

20% conversion efficiency by Chinese Tier One cell manufacturer with Al₂O₃: Repeat order for RENA-SoLayTec

A tier one cell manufacturer has ordered a second RENA-SoLayTec machine to start producing PERC cells in their production base of mono-Si wafers in China. The customer used the ALD Al₂O₃ InPassion LAB tool from RENA-SoLayTec in their R&D department, which has been used for their research of high-performance solar cells. This tier one cell manufacturer is one of the first adopters of the Al₂O₃ passivation technology and has recently announced results of average conversion efficiency of over 20% with their p-type mono-Si wafers.

This tier one customer has decided to continue the transition of Al₂O₃ into mass production based on the superior quality of Al₂O₃ deposition using ALD and the related low costs per layer. "They have tested several Al₂O₃ solutions in its lab and we are proud that they have chosen our InPassion ALD technology for their next step towards mass production of their high efficiency cells", comments Roger Görtzen, manager marketing and sales and co-founder of SoLayTec.

The cell efficiency improvement of Al₂O₃ from RENA-SoLayTec leads to an increase of up to 1,0% efficiency gain. Further, InPassion ALD has many distinct advantages: with smaller footprint gained higher throughput; independent module design achieved flexible throughput and production; thinner deposition thickness greatly reduced the chemical consumption; lower running and maintenance cost compared with other technologies.

"RENA-SoLayTec is continuously working to reduce the Cost of Ownership for affordable Al₂O₃ deposition. Our main developments focus on increasing output using the same machine hardware and a further reduction of all consumables, but especially the TMAL precursor. In this way RENA-SoLayTec is able to provide cell manufacturers "best in class" efficiencies, combined with a very attractive commercial solution.", added Roger Görtzen.

RENA GmbH

RENA is a leading production equipment and plant supplier for the application fields Clean Water, Green Energy, Health and Electronics. Around 50 % of the solar cells worldwide are produced on RENA wet processing equipment. In close cooperation with chosen partners, RENA further provides turnkey systems and technology transfer for the photovoltaic industry. RENA is also the majority shareholder of SoLayTec. For more information, please visit www.rena.com.

SoLayTec

SoLayTec is a spin-off company from the Dutch research organisation TNO and established in 2010. The company develops, delivers and services machines for atomic layer deposition (ALD) on solar cells worldwide. The SoLayTec ALD machines are intended for research and industrial mass production in the solar market. SoLayTec high volume production equipment will be exclusively sold by RENA GmbH on the market. For more information, please visit www.solaytec.com.

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