www.jetionsolar.com

CNBM | JETION SOLAR
Visionary Green Energy

Open a new era of ultra-high efficiency

Jetion Solar (China) Co., Ltd.

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Jeniüs N-HJT technology brochure 2026_05

JETION SOLAR

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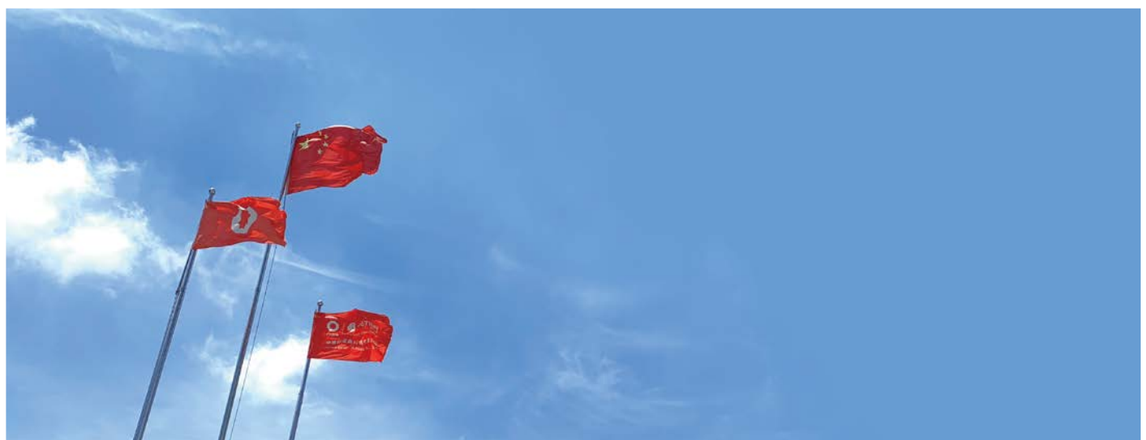
JETION SOLAR

GLOBAL LEADER IN SOLAR PRODUCT MANUFACTURING AND ENGINEERING SERVICES EXPERT

Founded in 2004, Jetion Solar is the flagship enterprise of CNBM Group (China National Building Materials Group Corporation) in the new energy sector. As a global leader in solar technology, Jetion Solar is at the forefront of new-quality productive forces, specializing in the R&D and manufacturing of high-efficiency solar cells and modules. Building on this foundation, Jetion Solar actively expands the global portfolio in solar power project development, engineering, construction, and operation, aiming to become a world-class provider of integrated PV products and engineering solutions.

So far more than 20 GW of Jetion Solar's products have been deployed across 83 countries and regions. And as backed by CNBM, Jetion Solar also provides global EPC services and project financing. Currently, Jetion Solar has an annual production capacity of 4.4 GW of cells, 2.5 GW of modules with 5 manufacturing plants worldwide. Jetion Solar serves worldwide customers with high-quality products and professional services.



CNBM's Solar Value Chain

From raw materials to project development, CNBM provides the whole PV value chain integration.

PV glass	PV Cell	PV Module	Thin-film Module	Utility/Commercial Project Development	Financing	EPC	Operation & Maintenance
Luoyang Glass	**Jetion Solar (China)**		AVANCIS	China Triumph International Engineering			
CNBM (Yixing) New Energy Resources			CTF SOLAR	**CNBM New Energy Engineering (subsidiary of Jetion Solar)**			
CNBM (Hefei) New Energy Resources				CNBM (Chengdu) Optoelectronic Materials			
CNBM (Tongcheng) New Energy Materials			Triumph Photovoltaic Materials				

HJT TECHNOLOGY PLATFORM

MAN OF ACTION IN PROMOTING APPLICATIONS

As a world-renowned solar photovoltaic enterprise, Jetion Solar attaches great importance to technology innovations, always adhering to the R&D philosophy of "Commercialize One Generation, Develop One Generation, and Reserve One Generation", and continuously promoting technology iterations and upgrades to provide customers with higher efficiency, higher quality photovoltaic products and better one-stop solutions.

Jetion Solar's stunning R&D team has been deeply involved in solar cell technology for many years, and with the accumulation of technology in silicon-based cells and the spirit of open innovation, significant breakthroughs have been made in exploring passivation technology, carrier selective conduction, metal-semiconductor contact, etc., and the HJT technology was born.

Jetion Solar R&D center is one of the most advanced photovoltaic laboratories in the industry. The laboratory has acquired China CNAS laboratory accreditation, TÜV SÜD CTF laboratory qualification and Wuxi key laboratory.

Jetion Solar has obtained more than 339 technology patents.

EXCELLENT R&D TEAM

3 PhDs, National 863/973 Project & First HJT industrialization Projects in China

50+ Leading Talents

20+ years of experience in the development of photovoltaic technology

TECHNOLOGY LEADS THE FUTURE

HJT HIGH-EFFICIENCY PHOTOVOLTAIC INDUSTRY LEADER

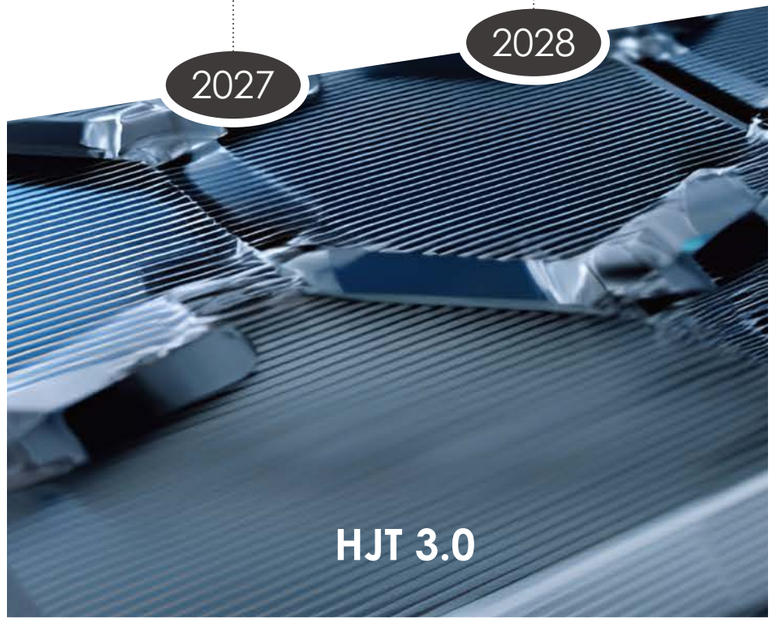
Jetion Solar R&D team has always been committed to the development and commercialization of new cell technologies. Based on silicon-based cells, the company started with Al-BSF polycrystalline silicon, transitioned to PERC cells and finally realized the industrialization of HJT on the ground. At the same time, the R&D team has also laid out advanced technologies such as microcrystalline, BC structure and shingled, and is always ready for technology upgrade. The clear technical route allows us to face each round of technological impact with ease.

2025
26.5%+
Cell Efficiency
730W+
Module Power

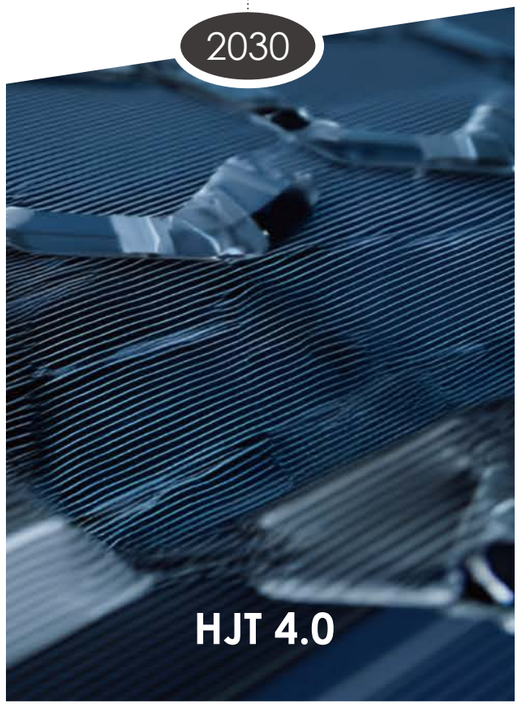
2026
26.8%+
Cell Efficiency
760W+
Module Power

2027
27.0%+
Cell Efficiency
780W+
Module Power

2028
28%+
Cell Efficiency
800W+
Module Power



2030
35%+
Cell Efficiency
1000W+
Module Power



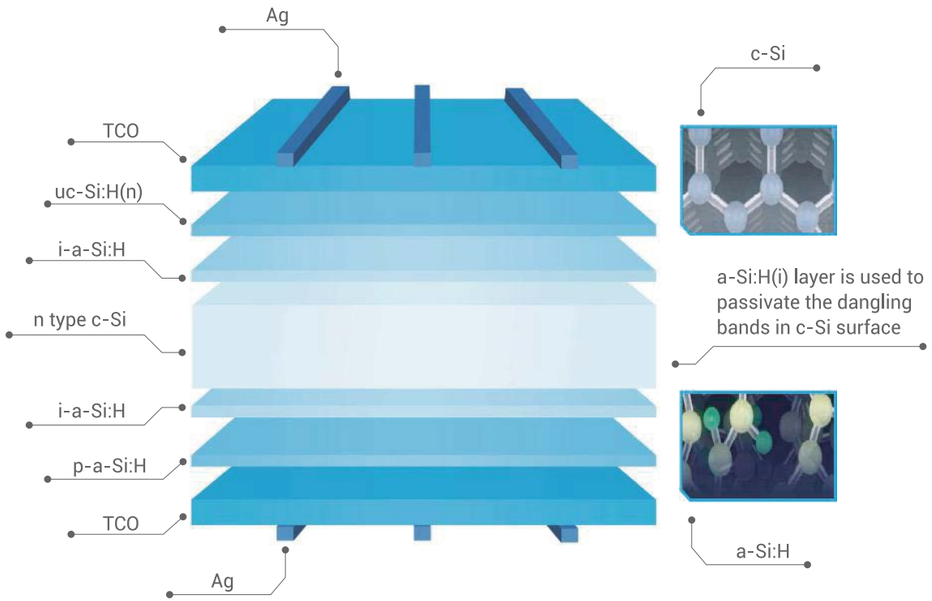
A leading domestic PV innovation platform for higher efficiency and lower cost.

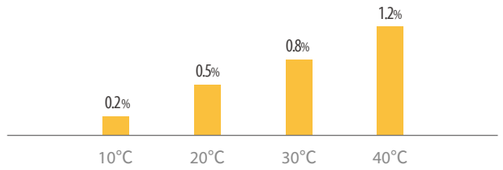
EXTREME INCREASE IN POWER GENERATION

HJT cells offer breakthrough improvements in efficiency and performance compared to traditional TOPCon technology. In addition, compared to other solar cell technologies, Jetion solar's HJT cell manufacturing requires only four low-temperature process steps, resulting in higher production efficiency and lower losses.

FOUR-STEP PROCESS

1. Texturing
2. A-si Front & Rear side deposition
3. TCO Front & Rear side deposition
4. Metallization





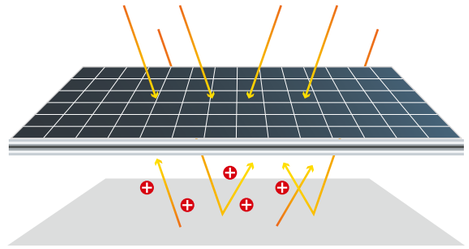
Power generation of HJT over TOPCon

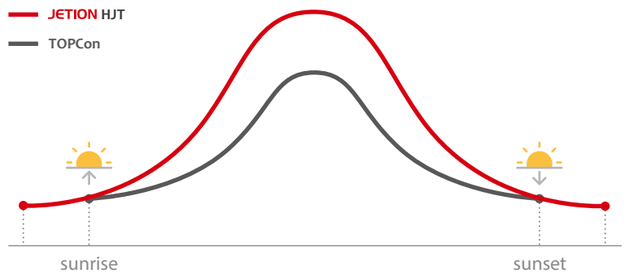
Extreme temperature coefficient

HJT cells have extreme temperature coefficients with improved power generation by **0.8-1.2%** compared to TOPCon at high temperatures in summer.

Bifaciality 90%

HJT comes with the fundamental advantage of the highest bifaciality, about **1-1.5%** higher than bifacial TOPCon.





Excellent low light performance

Extend power generation in low light conditions such as early morning and late afternoon, average daily power generation is approximately **0.4-0.6%** higher than bifacial TOPCon.

HJT CELLS

HJT cells combine the advantages of crystalline silicon and amorphous silicon thin-film technology, marking them as one of the solar industry's premier cell technologies today. Jetion Solar is fully committed to the HJT technology pathway, and has successfully elevated mass production efficiency through the employment of numerous core technologies, including wafer absorption, high cleanliness cleaning, intrinsic amorphous silicon passivation, doped layer microcrystalline silicon, MBB and half cut.

-0.24%/℃

NO LID&PID

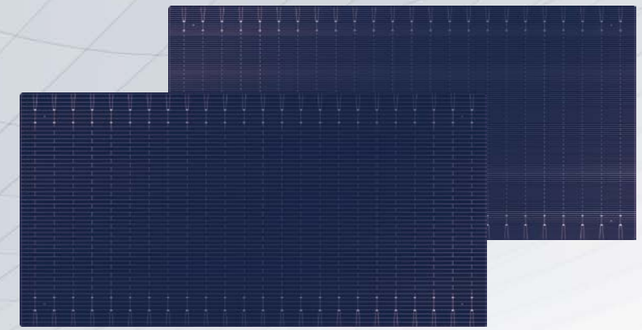
wafer	N-type wafer
Dimension	210×105±0.35mm
thickness	110±20μm
busbars	0BB/20BB

5.842W

Maximum power for mass production

26.5%

Maximum efficiency for mass production



-0.24 %/K

Temperature Coefficient of Voc (βVoc)

+0.04 %/K

Temperature Coefficient of Isc (αIsc)

Higher generation gain

HJT cells can increase module bifaciality to over 95%, ensuring higher power output.

Better power generation

The ultra-low temperature coefficient, excellent low light response, guarantees module power generation performance.

Lower power degradation

HJT modules have the first year power degradation of ≤1% and the annual power degradation of ≤0.3%.

HJT MODULES

Jeniüs N-HJT Bifacial modules

- Non-destructive smooth cutting surfaces with no heat affected areas and low impact on cell efficiency ;
- Dual-glass design with front/back loads up to 5400/2400 Pa ;
- Low water permeability packaging, high reliability and lower full life cycle degradation rates ;
- The extreme increase in efficiency thanks to the application of trans-light technology .

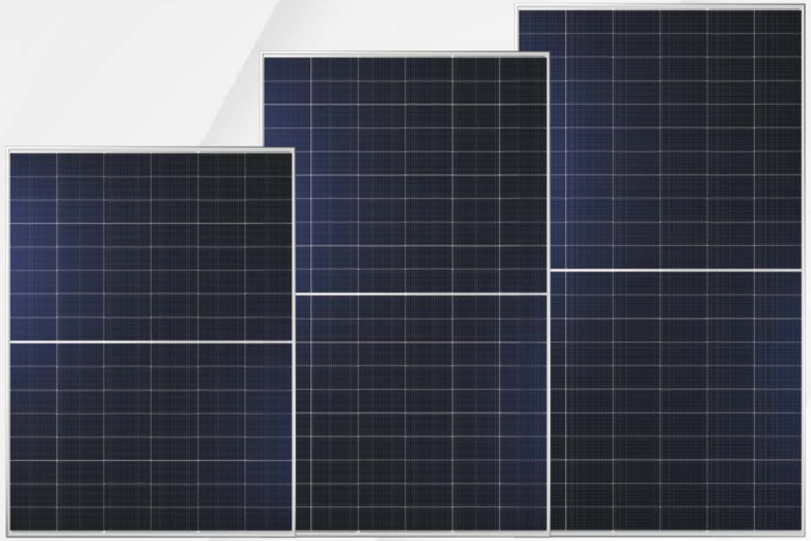
Curved surface packaging technology

Flexible packaging technology

High reliability packaging technology

Highly accurate and reliable SMBB stringing technology

Low loss cell cutting technology / Multi-segment technology



96-cell 120-cell 132-cell

276-cell

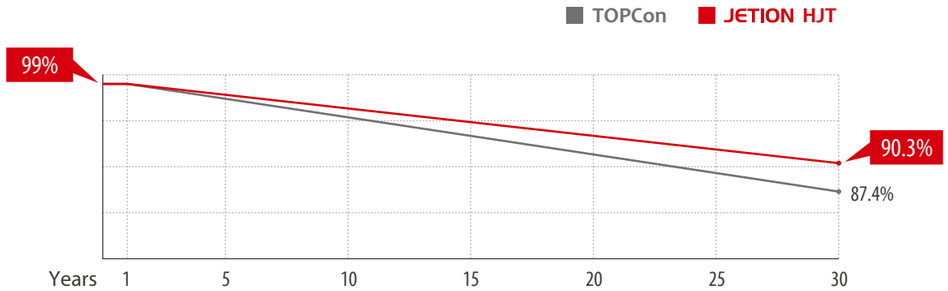
	525 W	660 W	755 W	765 W
Number of cells	96 [2 x (8 x 6)]	120 [2 x (10 x 6)]	132 [2 x (11 x 6)]	276 [2 x (23 x 6)]
Max-efficiency	23.0 %	23.3 %	24.3 %	24.6 %
Dimension	1750×1303×33 mm	2172×1303×33 mm	2384×1303×33 mm	2384×1303×33 mm
Weight	30 kg	34.3 kg	36.4 kg	37.4 kg
Application	Residential & Commercial	Utility	Utility	Utility

QUALITY FIRST

LEADING PRODUCT WARRANTIES & COMPLETE PRODUCT CERTIFICATION

In order to meet our customers' expectations of high quality, we constantly invest in state-of-the-art equipment and the most professional training of our staff. We have absolute confidence in the quality and performance of our products, even under the most extreme circumstances.

Jetion Solar's HJT modules are covered by a 15-year product warranty, with a 30-year output power degradation of <10% and a lower full life-cycle degradation rate to ensure optimal power generation yield.



CERTIFIED & INSURED


CERTIFICATE
No. Z2 068868 0124 Rev. 00

Holder of Certificate: Jetion Solar (China) Co., Ltd.

Certification Mark:

Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Mono-Crystalline Silicon Photovoltaic Module

Test report no.:

Valid until:

Date,

TÜV SÜD HJT Module Certification


CERTIFICATE
No. Z2 068868 0126 Rev. 00

Holder of Certificate: Jetion Solar (China) Co., Ltd.

Certification Mark:

Product:

Module(s):

Parameters:

Tested according to:

Test report no.:

Valid until:

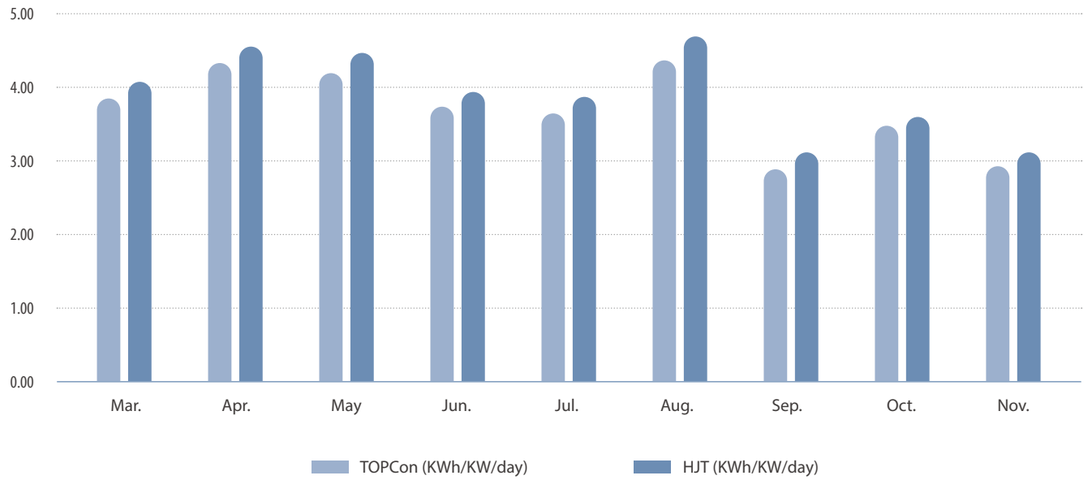
Date,

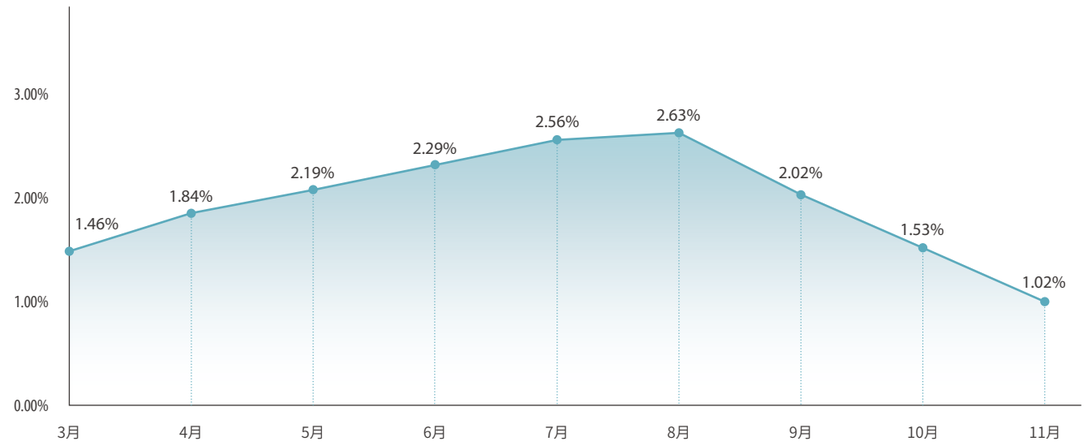
TÜV SÜD HJT Cell Certification

PEAK TILT PERFORMANCE

Jiangyin, Jiangsu (31°53′ N, 120°10′ E)　Optimum inclination 23° installation　Mar. - Nov.

	TOPCon power generation (kWh/kW/day)	HJT power generation (kWh/kW/day)	HJT over TOPCon gain
Mar.	3.90	4.09	1.46%
Apr.	4.34	4.57	1.84%
May	4.20	4.44	2.19%
Jun.	3.74	3.96	2.29%
Jul.	3.70	3.93	2.56%
Aug.	4.37	4.65	2.63%
Sep.	2.93	3.09	2.02%
Oct.	3.47	3.64	1.53%
Nov.	2.96	3.09	1.02%





The empirical data shows that HJT generated **2%** more electricity than TOPCon.

NEW VERTICAL VALUE

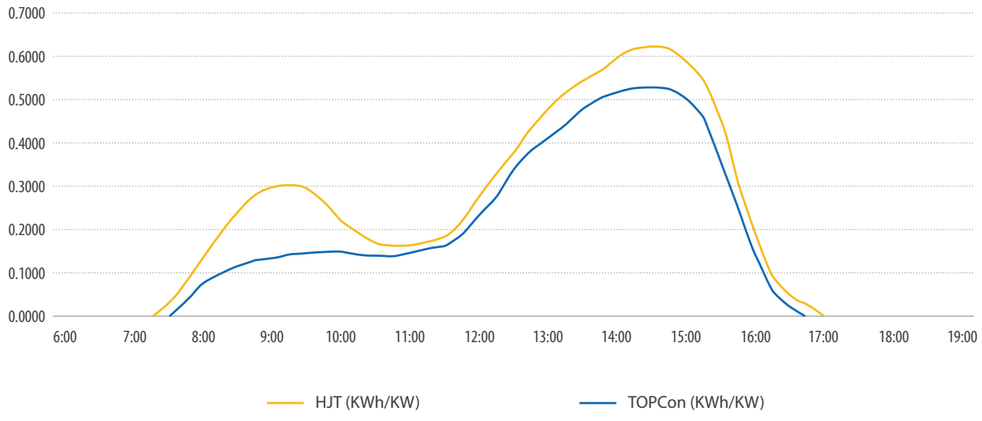
Jiangyin, Jiangsu (31°53′ N, 120°10′ E)

Focusing on highways, building facades, balconies, agriculture, and fencing, we deliver innovative solutions to help customers achieve optimal total returns.

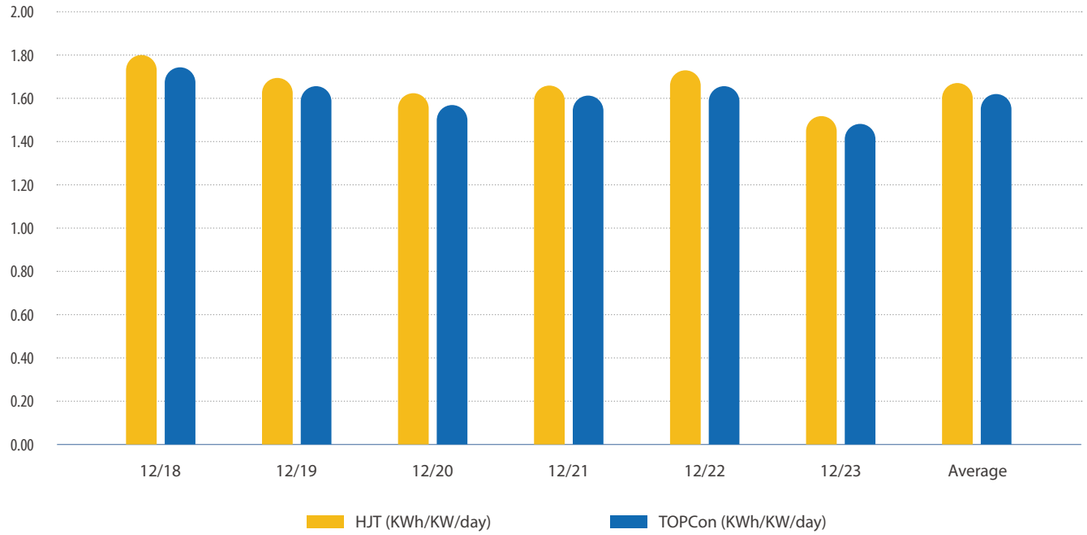
HJT module

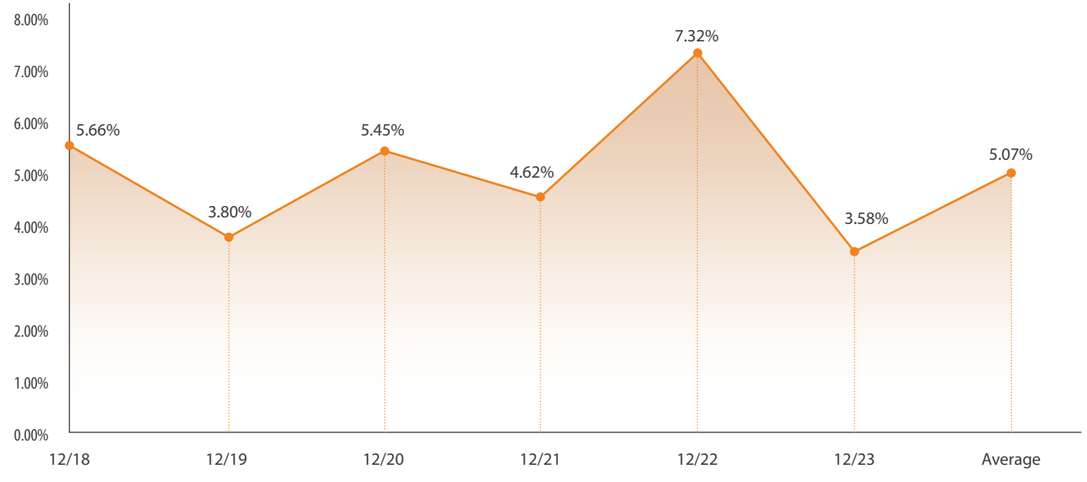
VS

TOPCon module



Better Dual-Peak | Longer Generation | Max Peak Output | All-Day Efficiency



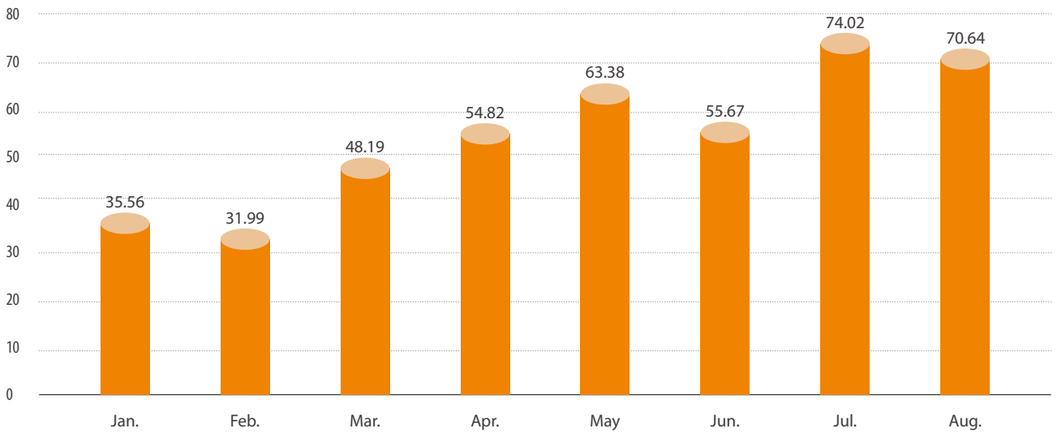


The empirical data shows that HJT generated **3.5~7%** more electricity than TOPCon.

PROJECT TRACK RECORDS

From lab to global scale, Jetion Solar is bringing HJT technology to life across Europe and Asia. Whether powering commercial rollouts in European markets or setting benchmarks in China's zero-carbon parks, we pair proprietary high-efficiency HJT modules with expert project delivery. This integrated approach helps clients worldwide cut costs, maximize performance, and harness the full value of every sunbeam.

Rooftop PV Generation (10,000 kWh)



This benchmark project embodies Jetion Solar's "zero-carbon factory" vision. Spanning the Phase I and II rooftops, the 5.4 MW distributed PV system utilizes our proprietary high-efficiency HJT modules to generate approximately 59 million kWh of clean electricity annually. By directly powering HJT cell production, the installation significantly reduces standard coal consumption. Delivered via our integrated "product + engineering + operation" model, it sets a replicable standard for low-carbon manufacturing transformation.

9.7 MWp

Jiaxing, Zhejiang Zhenshi Fibreglass HJT C&I Power Station

1 MWp

Albania HJT C&I Power Station

201.5 MWp

Binyang, Guangxi HJT&TOPCon Fishery-PV Power Station

5 MWp

Bulgaria Ground-mounted HJT Power Station