

Chongqing Jiangjin Field Test: JinkoSolar's Tiger Neo 3.0 Achieves Up to 7.55% Yield Gain Compared to N-Type BC Modules

Higher Total Power Generation: During the testing period, the Tiger Neo 3.0 achieved a consistent increase in power output per watt compared to N-type BC modules.

Figure 1: Power Generation Comparison (kWh/m²)

The chart shows the power generation of Tiger Neo 3.0 (blue line) and N-type BC modules (grey line) over a period of time. The Tiger Neo 3.0 consistently shows higher power generation, reaching up to 7.55% higher than the N-type BC modules.

2. Superior Low-Light Performance (For Comparison with Low Light) The me segment shows that the Tiger Neo 3.0 modules demonstrate particularly strong advantages during low-light periods—with a per-watt gain of 1.27% before 7:00, allowing them to enter effective power generation mode earlier; and a per-watt gain of 1.27% after 16:00, effectively extending the duration of power generation in the evening; The average gain across all time periods throughout the day (9:00 to 15:00) remains above 1%, demonstrating consistent performance stability around the clock. From a technical perspective, the Tiger Neo 3.0 maintains higher current collection efficiency in low-light environments thanks to its low leakage current characteristics; By contrast, N-type BC modules, due to the complex interlaced electrode structure on their rear side and dense current leakage pathways, suffer significant leakage power losses under low irradiance conditions, resulting in limited power generation.

■ Tiger Neo 3.0 ■ BC

Per Watt Generation Comparison(hour)

Tiger Neo 3.0 BC Generation Gain

3. Significant Advantage in Low Operating Temperature: The Tiger Neo 3.0 modules demonstrate a clear advantage in operating temperature. Throughout the entire test cycle, the average operating temperature was 1.27°C lower than that of competitor products with the same power output; during the midday period from 12:00 to 13:00, the average operating temperature was 2.7°C lower than that of competitor products with the same power output. Lower operating temperatures help mitigate power losses caused by the temperature coefficient, further enhancing power generation performance.

Data Insights

Actual measurement data from the nearly three-month monitoring period shows that during the test period, the cumulative power generation per watt of JinkoSolar's Tiger Neo 3.0 modules reached 1.27%, while N-type BC modules of the same power rating achieved 1.27%. The Tiger Neo 3.0 achieved a stable power generation gain per watt of 1.27%. In Jiangjin, Chongqing, overcast and rainy weather accounted for nearly 80% of the time, the Tiger Neo 3.0 modules' low-light performance can be verified from the following two perspectives.

1. Outstanding power generation performance in the morning and evening: A time-segmented analysis shows that the Tiger Neo 3.0 performs particularly well during low-light periods. Before 7:00, it achieves a per-watt gain of 1.27%, entering effective power generation mode earlier; after 16:00, it achieves a per-watt gain of 1.27%, effectively extending the evening power generation duration; The average gain remained above 1% during the 9:00–15:00 period, demonstrating stable performance throughout the day and across all time slots.

2. Significant advantages throughout the day on cloudy and rainy days: A single-day analysis of the rainy weather on June 6 showed that the Tiger Neo 3.0 achieved a power generation gain per watt of 1.27% on that day. Specifically, the average power generation gain from 9:00 to 15:00 was 1.27%, demonstrating stable performance even when irradiance was generally low throughout the day. Compared to the 2.29% average gain recorded on July 19 under similar conditions, the Tiger Neo 3.0's performance advantage is evident and relatively stable. Electrical losses are more easily amplified under low-irradiance conditions, thereby affecting power output during low-light periods. This is consistent with the technical analysis showing that Tiger Neo 3.0 achieves a gain of 1.27% per watt before 7:00 and a gain of 1.27% after 16:00. From a technical perspective, the Tiger Neo 3.0's performance advantage during low-light conditions is primarily due to lower internal current losses. As irradiance decreases, the photogenerated current produced by the module decreases accordingly, while the

Tiger Neo 3.0 BC