Tiger Neo 3.0

— Q&A Collection —

Marketing System-Technical Service Center

2025-7-14

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Note: Questions marked with ★ are key Q&As

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01 | Tiger Neo 3.0 Product Models, Availability, and Price

1.Is Tiger Neo 3.0 a single product or a product series?

Tiger Neo 3.0 is a series of high-power products built on Jinko's mature TOPCon technology platform. By integrating multiple innovative Jinko technologies, it achieves breakthroughs in both module power and efficiency. The series includes models for various applications, such as large-scale utility power plants and C&I rooftops, to meet diverse project requirements.

2.★ What are the main technological changes in Tiger Neo 3.0 compared to Tiger Neo 2.0?

The 2.0 series incorporated up to 20BB, HCP, and MAX technologies. The 3.0 series builds upon this by adding FP technology (the use of 20BB vs. 16BB may change; please stay updated with internal information) and will incorporate further upgrades based on Jinko's efficiency enhancement methods, achieving technological optimization. Explanations for each technology are in Section II.

3.★What are the currently released product models for the Tiger Neo 3.0 series? When will the official product datasheets be released?

The model type currently being officially exhibited and promoted by Jinko is the JKMxxxN-66QL6-BDV (module dimensions: 2382×1134mm). The official datasheet will be released in mid-to-late July. The Tiger Neo 3.0 production line is compatible with multiple models, and production schedules will be dynamically adjusted to ensure precise supply based on regional demands globally (e.g., the preference for smaller modules for European rooftop projects). For the residential market, Jinko is currently planning 48-cell and 51-cell versions of Tiger Neo 3.0 products. The 51-cell version will feature a 1.6mm+1.6mm glass-glass structure, intended specifically for the Australian market, with its datasheet planned for release at the end of July. The 48-cell version is in the planning stage; please stay updated with internal information.

4.★What is the production capacity for Tiger Neo 3.0 products this year? When will Jinko start accepting orders? Are there plans for expansion next year?

In 2025, the annual production capacity for Tiger Neo 3.0 will be 1 GW. Order acceptance will commence in Q4 2025, with deliveries starting from November 2025. Estimated monthly output of around 60 MW. However, please refer to the feedback from order inquiries for specific capacity distribution. It is currently estimated that by Q2 2026, the Tiger Neo 3.0 capacity will expand to 15 GW, but this plan may change dynamically based on market feedback. Please stay updated with internal information.

5.★What are the deliverable power classes for Tiger Neo 3.0 products this year? What is the expected power increase for next year?

For the N-66QL6-BDV product, mass production will start this November with a minimum order power class of 650W. The roadmap will be released in August. For specific deliverable power classes, please refer to your order inquiry. The N-51QL6-DV will also begin mass production this November with a power of 510W, and its roadmap will also be released by the end of August. Please note that much of the information for these new products is still under discussion and is subject to significant change. Please stay updated with internal information.

6.Compared to TOPCon competitors, do we have an advantage in power class, mass production timeline, or production capacity?

Jinko Solar sustains power output and mass production advantages in the TOPCon segment. Taking 2382×1134mm module size as reference: most manufacturers maintain approximately 620W power output, matching Jinko's conventional production capacity; leading competitors are progressively introducing advanced technologies to achieve 640-645W power levels, approaching Jinko's Tiger Neo 2.0 advanced production tier; regarding 670W high-power products, while multiple industry leaders showcased prototypes at SNEC, Jinko leads mass production implementation and will initiate 650W+ module delivery in November 2025.

7.What are the core selling points of Tiger Neo 3.0?

The core advantages of Jinko's Tiger Neo 3.0 module are its ultra-high power of up to 670W and a bifaciality of 85%. The 670W ultra-high power directly reduces the customer's system costs: for the same installed capacity, fewer modules are needed, significantly saving on land, mounting structures, and installation costs. Compared to the Tiger Neo 2.0 and competitor BC modules, the higher module bifaciality captures more reflected light, bringing additional revenue to the customer. Its excellent low-light performance provides more power generation gains during early morning and late evening hours, as well as on overcast days (Reasons for TOPCon's excellent low-light performance).

8.★What is the pricing strategy for Tiger Neo 3.0 products?

The pricing strategy for the N-66QL6-BDV product is a premium of approximately 10% over the mainstream 620W power class of the N-66HL4M-BDV. Although there is a 10% premium, this product, with its ultra-high power of up to 670W, reduces the number of modules required, significantly lowering costs for mounting structures, land, and installation. Combined with the long-term generation gains from low degradation and high bifaciality, customers receive a superior return through lower Balance of System (BOS) cost and Levelized Cost of Energy (LCOE), even with a slightly higher initial price per watt. This creates a value loop of "higher investment, higher return." Taking the N-66QL6-BDV as an example, calculations for a 10 MW distributed power station in Hainan show that, to achieve the same LCOE, the 660W N-66QL6-BDV can command a premium of 13.68 cents/W over a 620W module, which is higher than the current 10% premium.

The 51-cell version, with a primary power class of 510W, is designed to support the Australian market. Its pricing strategy will be flexibly adjusted according to market conditions in Australia, with plans for a similar premium as the Tiger Neo 2.0 all-black product. The same logic applies to the 48-cell version, for which the estimated power is under evaluation and expected to be released in September.

02 | Tiger Neo 3.0 Product Technology, Core Parameters, and Performance

1.★What is the source of such a high power increase in Tiger Neo 3.0?

A: The core of the Tiger Neo 3.0 module's ability to achieve an ultra-high power of 670W lies in Jinko's deep integration of multiple cutting-edge technologies. It combines advanced technologies such as HCP, 20BB/SMBB (please monitor internal updates for the final technology used), MAX, and FP. By optimizing the cell's grid line design, passivation layer, and metallization process, the cell conversion efficiency can be increased to 27%, and the bifaciality is simultaneously raised to 85±5%. Additionally, the cell cutting is deeply optimized to expand the module's effective light-receiving area, fundamentally increasing the module's conversion efficiency per unit area.

2.What new technologies does Tiger Neo 3.0 include?

A: It includes HCP, MAX, 20BB/SMBB (please monitor internal updates for the final technology used), and FP technologies. The potential addition of other technologies will depend on internal R&D progress.

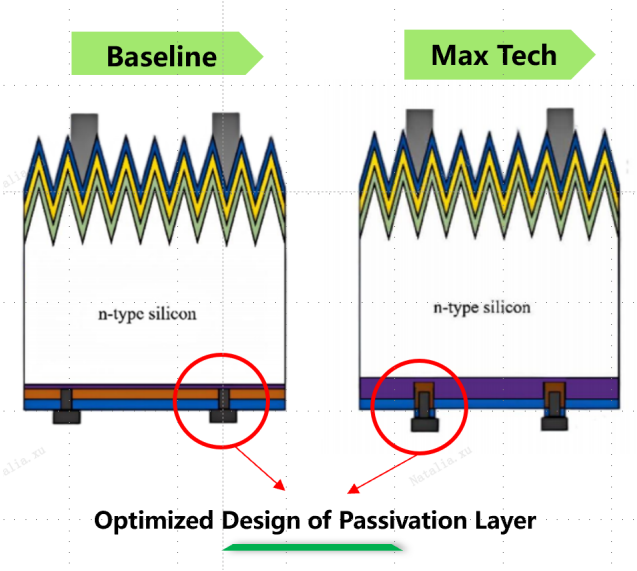
3.Where does the new Tiger Neo 3.0's high bifaciality of 85% come from?

A: The further increase in the bifaciality of Jinko's new product is thanks to the MAX technology, which structurally optimizes the passivation layer on the back of the cell. This technology optimizes the Poly-Si and SiNx layers on the cell's rear side, achieving both lower contact resistance and higher bifaciality. Compared to BC modules, whose actual bifaciality is only around 65-70% due to rear electrode shading, Jinko's dual glass module with 85% bifaciality generates 0.66% to 4.54% more energy per watt than BC in bifacial generation scenarios (e.g., desert, snow), based on Jinko's empirical data. This advantage covers more than 70% of the applicable market for bifacial modules, providing a significant LCOE advantage for large-scale utility projects.

4.What is MAX technology?

A: MAX technology is a patterned enhancement process that optimizes the backside Poly-Si layer and SiN☒ layer, improving product performance in three ways:

1. Lower contact resistance and parasitic absorption, which increases the short-circuit current and improves cell efficiency, resulting in a module power increase of 4-5W.
2. Optimized rear-side design, which reduces irradiation loss and increases bifaciality, further enhancing the module's power generation capacity in real-world use.
3. Optimized film thickness, which reduces the module's sensitivity to the environment and improves its weather resistance.



5.What is the bifaciality performance of mass-produced modules? How should this be evaluated in actual contract negotiations?

A: Based on the bifaciality of the modules used in field test sites (already equipped with MAX technology), the figure is around 84%. However, the bifaciality for mass production is subject to confirmation from R&D. R&D will provide feedback in early August; please monitor internal updates.

6.What is HCP technology? How does it contribute to module power enhancement?

A: HCP, or Half Cut Passivation technology, primarily serves to increase module power and enhance performance. In the previous generation of technology, cell cutting was performed during the module production stage, and the half-cells were directly soldered. Even with laser non-destructive cutting, the cut surface would still have defects, leading to carrier recombination and affecting module power. HCP technology moves the cell cutting process to the cell production stage and passivates the cut surface. By repairing the defects on the cut surface, it effectively improves cell efficiency and module power. Measured data shows that this technology can increase module power by more than 5W and cell efficiency by 0.5%.

7.What is FP technology?

A: FP technology is Jinko's multi-cut cell technology. By optimizing the number of cell slices to 4, it can increase module power by about 10W. Besides the power increase, it effectively reduces the impact of partial shading on the overall power generation performance, lowering shading losses. The module also generates less heat during operation, which improves its heat dissipation, extends its service life, and increases its power generation efficiency.

8.Many manufacturers launched similar multi-cut cell products at the SNEC exhibition. What is Jinko's advantage?

A: Jinko's core advantage among similar multi-cut cell products at SNEC stems from its long-term deep cultivation of TOPCon technology and the dual guarantee of its mass production system. As one of the industry's earliest adopters of TOPCon, our accumulated R&D foundation supports continuous technological iteration. This, combined with mature, high-standard production processes and a professional technical team, ensures the reliability of the product from R&D to delivery. This deep synergy of technological expertise and manufacturing experience provides customers with more stable performance and long-term return guarantees.

9.★What improvements does the Tiger Neo 3.0 module have in terms of anti-shading performance?

A: The multi-cut cell design can effectively reduce the impact of partial shading on the entire module's power generation performance. Tiger Neo 3.0 products are equipped with FP technology, which uses a parallel circuit design. When some cells are shaded, the current can be shunted through the parallel paths, reducing the current load on the abnormal cells and significantly lowering the module's abnormal temperature. Currently, there are no field test results comparing Tiger Neo 3.0 and Tiger Neo 2.0, but R&D plans to conduct these tests at the end of July. Please stay updated with internal information.

10.★Will the temperature coefficient of Tiger Neo 3.0 be optimized? Is there supporting data?

A: Compared to the -0.29%/ ° C of the Tiger Neo 2.0, Tiger Neo 3.0 will feature a further optimized temperature coefficient, which will be consistent at -0.26%/ ° C for the entire series. Temperature coefficient testing is currently underway by R&D, with results expected in early August. Please monitor internal updates.

11.★Will there be an optimization in the linear degradation of Tiger Neo 3.0?

A: The annual linear degradation rate for the Tiger Neo 3.0 series products is reduced from 0.4% in the the Tiger Neo 2.0 to 0.35%. Combined with a 1% initial first-year degradation, this significantly slows down the module's power decay, increasing the theoretical power retention rate to 88.25% in the 30th year.

12.What is the technical reason for the lower linear degradation of -0.35%?

A: Several advanced Jinko technologies in Tiger Neo 3.0 contribute to reducing the product's linear degradation. At the cell stage, the passivation layer is optimized to further reduce environmental sensitivity. At the module stage, the cell soldering process is optimized in terms of welding parameters and traceability, improving the overall product quality.
Single Reliability Test results will be available before August. Three Times Reliability Testing is ongoing but takes longer. For specific order negotiations, please request the relevant reports from your regional technical support.

13.What is the actual degradation of Tiger Neo 3.0 during operation?

A: As a new generation TOPCon product, Tiger Neo 3.0 has not yet accumulated actual operational degradation data. However, it has further improved material stability by optimizing the passivation layer design. For reference, data from Jinko's Ningxia field test site shows that the Tiger Neo 2.0 bifacial module had a first-year degradation rate of only 0.5%, which is lower than the warranted 1%. Based on the continuity of technological iteration, the new generation product is expected to maintain or improve this degradation performance. Specific data will require long-term field verification. Customers can track performance through Jinko's Outdoor Performance Test platform. Single Reliability Test results will be available before August. Three Times Reliability Testing is ongoing but takes longer. For specific order negotiations, please request the relevant reports from your regional technical support.

14.Will there be any changes to the product warranty period for the Tiger Neo 3.0 series?

A: The product warranty period for the N-66QL6-BDV product will remain the same as the previous generation, which is 12 years. The warranty for the 48-cell and 51-cell versions will follow the positioning of Tiger Neo 2.0 residential products (25 years for all-black modules, 15 years for non-all-black), with warranty extensions offered only to customers in premium-priced segments.

15.What is the certification plan for the Tiger Neo 3.0 series?

A: The IEC 61215 & 61730 certificate will be obtained in mid-July. Certificates for salt mist, ammonia, and dust will be obtained by the end of August. 3xIEC reliability testing is ongoing but will take a considerable amount of time; please stay tuned for internal updates. For regional certifications, please consult your regional pre-sales team.

Regarding the N-66QL6-BDV Product:

1)★Please specify whether ultra-narrow spacing, zero spacing, or negative spacing technology is implemented. How is it achieved? How does Jinko address the risk of micro-cracks from gap changes?

A: The unified external response should be "zero spacing." In detailed offline discussions with clients, you can clarify that it is actually a negative spacing technology.
Jinko has implemented the following measures to control micro-cracks:
a)We have developed new high-strength, more flexible silicon wafers with significantly improved resistance to mechanical stress, effectively reducing micro-cracks during the soldering process.
b)The latest soldering equipment uses more precise alignment systems and gentler welding parameters. By finely controlling key parameters like welding temperature, time, and pressure, we can greatly reduce the risk of micro-cracks caused by thermal or mechanical stress.
c)A new zero-gap flexible technology has been introduced into the stringing process, which can significantly reduce or even eliminate inter-cell stress, thereby avoiding the risk of inter-cell micro-cracks.
d)Our online inspection and control measures for process defects, integrated with our updated production system, now support cell-level traceability. This allows for the timely detection of potential micro-cracks, ensuring that only qualified products move to the next stage.

2)For a quarter wafer cut + zero-gap combination, customers may worry about micro-cracks. Can you provide mass production EL images?

A: EL images and single reliability test results will be available before August. Please stay updated with internal information.

3)Customers have always been concerned about the reliability risks of zero-gap modules. Can you provide talking points and supporting evidence to address customer concerns about potential long-term risks like micro-cracks, hot-spot sensitivity, and ribbon detachment?

A: Jinko considers quality and stability as a core premise for the technological upgrade of Tiger Neo 3.0. To address the risk of micro-cracks, Jinko has taken the following measures: new wafers with stronger stress resistance to reduce soldering-induced cracks; new soldering equipment with precise parameter control to lower crack risk; introduction of zero-gap flexible technology to avoid inter-cell cracks; and online inspection with cell-level traceability to screen out defective products. Hot-spot protection relies on system design and subsequent O&M—customers need to regularly clean off obstructions like leaves and bird droppings, and it is recommended to use infrared monitoring equipment to promptly identify abnormal hot spots. Supporting materials such as EL images and single-factor reliability test reports will be available before August. Please monitor internal updates.

4)★How does the appearance of this product change compared to the N-66HL4M-BDV?

A: Compared to the N-66HL4M-BDV, the N-66QL6-BDV has a different number of cell cuts. While the total number of whole cells remains 66, they are converted from half-cut to multi-cut (4-cut). The number of cells described in the datasheet changes from the original 66×2=132 to 66×4=264. The number of junction boxes is reduced from 3 to 2, but they still contain 3 bypass diodes.

Mechanical Characteristics

Cell Type	N- type Mono-crystalline
No. of cells	264（66×4）
Dimensions	2382×1134×30 mm

5)★What are the differences in electrical parameters compared to the N-66HL4M-BDV?

A: The N-66QL6-BDV fully maintains the core physical specifications (2382×1134mm) and electrical parameter characteristics of the N-66HL4M-BDV product. Its Open-Circuit Voltage (Voc) and Short-Circuit Current (Isc) remain essentially the same as the N-66HL4M-BDV. This design strategy ensures customers do not need to worry about system compatibility: the module is directly compatible with mainstream inverter brands like Huawei and Sungrow without requiring additional adaptation. Customers can quickly deploy systems based on existing mature designs, avoiding the risks and costs of inverter selection and design adjustments due to changes in module parameters.

6)When will the mechanical load data for this product be officially released?

A: Systematic testing of the product's mechanical load and the output of test reports will begin at the end of July. The official load data will be updated in the installation manual in October. Inquiries before this date will be treated as special requests; please contact the PV solutions department for support.

Regarding the 48-cell and 51-cell Products:

1)★Please specify whether ultra-narrow spacing, zero spacing, or negative spacing technology is implemented.

A: The 51-cell version uses ultra-narrow spacing technology. The 48-cell version is under internal evaluation; please stay updated with internal information.

2)Which existing products do these two models benchmark against? What are the differences in electrical parameters?

A: The 48-cell version will be benchmarked against the N-48HL4M-DV/DB/BDV of the same size. Differences in electrical parameters and power are currently being evaluated; please monitor internal updates. The 51-cell version does not have a current model to benchmark against; it is a new size of 1906×1134mm.

3)★What are the changes in appearance?

A: The appearance of the 48-cell version has not yet been determined; please monitor internal updates. The 51-cell version will use multi-cut cells (4-cut) combined with ultra-narrow spacing technology, creating an orderly, high-tech look. The number of junction boxes will be changed to 2, but they will still contain 3 bypass diodes.

4)When will the mechanical load data be officially released?

A: The residential products for Tiger Neo 3.0 are still under internal discussion, with results expected soon. Regardless of which module type is launched, the official load data will be updated in the installation manual in October. Inquiries before this date will be treated as special requests; please contact the PV solutions department for support.

03 | The Economics of Tiger Neo 3.0

1.Compared to Tiger Neo 2.0 products, how much BOS cost can be saved by using Tiger Neo 3.0 in distributed generation scenarios?

A: BOS costs vary in different regions due to factors like local land costs, labor and installation fees, policy requirements, and grid connection standards. Taking a 10 MW project in Hainan, China as an example, compared to the mainstream 620W Tiger Neo 2.0 module, the Tiger Neo 3.0 series N-66QL6-BDV can help customers reduce BOS costs by 0.026 RMB/W (assuming the same module price), a decrease of 2.26%.

2.In C&I scenarios, what is the impact of the new Tiger Neo 3.0 on the Levelized Cost of Energy (LCOE)?

A: Using a 10 MW project in Hainan, China as a model and based on Jinko's financial analysis model, the N-66QL6-BDV can increase the Internal Rate of Return (IRR) by 1.43% and reduce the LCOE by 4.93%, assuming the same module price. This improved return is due to the increased energy generation from higher power and optimization of system costs.

C&I—— The Comprehensive Optimization Effect of TOPCon Module on Project LCOE

Scenario		High Temp&Humdity		High Temp&Irrdiation		Temperate climate		Mediterranean climate	
Project location	unit	Hainan,CN		Saudi Arabia		Japan		France	
		C&I		C&I		C&I		C&I	
Project Info		Same Capacity 10MWp							
Module Type		TigerNeo 3.0	TigerNeo 2.0	TigerNeo 3.0	TigerNeo 2.0	TigerNeo 3.0	TigerNeo 2.0	TigerNeo 3.0	TigerNeo 2.0
Module Power	Wp	660	620	660	620	660	620	660	620
LCOE[1]		Lower 4.93%	BSL	Lower 4.36%	BSL	Lower 4.52%	BSL	Lower 5.14%	BSL
TOPCon premium price for same LCOE[2]		13.68分/w more expansive	BSL	2.1 UScents/w more expansive	BSL	2.68 UScents/w more expansive	BSL	2.75 UScents/w more expansive	BSL

Notes
1: Calculate the LCOE value based on the difference in single watt power generation through PVsyst simulation;
2 Premium: Based on the BOS cost of each technical component remaining unchanged, TigerNeo3.0 components need to have a higher unit price than BC components to obtain the same LCOE results.

3.★What are the advantages of Tiger Neo 3.0 in new C&I projects?

A: The Tiger Neo 3.0 N-66QL6-BDV product, with a maximum power of 670W, offers an over 8% increase in power generation per unit area compared to mainstream 620W (TOPCon) modules (a 6% increase in front-side power per unit area and a 2% increase in energy yield per watt). This can significantly shorten the investment payback period by about 3-5 months. At the same time, its excellent low-light performance is outstanding during periods

of insufficient irradiation, such as early morning and late evening, making it particularly suitable for areas with poor irradiation conditions. Data from our multiple field test sites in China shows that it can provide an additional 5-10% generation benefit during these times compared to BC modules.
Note: This answer is from a China-region perspective (using the N-66QL6-BDV). The smaller format modules (48/51) for international markets have not yet been calculated.

4.★What are the advantages of Tiger Neo 3.0 in large utility projects?

A: The Tiger Neo 3.0 N-66QL6-BDV product offers a triple advantage in large utility projects: its 85% bifaciality provides a 10%-20% increase in rear-side generation gain compared to BC technology, making it particularly suitable for high-albedo ground-mount power plants in locations like deserts and snowy areas. The excellent low-irradiance performance of TOPCon technology significantly optimizes energy capture efficiency during early morning, evening, rainy, and cloudy periods. Additionally, the annual degradation rate is reduced from 0.4% to 0.35%, extending the module's high-power output period.
Comparative data from Jinko's existing field test sites for Tiger Neo 2.0 in Hainan, Ningxia, and Shandong shows a 0.66%-5.11% higher energy yield per watt compared to BC products, verifying its performance advantage across multiple environments.

5.In utility-scale power plant scenarios, does the Tiger Neo 3.0 product have a BOS cost advantage over BC modules?

A: Jinko has also conducted economic calculations for simulated power plants in four typical geographical environments. At the same power class, using Tiger Neo 3.0 products will bring customers a BOS cost advantage of 0.85 to 4.8 fen/W. Taking Hainan as an example (BOS cost reduction of 0.85 fen/W), costs for mounting structures and their installation can be saved by 0.11 fen/W; installation costs by 0.1 cents/W; logistics fees by 0.115 fen/W; and cable and installation costs by 0.315 fen/W.

Utility——Optimization Effect of TOPCon Module on Power Plant Construction Cost

Scenario		High Altitude		High Temp&Humdity		High Temp&Irrdiation		Temperate Zone	
Project location	unit	Qinghai,CN		Hainan,CN		Saudi Arabia		Italy	
Installation		Fixed 2P		Fixed 2P		Tracker 1P		Tracker 1P	
Project Info		Same Capacity 100MWp							
Module Type		TigerNeo3.0	BC	TigerNeo3.0	BC	TigerNeo3.0	BC	TigerNeo3.0	BC
Module Power	Wp	660	660	660	660	660	660	660	660
Module Price dif		Same		Same		Same		Same	
BOS dif	元/Wp	-0.0101	BSL	-0.0085	BSL	-0.04816	BSL	-0.03984	BSL

6.★In utility-scale power plant scenarios, does the Tiger Neo 3.0 product have an LCOE advantage over BC modules?

A: Calculations for four typical environments—high altitude, high temperature/high humidity, high temperature/low irradiance, and temperate—show that, at the same module price, Tiger Neo 3.0 can reduce LCOE by 0.5% to 1.9%.

Utility——TOPCon Module's Power Generation Gain Performance in Typical Global Regions

Scenario	High Altitude		High Temp&Humdity		High Temp&Irrdiation		Temperate Zone	
Project location	Qinghai,CN		Hainan,CN		Saudi Arabia		Italy	
Installation	Fixed 2P		Fixed 2P		Tracker 1P		Tracker 1P	
Project Info	Same Capacity 100MWp							
Module Type	TigerNeo3.0	BC	TigerNeo3.0	BC	TigerNeo3.0	BC	TigerNeo3.0	BC
LCOE[1]	Lower 0.5%	BSL	Lower 0.78%	BSL	Lower 1.9%	BSL	Lower 1.5%	BSL
TOPCon premium price for same LCOE[2]	0.22 UScents/w more expansive	BSL	0.305 UScents/w more expansive	BSL	1.02 UScents/w more expansive	BSL	0.78 UScents/w more expansive	BSL
LCOE[3]	/		Lower 4.73%	BSL	/		Lower 2.62%	BSL
TOPCon premium price for same LCOE[4]	/		1.9 UScents/w more expansive	BSL	/		1.34 UScents/w more expansive	BSL

Notes
1: LCOE values calculated based on the difference in specific generation simulated by PVsyst; 3: LCOE values calculated based on the difference in power generation per watt from TigerNeo Field test report.
2 & 4 Premium: BOS costs of each technology module remaining unchanged, TigerNeo3.0 modules need to be priced higher than BC modules to achieve the same LCOE result.

7.Are Tiger Neo 3.0 series products suitable for flexible trackers, and what are the considerations for micro-crack stability?

A: The suitability of the product largely depends on the customer's and the specific order's requirements, which need to be evaluated based on the customer's load, quality, and degradation demands. Initially, a project assessment can be based on the fixed-tilt load test results (internal test data is expected in early September). If required, third-party wind tunnel testing can be conducted on the N-66QL6-BDV model to assess micro-crack conditions before and after testing. Please contact the PV solutions department for such requests.

04 | Future Development of Tiger Neo 3.0

1.Will the Tiger Neo 3.0 series be expanded to more models in the future? The market is pursuing high power; will the current 700W module product be upgraded?

A: Jinko will continuously track industry trends both domestically and internationally and dynamically optimize its product matrix based on market feedback. If your region has such needs, please provide timely feedback to the GPM department.

2.Will Jinko launch a product that combines both high power and high load capacity in the future?

A: Currently, the Tiger Neo 3.0 series is primarily focused on efficiency improvement. We are not actively considering products for niche scenarios with low demand. If your region has such needs, please provide timely feedback to the GPM department. For most projects, we recommend first enhancing load capacity through system design improvements (such as using a dual-fastening structure of bolts and clamps). Customers can obtain customized solutions through their regional technical support. If project requirements exceed the limits of system design, Jinko will dynamically initiate reserves for specialized high-load products based on market price signals and scalable demand, ensuring a precise match between technological investment and commercial value.

3.Will Tiger Neo 3.0 consider developing an offshore product?

A: Jinko Energy already has N-66HL4M-BDV and N-72HL4-BDV products that have passed rigorous third-party accelerated testing, establishing a high-reliability technological foundation. The decision to expand the offshore product on the Tiger Neo 3.0 platform will be based on market acceptance of high-premium products and internal economic validation.

4.Will Jinko consider developing triple-guard module products (dust accumulation resistance, fire resistance, shading tolerance) on the Tiger Neo 3.0 technology platform, analogous to LONGi's HI-MO X10 solution?

A: At this stage, Jinko is focused on improving the efficiency of Tiger Neo 3.0 and does not have plans for scenario-specific " triple-guard " modules. The main considerations are: first, the market for customized features like anti-dust/fire resistance is limited; second, it involves structural changes that require new certifications, which is a lengthy process; and third, R&D resources are prioritized for efficiency-enhancing technology iterations. If large-scale specialized demand materialize in your region, please report it regularly to GPM for a special evaluation.

5.Does Jinko have special solutions to meet requirements in high snow load regions?

A: Jinko currently offers two products, the N-72HL4-BDX and the N-66HL4M-BDX. Both of these products can pass a test load of 6000/4000 Pa with standard bolt installation. Combined with load-enhancing installation methods, they can meet the needs of customers with higher load requirements.

6.For coastal high salt-mist regions, are there enhanced solutions for Jinko module's frame anti-corrosion process, sealing, and encapsulation materials? What does the accelerated aging test data look like?

A: Jinko's offshore products are specifically optimized for highly corrosive environments like offshore/coastal areas. The module BOM is enhanced with double-coated glass to improve light transmittance and weather resistance, a thicker frame oxide film to enhance resistance to salt mist corrosion, and optimized adhesive quantity and encapsulation combination to improve the module's resistance to water penetration. Additionally, fluoro rubber sleeve + shrink tube are used for targeted protection of the connectors. As the first company in the industry to complete specialized, rigorous testing for marine environments, Jinko's offshore modules have shown excellent performance in alternating salt spray tests, exhibiting lower degradation and superior corrosion resistance compared to general products. If needed, you can request third-party test reports from the corresponding regional technical team.

7.What is your view on desert photovoltaic modules?

A: Desert photovoltaics is a concept that has emerged in recent years. Similar to anti-glare and offshore PV modules, it essentially imposes stricter conditions on the materials used and the reliability of the modules compared to conventional ones. Jinko's current standard products are directly applicable to most desert scenarios. At the same time, Jinko will continue to monitor the market and third-party proposals for specific reliability test sequences for preliminary research.

8.Does Jinko have anti-glare modules?

A: The demand for anti-glare modules is mostly in scenarios like C&I rooftops and areas around airports. However, the optical performance requirements for anti-glare modules vary by region and project. Jinko has proactively researched, developed, and tested various solutions for such needs and is currently advancing the development of an anti-glare module based on the Tiger Neo 2.0 66-cell version. Please stay updated with internal information and consult your regional technical/pre-sales team if you have a need.

9.How do Jinko's anti-glare modules match customer needs? Can they be customized?

A: Jinko's current strategy for anti-glare modules is to use anti-glare glass, and we will consider expanding this to specific models based on market demand. Based on inquiries received, Jinko is currently promoting the R&D of an anti-glare version of the 66-cell dual glass module. Please stay updated with internal information for product progress.

10.What is the next iteration direction for the Tiger Neo 3.0 technology roadmap? Will it integrate HJT or perovskite technology?

A: For the Tiger Neo 3.0 product, Jinko Energy will continue to optimize technical details, for instance, by promoting iterations through the application of power-gain materials, but it will still be based on the TOPCon technology platform. In the field of TOPCon/perovskite tandem cell R&D, Jinko continues to achieve innovative breakthroughs, with the current conversion efficiency reaching 34.22%. For future developments in our technology roadmap and product releases based on new technology platforms, please continue to follow Jinko Energy's official announcements.

11.For high-altitude application scenarios, do the modules have a unique design? If not, how can we introduce the reliability of the modules in high-altitude regions to customers?

A: For high-altitude application scenarios, the fundamental design of the module is not different. Its reliability needs special attention on two points: first, the harsher environment requires the module to pass stricter reliability tests (such as UV aging, thermal cycling TC, etc.); second, the electrical safety risks posed by low air pressure must be addressed. For specific projects, the following actions can be taken:

1. Provide the customer with corresponding stricter reliability test reports based on the project location and customer requirements.
2. Different altitudes require modules to pass impulse voltage tests with different pulse values; the higher the altitude, the greater the required pulse value. The thickness of the encapsulant film is a key material for the module to pass the impulse test. You can consult the pre-sales/GPM department about whether the film needs to be thickened based on the specific project location.

12.What is the structure of Jinko's perovskite tandem solar cell? What are its advantages and disadvantages?

A: Jinko is committed to developing a complete technology solution for high-efficiency perovskite/TOPCon tandem solar cells with TOPCon as the bottom cell. This tandem cell has high commercial viability and is compatible with existing power plants. All perovskite cells face three major challenges: recombination losses at the tandem interface, a significant drop in efficiency during large-area fabrication, and insufficient stability. To address these difficulties, Jinko continues to make targeted breakthroughs, constantly improving optical, electrical, and stability aspects. Currently, the cell's highest efficiency reaches 34.22%, and it has passed multiple reliability tests such as DH, TC, and MPPT, with a relative efficiency loss of less than 5%, placing it at the forefront of the industry.

05 | Comparison of Tiger Neo 3.0 and BC

1.What are the main advantages of TOPCon vs. BC?

A: TOPCon has advantages in the following four areas:

1)Technology Maturity:

TOPCon technology is more mature with a well-established supply chain, whereas BC technology requires long-term validation. In 2025, TOPCon's global capacity share is projected to reach 77%, with a complete supply chain and a stable process yield rate of over 99%. In contrast, BC's global capacity share in 2025 is only 7%, with its supply chain still being optimized. The all-back-contact design of BC cells makes the manufacturing process complex, resulting in a yield rate of only 95% and requiring wafer modifications to reduce micro-crack risks.

2)Economies of Scale:

TOPCon has a significant advantage in scale, while BC is limited by capacity growth and investment barriers. In 2025, TOPCon's global capacity share will be 77% (approx. 850 GW), with Jinko leading with over 100 GW of capacity. Mass production drives down costs, and it is compatible with low-cost upgrades of PERC production lines. In contrast, BC's global capacity in 2025 is only 85 GW (with a single company accounting for 50%) and relies on retrofitting old lines (e.g., HPBC requires 3-6 months of downtime). Additionally, new BC capacity investment is higher, with its per-GW equipment cost being 30% more than TOPCon.

3)Shipment Volume Comparison:

TOPCon shipments overwhelmingly surpass BC and cover all application scenarios. BC is competitive only in niche markets. In H1 2024, TOPCon companies accounted for 67% of global shipments (Jinko shipped 35.9 GW). By 2025, TOPCon shipments are expected to exceed 600 GW globally. In contrast, total BC shipments for 2024 are projected at only 22 GW, mainly targeting high-end distributed and residential markets, with limited application in utility-scale power plants.

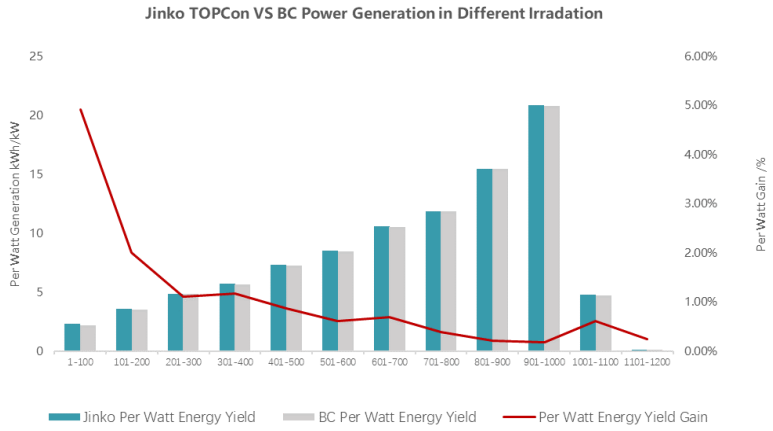
4)Cost Advantage:

TOPCon has a comprehensive advantage in materials, equipment, and LCOE. BC is barely sustained by premium-priced scenarios. TOPCon's silver paste consumption is 30% lower than BC's, and its module cost per watt is 0.1-0.15 RMB lower. The complex process of BC requires laser grooving and rear-side electrode printing, has high silver paste consumption, and requires customized wafers, which further increases costs.

2.★There are conflicting claims about whether BC or TOPCon has better low-light response. What is the actual situation? What is the mechanism behind Tiger Neo 3.0's better low-light performance compared to BC modules?

A: A common talking point for BC is that its low-light performance is better during early morning and late evening when irradiance is low because there are no grid lines on the front to cause shading. This statement confuses concepts and sidesteps the main issue. In reality, just as power generation capability under STC conditions is only related to the module's power and not to grid line shading, the core of performance evaluation in low-light conditions should also be the actual power output, not the presence of grid lines.

In contrast, TOPCon's low-light performance is superior. The fundamental reason is that the leakage current design of BC modules reduces the cell's shunt resistance (Rsh), causing more photo-generated carriers to be consumed internally within the cell and reducing the amount delivered externally, which manifests as poorer low-light performance. Low-irradiance test results from authoritative third-party labs show that at a low irradiance of 200W/m², TOPCon's generation capability is 3.6% higher than BC's. The test results from our field test sites in Yinchuan, Ningxia, also confirm this conclusion.



3.★Compared to BC, what is the expected power level of Tiger Neo 3.0?

A: Tiger Neo 3.0 achieves comprehensive technical parity with BC modules: in power output, the N-66QL6-BDV model will deliver 650W+ modules from November, matching BC products; key performance parameters including temperature coefficient (-0.26%/ ° C) and linear degradation rate (0.35%) also reach equivalent standards. Through two core advantages - 15-20% higher bifaciality significantly enhancing backside energy yield in high-reflectivity environments, combined with superior low-irradiance energy harvesting capability - Jinko creates additional power generation revenue for end customers, strengthening full-scenario LCOE competitiveness.

4.In low-irradiance regions, will the economic advantage of Tiger Neo 3.0 over BC modules be further expanded?

A: The generation gain in low-irradiance environments is an important factor in evaluating the economics of a PV project. However, factors like land cost, installation fees, and policy requirements vary significantly by region, and these collectively influence BOS cost and LCOE. Therefore, a comprehensive assessment must be made based on the specific project scenario, and it cannot be generally stated that TOPCon's economic advantage will expand. What is certain is that, under the same conditions, TOPCon's low-light performance advantage over BC will bring more revenue to the customer and effectively reduce the LCOE.

5.Does Jinko provide field test reports comparing the power generation of Tiger Neo 3.0 and BC modules in low-light environments? Besides empirical data, is there any other way to quantify the superior low-light performance of the Tiger Neo 3.0 product series?

A: Jinko has conducted extensive field validations with multiple authoritative third parties around the world. For field test results of Tiger Neo 2.0, you can contact PV solution department to obtain the relevant reports. Field testing for Tiger Neo 3.0 has already been planned; please stay updated with internal information. In addition to empirical data, the module's low-light response test report can serve as supporting evidence. R&D has included this test in the plan and expects to receive the report in early September.

6.How do we respond to the unique advantages of BC modules in anti-hot-spot and anti-shading performance?

A: BC's anti-shading principle is achieved by the current breaking down a buffer layer on the back when a cell is shaded, but this feature has limited utility in real-world scenarios. This is because utility-scale power plant designs avoid shading between 9:00 AM and 3:00 PM. Moreover, the high leakage current characteristic that its anti-shading relies on actually impairs low-irradiance performance, thereby reducing overall power generation. In contrast, low-light generation capability is important in all scenarios, as it boosts power generation in the morning, evening, and on rainy days. Therefore, the outstanding low-light performance of TOPCon is the more important aspect to focus on.

06 | Other Questions about Tiger Neo 3.0

1.Can Jinko sign a power generation guarantee?

A: As a leader in TOPCon technology, Jinko is fully confident in the generation advantages of its new products. However, we must also recognize that the power generation of any PV project is not solely influenced by the modules. The data from Jinko's ongoing field projects in multiple countries and regions around the world is sufficient to demonstrate the excellent performance and economic value of Tiger Neo 3.0 products.

2.What are Jinko's plans for the recycling and disposal of Tiger Neo 3.0? Does the new technology affect the module's recyclability?

A: The Tiger Neo 3.0 product is a further upgrade on an existing platform. The main materials used have the same recycling characteristics as the Tiger Neo 2.0 and will not have any impact on the module's recyclability. Therefore, Jinko will continue its existing recycling approach, which involves proactively researching recycling regulations and policies in different regions, establishing relevant recycling resource channels, and providing customized recycling services based on customer needs. This includes offering "reuse" and "recycle" models to help customers fulfill their recycling obligations in accordance with local regulations at the end of the module's life cycle.