases the output power.

Reducing busbar loss:

The busbars are more densely distributed, reducing loss.

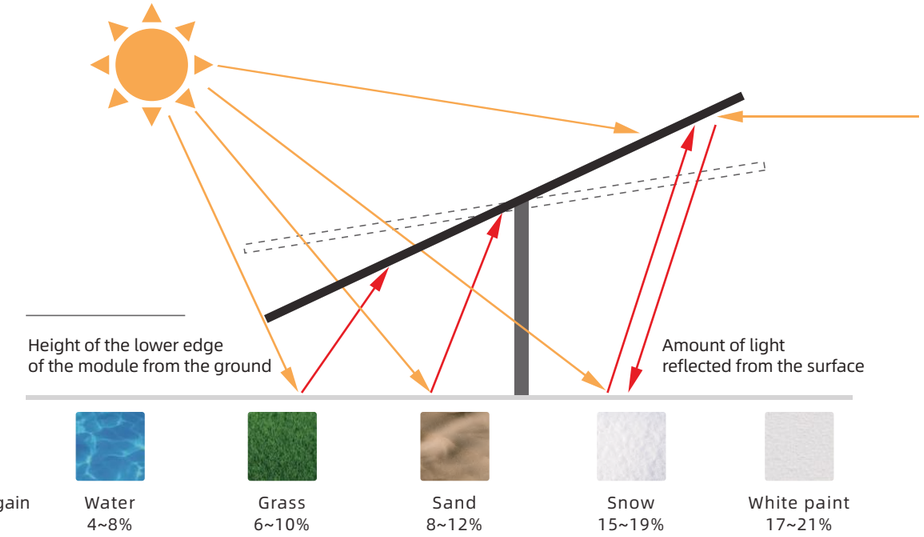
Improving efficiency:

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



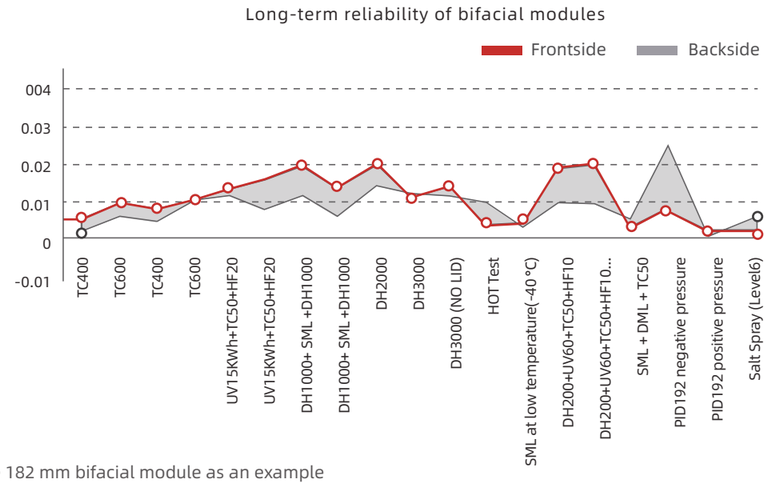
Bifacial Technology

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

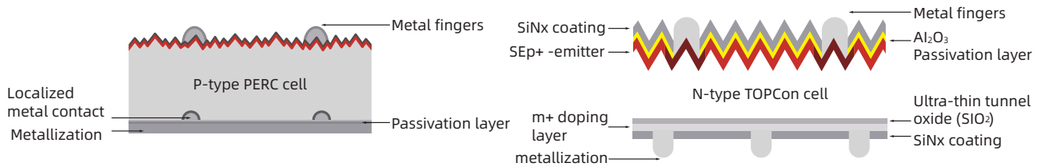
High reliability: Bifacial modules demonstrate superior long-term reliability, higher quality, and create more value.



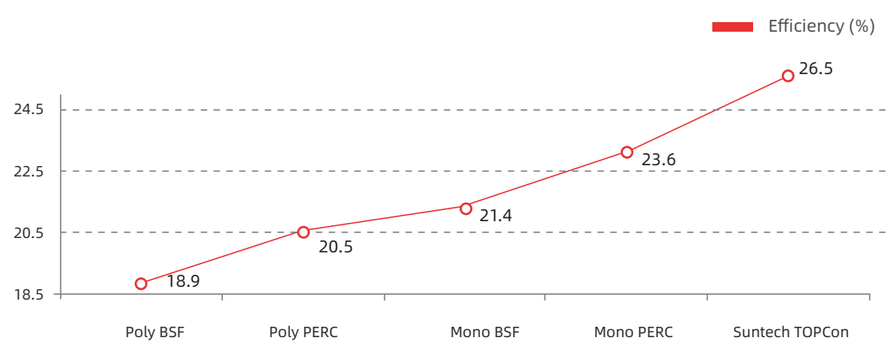
Note: Using the 182 mm bifacial module as an example

N-type TOPCon Technology

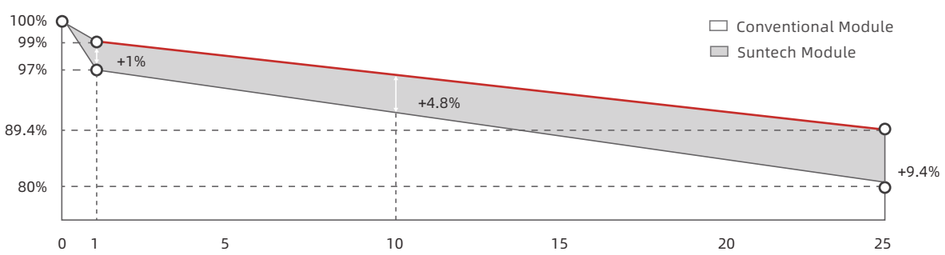
Multi-layer energy enhancement and efficiency iteration: TOPCon cell adopts a new surface passivation technology, which effectively reduces surface compound and metal contact compound, and enables improved efficiency. The efficiency of Suntech N-type cell exceeded 26.5%.



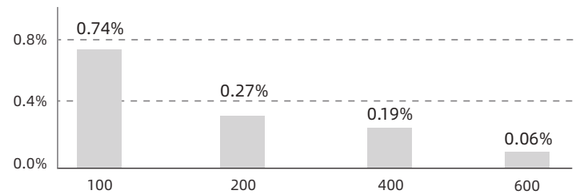
Efficiencies of different cell technologies



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.

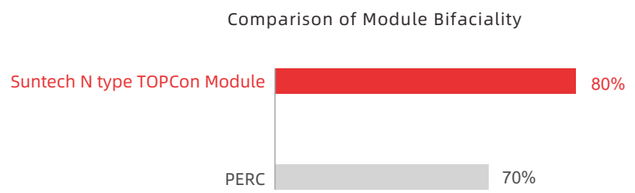


Excellent weak light performance: Higher derived resistance, higher life expectancy, more power output gain in weak light condition, such as in the morning and evening or on cloudy days.

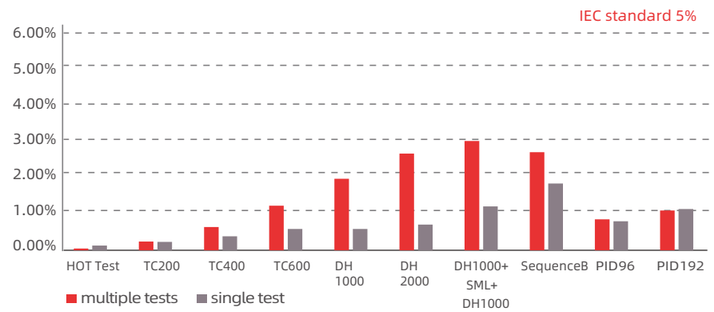


Power gain of Ultra V Pro products at different irradiances

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.



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 TOPCon module weather resistance test

Suntech Products

Utility Solar Power Plant

Helping the world achieve carbon neutrality goals

Distribution Commercial & Industrial

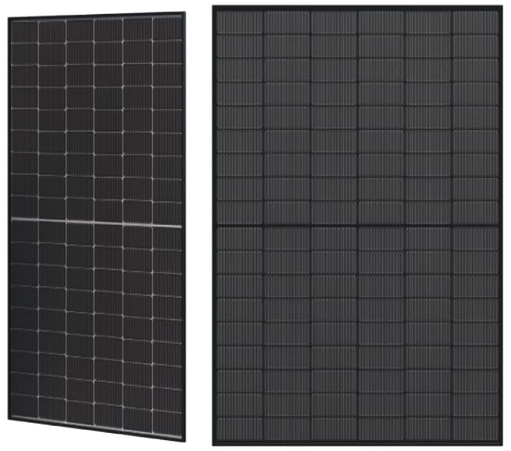
Helping industrial and commercial enterprises save energy & reduce consumption, for an environmentally oriented energy transition

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)
Ultra V Pro mini First year power degradation 1% Annual degradation 0.40%	H48-Nkh	425-445	1762×1134×30	21.5
	※ C54/Nshkm+	420-440	1722×1134×30	21.0
	※ C54/Nshtb+	405-425	1722×1134×30	21.0
	C54/Nshm	420-440	1722×1134×30	21.0
Ultra V mini First year power degradation 2% Annual degradation 0.55%	C54/Umhm	395-415	1722×1134×30	21.0

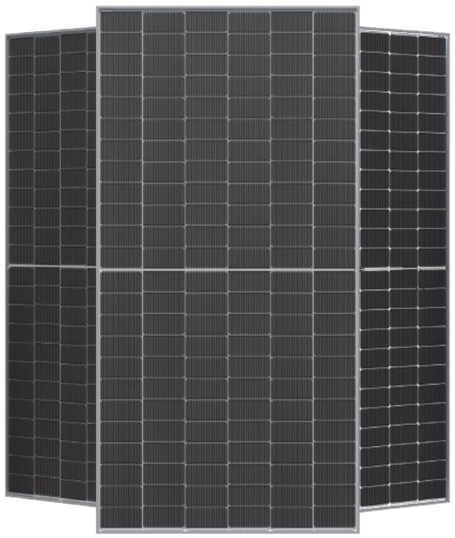
※ Glass-glass module

TOPCon module in red

Note: See datesheeet for details

Utility

Solar Power Plant



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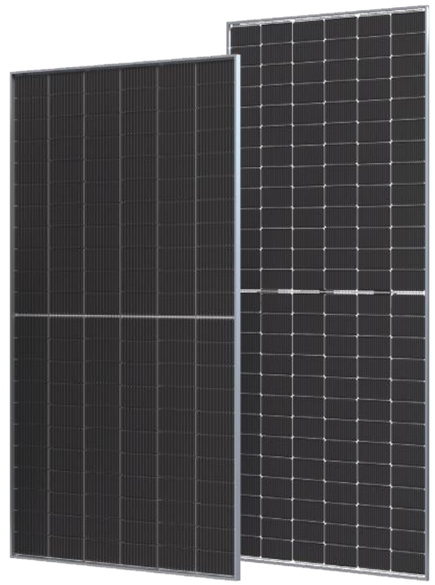
Bifacial Gain

Basic Products

	Module type	Power (w)	Dimensions (mm)	Weight (kg)
Ultra V Pro First year power degradation 1% Annual degradation 0.40%	※ C72/Nsh+	565-585	2278×1134×30	32.0
	※ H66-Nsh+	600-620	2382×1134×30	32.5
Ultra X Pro Plus First year power degradation 1% Annual degradation 0.40%	※ D66-Nsh+	680-700	2384×1303×35	37.5

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)
Ultra X First year power degradation 2% Annual degradation 0.55%/0.45%	※ D66/Pmh+	650-670	2384×1303×35	37.5
	D66/Wmh	655-675	2384×1303×35	33.5
Ultra V First year power degradation 2% Annual degradation 0.55%/0.45%	C72/Vmh	540-560	2278×1134×30	27.5
	※ C72/Pmh+	535-555	2278×1134×30	32.0