

SoleFiori Technology Company

Committed to the high-end manufacturing of new high-efficiency HJT solar cells and modules with low energy consumption and low carbon emissions

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SoleFiori Technology Company

Expert in High-efficiency HJT Solar Cell & Module



SoleFiori

Chase the Light and Make Human Future Bright

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SoleFiori Technology Company

Global Leader of HJT

SoleFiori Technology Company focuses on R&D and production of high efficiency HJT cells and modules. SoleFiori was jointly invested in and established by the top PV authority team, the world-renowned investment group Primavera Capital, and the leading state-owned enterprise Gree Group. The company is committed to the high-end manufacturing of new high efficiency HJT solar cells and modules with low energy consumption and low carbon emissions.



Global Photovoltaic Scientist



High-Efficiency HJT Club



Guangdong investment
Elite Enterprise



Member of Guangdong
Solar Energy Association



Member of CPIA

The R&D team is deeply committed to the PV industry
and has **20⁺** years of R&D experience.
Obtained Dozens of Technology Patents



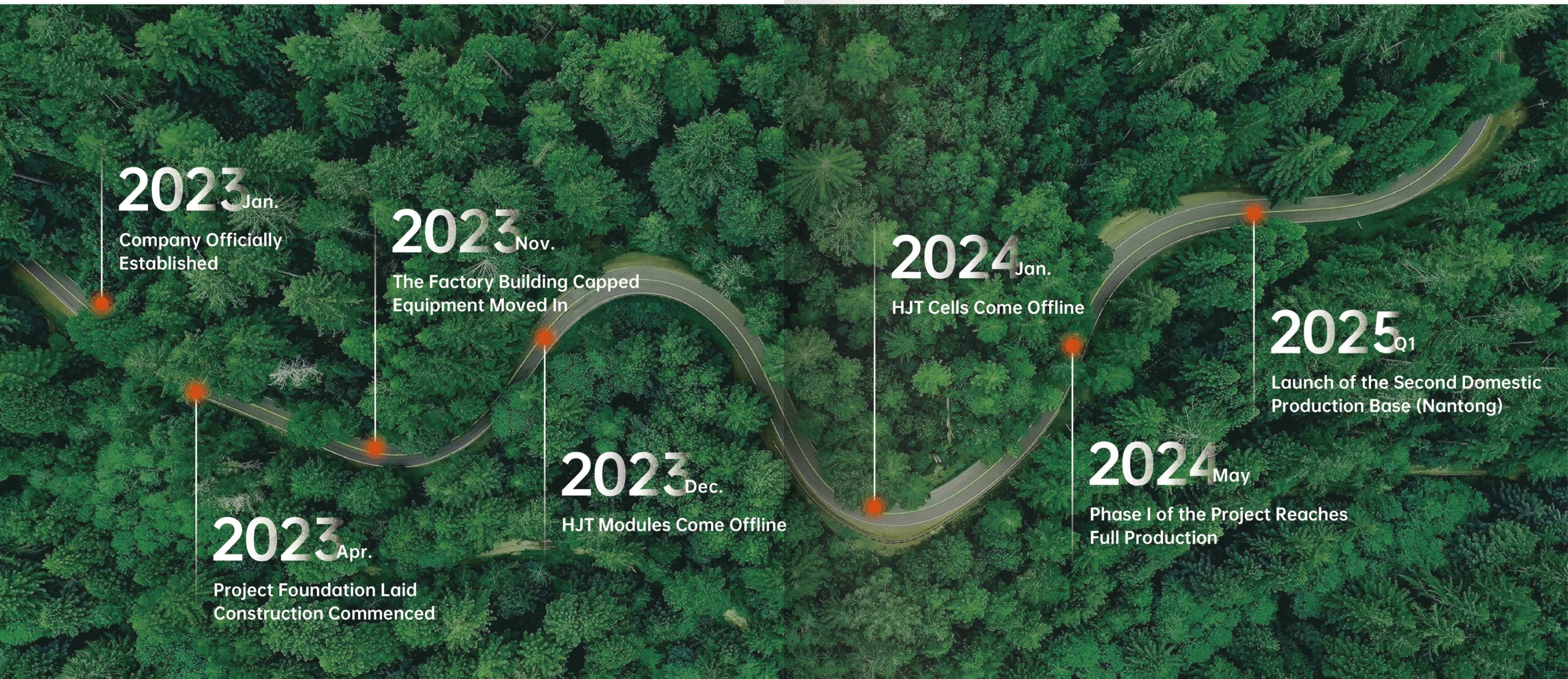


HJT Cell Capacity

Zhuhai 8GW
Nantong 4GW

HJT Module Capacity

Zhuhai 5GW
Nantong 6GW

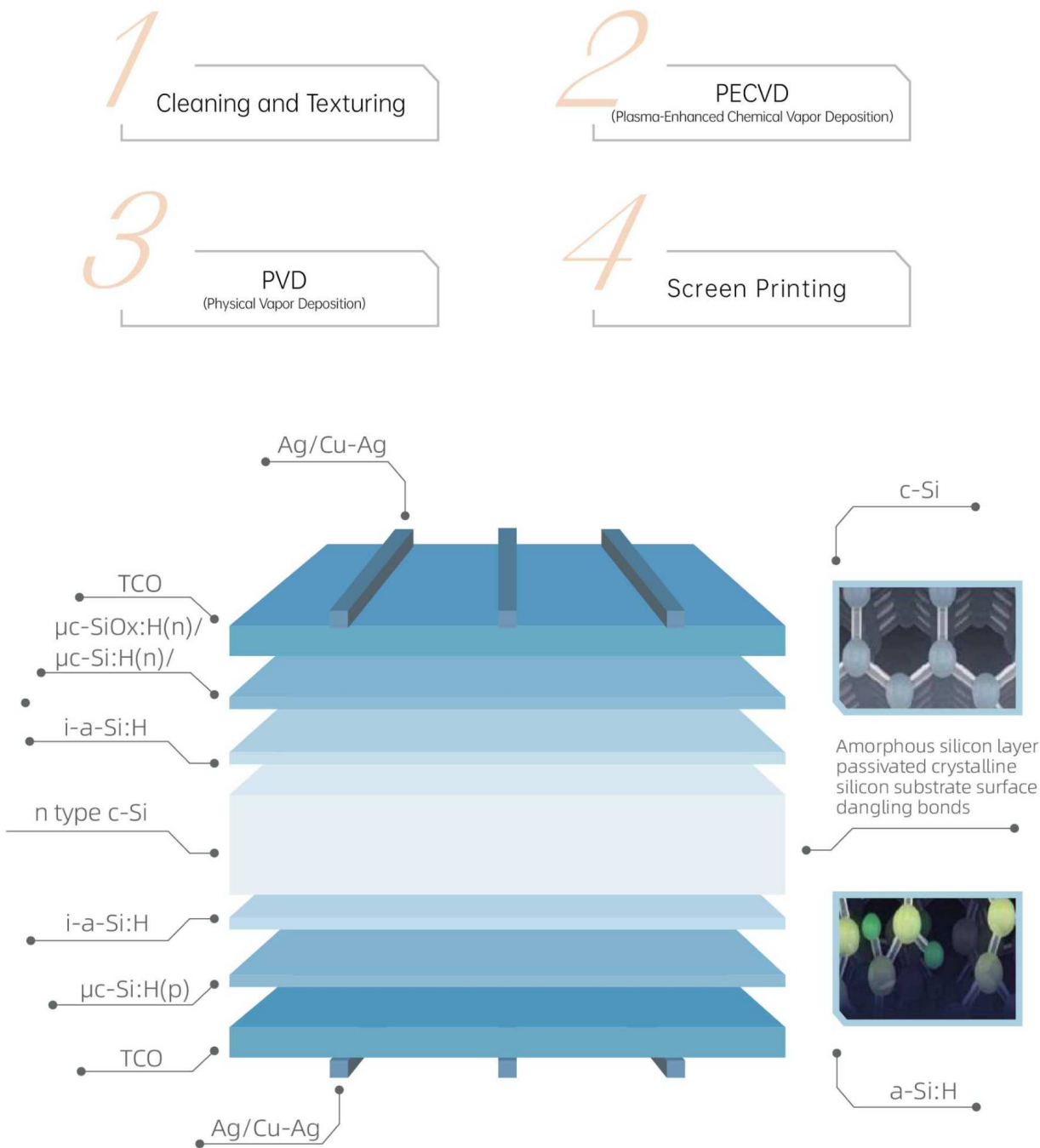


Ultimate Power Generation Improvement

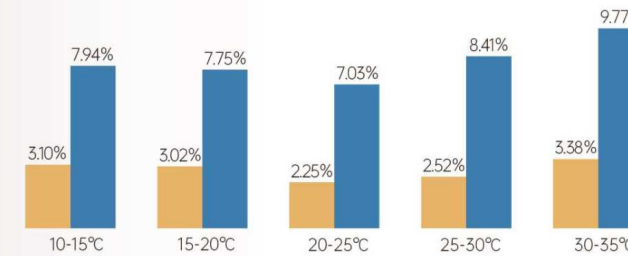
New Generation Mainstream Cell Platform Technology

HJT products combine the advantages of amorphous silicon and crystalline silicon cells and use the most advanced bifacial microcrystalline process in the industry, representing cutting-edge technology in the PV field. HJT cells are characterized by high conversion efficiency, high bifacial rate, excellent temperature coefficient, low PID, and low LID.

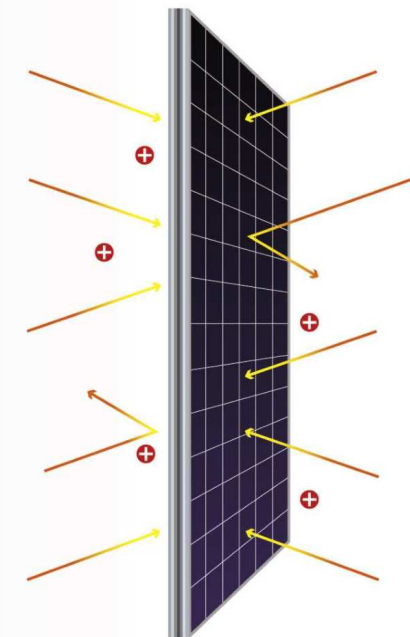
Four-Step Process for HJT Cells



Power Generation: HJT vs. Traditional Technology
Power Generation: HJT vs. Other N-type



*Source: CTC group



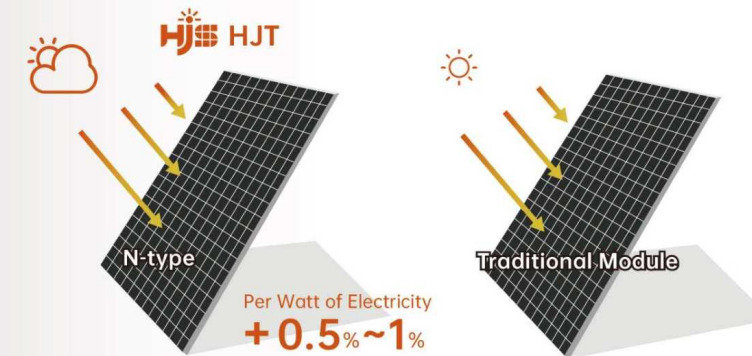
Excellent Temperature Coefficient

The temperature coefficient of HJT cells is approximately $-0.24\%/^{\circ}\text{C}$. Within different environmental temperature ranges, the power generation capacity per kilowatt is at an absolute advantage. The relative gain compared with traditional modules remains above 7%; The relative gain compared with other N-type modules remains above 2.25%.

97% Ultra-High Bifaciality

The inherently symmetrical structure of HJT cells delivers over 10% relative gain compared to N-type monofacial modules and 3%-6% relative gain versus N-type bifacial modules.

Vertical Project Generation Gain:
HJT vs. Traditional Module: 22.81% gain
HJT vs. other N-type: 18.18% gain



+0.5~1% Low-Light Performance

N-type monocrystalline silicon wafers in HJT cells exhibit superior low-light performance compared to traditional technology monocrystalline silicon wafers, delivering about 0.5-1% higher energy generation per watt than bifacial traditional technology cells.

HJT 2.0

Mass Production Efficiency: 26.5%+

With outstanding photoelectric conversion efficiency, high bifaciality, and excellent temperature coefficient, SoleFiori's HJT modules significantly reduce investment costs for power plants while delivering higher energy yield under the same installed capacity, demonstrating industry-leading advantages.

Lower Power Degradation

HJT Modules: <1% First-Year Degradation, <0.3% Annual Degradation Thereafter

Long-Term High-Yield Power Generation Guarantee

Higher Efficiency→increased Energy Output
Lower Degradation→Stable Returns Over 30 Years

Thinner Wafer Thickness

Wafer Thickness Down to 80 μm
Maximizing Material and Energy for Sustainable Development

Lower LCOE

Low LCOE
Improved PV Power Plant ROI

Maximizing Customer Value Through HJT Technology:

As a next-gen platform-level cell technology in PV manufacturing, HJT cells deliver maximum value to diverse customers by optimally matching their differentiated needs in PV module applications.

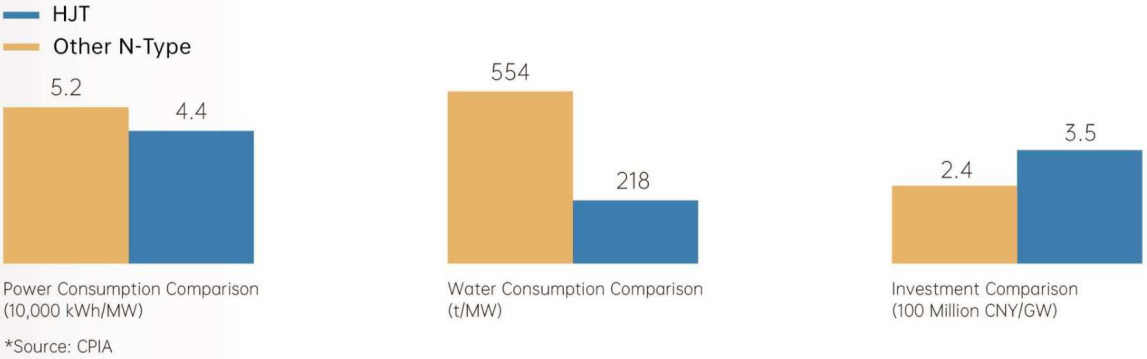
PV Project Types

Natural Environmental Characteristics

Macro External Conditions

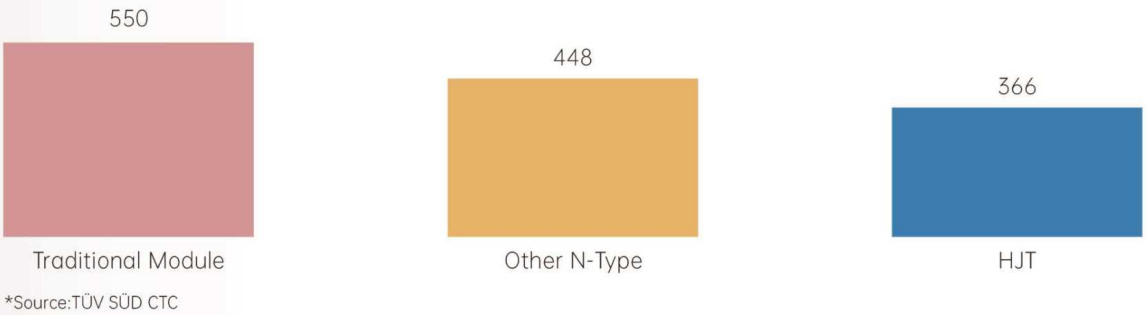
HJT vs. Other N-Type Technologies: Energy Consumption and Investment Comparison

By 2025, HJT technology achieves further optimization in energy and water consumption. It enables higher resource efficiency, significantly enhancing green and low-carbon performance, and further reducing overall investment costs.



Carbon Emissions Comparison

HJT Technology, with its low-carbon emission advantage, aligns with green and sustainable development, providing a more environmentally friendly and efficient solution for the clean energy industry.



PV Project Types—Full-Scenario PV Application Solutions

Utility-scale power plant projects, industrial and commercial rooftop projects, residential rooftop projects, curtain wall and fence projects, mobile energy facilities projects, etc.

Natural Environment Characteristics—Stability Guaranteed Under Harsh Conditions

Adaptable to diverse natural conditions such as temperature, humidity, wind speed, dust levels, radiance, and spectral properties.

Macro External Conditions—Comprehensive Adaptability to External Factors

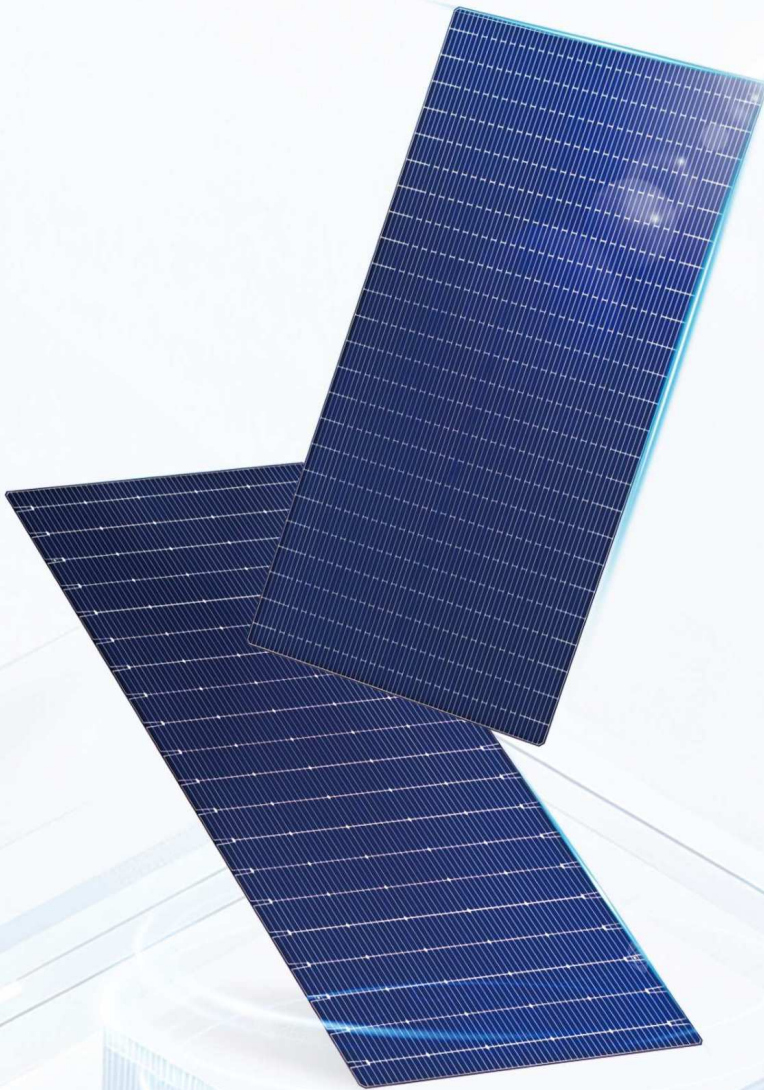
Fully compatible with various project constraints, including but not limited to site limitations, technical requirements, grid accessibility, consumption capacity, and economic factors such as electricity market conditions, land rental, and labor costs.



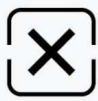
Bifacial Microcrystalline High-Efficiency HJT

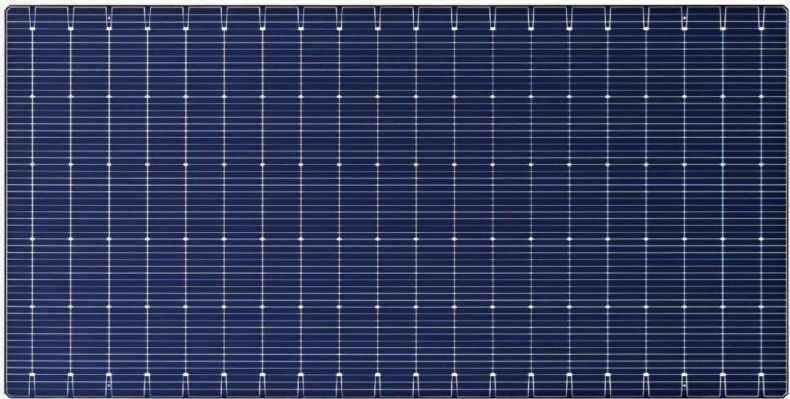
N-Type Monocrystalline Silicon Solar Cell 210 Half-Cut

HJT cell efficiency can exceed 28%, ranking among the highest-level solar technologies. SoleFiori has effectively improved the cell mass production efficiency through a number of core technologies such as wafer absorption, high-clean cleaning, intrinsic amorphous silicon passivation, doped layer microcrystalline silicon, SMBB, and 0BB.

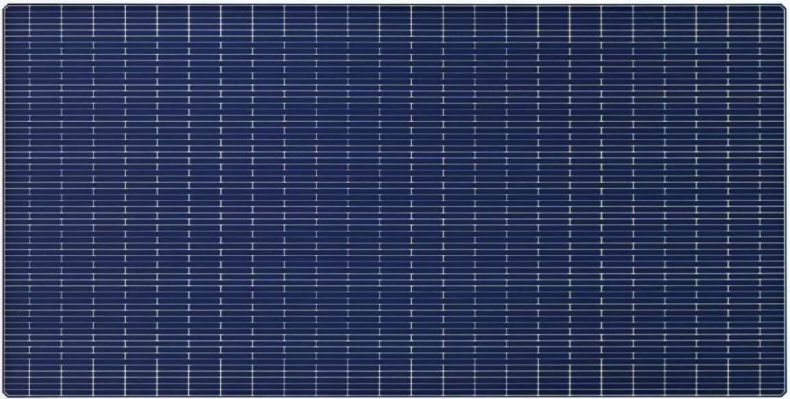



-0.24%/°C
Industry-Leading
Temperature Coefficient


LID&PID
No LID and PID



20BB
26%+
Average Efficiency of Mass Production

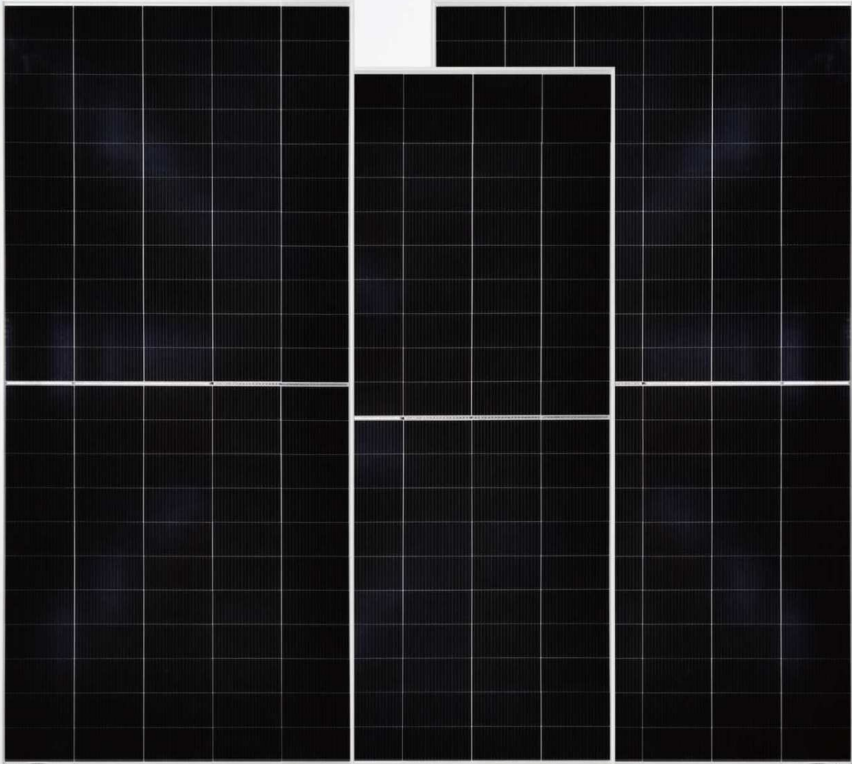


0BB
26.2%+
Average Efficiency of Mass Production

Cell Grid Line	20BB	0BB
Base Material	N-type monocrystalline silicon	N-type monocrystalline silicon
Wafer Thickness	110μm ⁺²⁰ ₋₁₀	100μm ⁺²⁰ ₋₁₀
Wafer Size	210mm*105mm±0.25mm	210mm*105mm±0.25mm

SoleFiori HJT Bifacial Double Glass Module

HJT 210mm Cell



620_w

675_w

740_w

Cell Connection	110 [5x11x2]	120 [6x10x2]	132 [6x11x2]
Maximum Module Efficiency	23.73%	23.8%	23.82%
Module Dimension	2384x1096x33mm	2172x1303x33mm	2384x1303x33mm
Module Weight	32.0kg	35.0kg	38.0kg
Typical Scenarios	Residential, Industrial & Commercial Roof Top	Ground power plants	Power Plants, Rooftop PV, Solar car ports, Hybrid Fishery-Solar Plant, BIPV, etc.

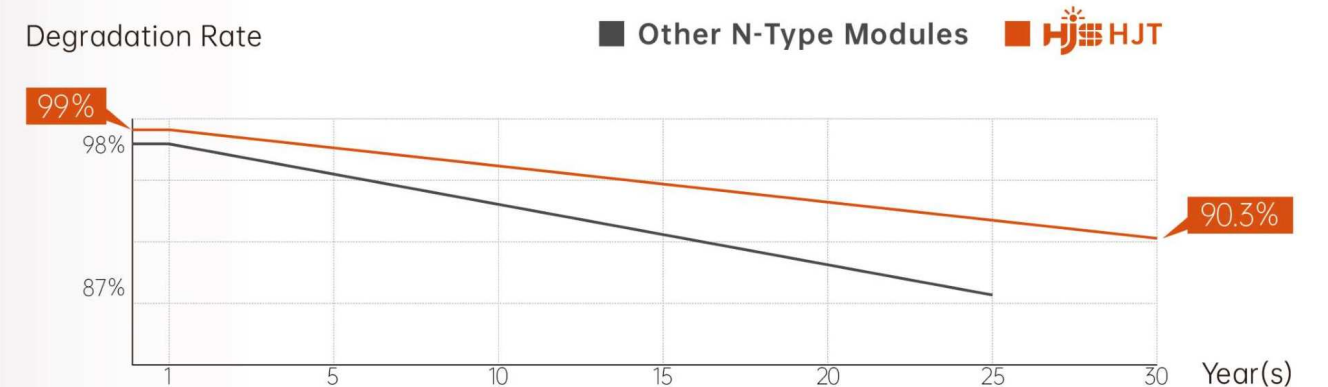
Quality First

Leading Product Warranty & Comprehensive Product Certification

To meet customers' expectations for high quality, SoleFiori continuously invests in state-of-the-art equipment and professional staff training. We have absolute confidence in product quality and performance.

Compared to traditional modules, SoleFiori's HJT modules deliver higher power output and superior reliability.
Degradation: 12-Year Product Warranty / 30-Year Power Warranty / 1% First-Year Degradation / 0.3% Annual Degradation.
A lower whole-life degradation rate ensures optimal power generation returns.

Degradation Rate



Product Certification

SoleFiori has obtained the latest PV module certifications IEC 61215:2021 and IEC 61730:2023, as well as internationally recognized certificates: CQC, CE, CB, ETL, cTUVus, DEWA, SASO, JPAC, CEC, and UKCA. The products have passed the industry's tests: salt mist, dust, ammonia, panel, letid and PID.



Case 1: Power Plant - Desert

Under high temperature and high reflection environment:

- ✓ HJT module's low temperature coefficient and high bifaciality are significantly enhanced.
- ✓ Power generation gain $\geq 3\%$ during the whole life cycle.
- ✓ Structural optimization of support systems, along with decreased cable demands and minimized installation expenditures, resulted in a BOS cost reduction of RMB 0.02/W.
- ✓ LCOE decreases by $> 2.1\%$
- ✓ Project IRR increases by $> 0.3\%$



Technology Route	BC	Topcon	HJT
Power (W)	650	710	730
Module Efficiency (%)	24.1	22.9	23.5
DC-Side Installation Capacity (MWp)	1	1	1
First-Year Degradation (%)	1	1	1
Annual Degradation Over 25 Years (%)	0.35	0.4	0.3
Module Investment (10k CNY)	75	69	73
Total Project Investment (10k CNY)	255.3	250.4	252.7
Annual Average Generation Over 25 Years (10k kWh)	178.96	177.87	183.2
LCOE(CNY/kWh)	0.1222	0.1209	0.1183
IRR (%)	8.7	8.86	9.14

*The data is calculated based on measured results from an actual experimental power station.

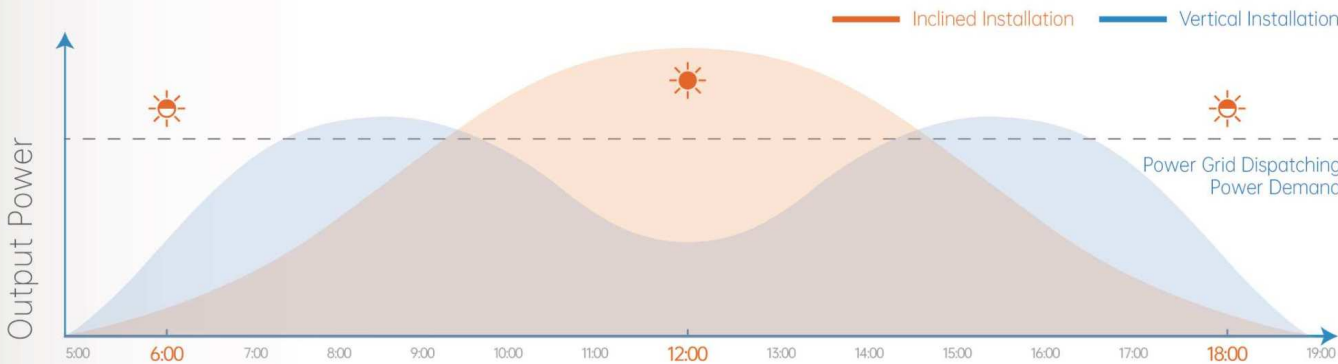
Case 2: Vertical Installation + Bifacial Power Generation

In vertical installation, HJT modules deliver superior power generation:

outperforming other N-type modules by about 10% and traditional modules by over 16%.

- ✓ Twin-peak power generation and double income:
peak generation during morning and evening hours doubles energy capture during high-price spot market periods.
- ✓ Flexible siting and versatile applications:
agri-PV, highway guardrails, building facades... No additional land required, but doubled power output.
- ✓ Dust-proof and easy to maintain, long-lasting and efficient:
vertical installation prevents dust accumulation and maintains long-lasting and efficient power generation.

No.	Front-Side Module Power	Back-Side Module Power	Bifaciality Rate	Average Bifaciality Rate
1	715.79	683.09	95.4%	95.3%
2	717. 21	682.51	95.2%	
3	717.68	685.01	95.4%	
4	716.81	682.51	95.2%	
5	715. 94	682.54	95.3%	
6	718.51	683.87	95.2%	



Legend:

- ★ Global Headquarters
- R&D Centre
- Projects Under Construction
- Partners



New Energy Internationalisation Practitioner

Since its foundation, SoleFiori has established a core strategy of promoting international development, and has made it a responsibility to facilitate the global transition to renewable energy.

Partners

SoleFiori collaborates with renowned global partners to establish a close cooperation, jointly advancing clean energy technology innovation and low-carbon industry development.

Vision

Chase the light and make human future bright

Mission

Innovation, motivation derived by sun
Quality first, customers foremost

Values

Be kind in life, be diligent in work,
win together and share the honor

Empowering a Low-Carbon Future

*Dedicated to Delivering Value to the PV Industry and
Society Striving for a Zero-Carbon Green Energy World!*

