



What to expect from JinkoSolar 460Wp modules-and-beyond?

JinkoSolar launched its new flagship module Tiger at All-Energy Australia 2019. The module includes upgraded PERC half cut cell based on 9 busbars with TR technology, with module efficiency reaching 20.8% and the module peaking up to 460Wp. Tiger provides a significant enhancement of its 9BB and TR technology and offers customers a highly competitive performance-to-cost advantage as well as a fast time-to-market with direct migration from Cheetah version.

By leveraging the new capabilities gained from Cheetah's success, JinkoSolar's Tiger delivers 10% higher power over Cheetah version and 5% over Cheetah+. At the same time, its design is fully compatible with its existing module encapsulation processes and equipment, allowing its comprehensive supply ecosystem to be reused. As a result, it offers a seamless migration path with a fast go-to-market cycle time with a very limited engineering resources for customers to achieve the product benefits from the new technology offering. Therefore, JinkoSolar claims to reach 9-10GW of Tiger modules of 460Wp by adopting TR technologies and is confident to push power to the 500 Wp or above by 2021 according to the Company's roadmap.

Undouble, JinkoSolar is well prepared to begin 460Wp Tiger panels volume production early next year and make record of its fastest ramping model. The Tiger panel provides better density and power value than previous models, due to using a combination of 9BB and tilt ribbon technology.

Multiple busbars provide lower resistance and a shorter path for the electrons to travel resulting in higher performance, but too many busbars will shade part of the cell and so they need to be carefully designed. Another benefit of having 9 BB is if micro-cracking does occur in a cell due to external stresses there is less chance of this forming a hotspot as the electrons have many alternative busbars to flow along. Hence, Tiger modules which use 9 BB, that stands for lowering electrical resistance and further increasing efficiency.

TR (Tilling Ribbon) is an emerging cell interconnects technology using round ribbon instead of conventional flat ribbon to achieve a tiled interconnection of the cell, eliminating the typical cell gap architecture and making cells theoretically adjacent tightly.



Different from shingled configuration which cells are made by laser cutting a normal full-size cell in to 5 or 6 strips and layering them in a shingle structure using rear side connection adhesive, TR technology just removes the gap between cells and seamless interconnecting them with round ribbon. This process maximizes the panel surface area to the extreme as it doesn't sacrifice overlapped area of partially shaded cell, thus increasing the panel efficiency. In addition, uniquely dent design at the part where round ribbon connecting cells makes them 100% contact without any lose.

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