

Best technical product for thin-film module manufacturing

Oerlikon Solar KAI 1200 PECVD SYSTEM

The Oerlikon Solar KAI 1200 PECVD production system, originally used to produce TFT semiconductor devices in the LCD industry, deposits amorphous and microcrystalline absorber layers faster and at a better quality resulting in a significant reduction of the production cost of silicon thin-film solar modules. Based on its research in partnership with the IMT in Neuchatel and the EPFL in Lausanne, a dielectric lens compensation was invented which eliminates the standing wave effect. From the first concepts in early 2000, Oerlikon Solar successfully implemented this new type plasma source into mass production.

- The 40MHz VHF technology has considerably increased deposition rates and at the same improved the absorber layer quality.
- Oerlikon Solar's tool has doubled the deposition rate on its 1.4m² solar panels at best in class layer quality and improved the cycle time for the deposition of the amorphous absorber layer by over 30%.
- Amorphous single junction modules have shown an initial aperture efficiency of 9.6%.



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