# CGC Sanya Test: TOPCon Bifacial Modules Show Significant Power Gain of 3.6% Over BC Bifacial Modules, with Morning and Evening Increase Reaching 8.92%

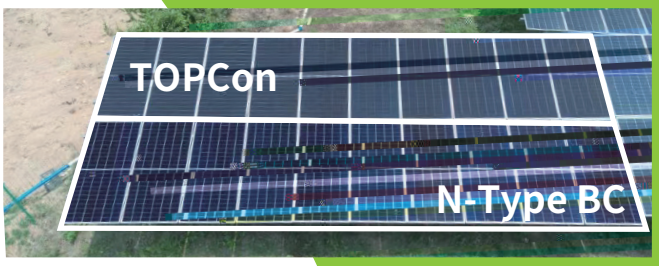


Figure1 Jinko Sanya Empirical Project

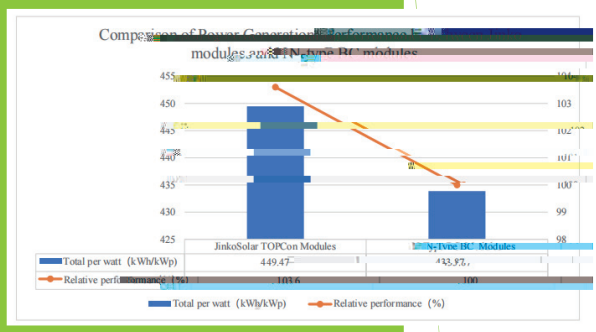


Figure 2 Comparison of Power Generation Performance of JinkoSolar TOPCon Modules and N-Type BC Modules

Figure 3 Comparison of power generation between TOPCon and BC modules at different time periods

Figure 4 Comparison of power generation between TOPCon and BC modules under different irradiance levels

These analysis results revealed that the lower the irradiance the higher the energy yield of TOPCon versus N-type BC to a value higher than that obtained in present study (+3.6%).

The loss mechanism for lower yield of N-type BC was attributed to low bifaciality and poor low irradiance performance due to cell properties (multiple leakage current effects and grid on the back side) . These analyses also revealed that the TOPCon energy yield gain over N-type BC can be increased further to and in early morning 6am-7am and later afternoon 6pm-7pm respectively.The average energy yield gain of TOPCon over N-type BC module is in dusk and dawn. This study can contribute to achieving higher energy yield from PV systems during field applications. This can contribute to the design of products with higher energy yield and lower LCOE in the PV industry.