

SERIS PRESS RELEASE FOR IMMEDIATE RELEASE

SERIS launches fully screen-printed monoPoly silicon solar cell technology for mass production

Singapore, 13 December 2017 - The Solar Energy Research Institute of Singapore (SERIS) at the National University of Singapore (NUS) has reached a new cell efficiency milestone in the development of its low-cost screen-printed bifacial monoPoly silicon solar cell technology, recording an average cell efficiency of 21.5% in pilot-scale production using commercially available large-area Cz-Si wafers.

SERIS' proprietary monoPoly cell technology, applicable on both p-type and n-type silicon wafers, features homogenous junctions and standard fire-thorough screen-printed metal contacts with grids on both sides, resulting in a high-efficiency bifacial solar cell. This passivated-contact cell uses an advanced tunnel oxide and doped silicon layers, enabling excellent surface passivation in the non-contact cell regions along with very low-resistance and low-recombination screen-printed contacts.



Front image of a fully screen-printed monoPoly solar cell.

Dr. Shubham Duttagupta, Head of SERIS' Monocrystalline Silicon Solar Cell Group said, "monoPoly cells use the same tools and fewer process steps compared to standard p-type PERC technology, delivering a very attractive cost-of-ownership for solar cell manufacturers seeking to boost cell efficiencies in their current production lines or planning an expansion for new production lines."

SERIS CEO, Prof. Armin Aberle added, "We are very pleased to announce this important milestone and we are thankful for the strong support from our industry collaborators. This result is a testament to SERIS' long-standing commitment to work closely with the solar industry to reduce the \$/Watt production costs, improve the cell efficiencies, and increase the margins for our industry partners through technology innovation."

SERIS expects to achieve monoPoly cell efficiencies of above 23% through implementation of advanced grid designs, material improvements and fine-tuning of processes at our industry partners' production lines.

The technical details of the monoPoly technology will be presented at the [PV CellTech 2018](#) and [SNEC 2018](#) conferences in H1 2018.

About the Solar Energy Research Institute of Singapore (SERIS)

Founded in 2008 and located at the National University of Singapore (NUS), the Solar Energy Research Institute of Singapore (SERIS) is Singapore's national institute for applied solar energy research. SERIS conducts research, development, testing and consulting on solar energy technologies and their integration into power systems and buildings. The institute's R&D spectrum covers materials, components, processes, systems and services, with an emphasis on solar photovoltaic cells, modules and systems. SERIS is globally active but focuses on technologies and services for tropical regions, in particular for Singapore and South-East Asia.

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