



Mitigate the effects of micro-cracks with HeatCap®

What HeatCap[®] can do and how it works



Up to 20 % increase in cell strength



The SiC coating at the back of each solar cell increases up to 20% the force each cell can withstand before breaking. The coating also has the effect of stopping the propagation of forces, preventing micro-cracks from appearing. This leads to more consistent energy output and less power degradation in the long term.

Defence against heavy snow



Protection against strong wind



As the modules are exposed to the weather elements, the ability to resist wind pressure is important. HeatCap^{*} modules can withstand strong wind up to 202 km/h in speed. This is equivalent to Level 17 wind intensity on the Beaufort Scale. When installed on a reliable mounting structure, the system can stand up to a Category 4 hurricane.

Reduction in hot spot temperature



The increased module stability means a 48-cell module can allow up to 1,180 kg of settled snow, approximately 3 m in depth, to rest on the panel without causing destruction. This allows the modules to endure heavy snowfalls during long winters.

SiC is an excellent heat conductor and has been widely used with heat sinks in the semiconductor industry. HeatCap^{*} is capable of distributing heat evenly across each cell to lower hot spot temperature by up to 7°C.

Third party tested to withstand both static and dynamic Mechanical Loading tests



WINAICO works with Taiwan's leading research institute, ITRI, to put HeatCap* modules through severe mechanical loading tests. Based on before-and-after EL pictures, HeatCap* modules outlast normal modules at both 8600 Pa Mechanical Loading (ML) and 4000 Pa Dynamic Mechanical Loading (DML) tests, with minimal micro-cracks appearing after the reliability tests.

The results are definite proof in the micro-crack mitigation capability of the HeatCap^{*} technology.



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