

## Caelux selects LayTec to ensure unprecedented quality of perovskite-based solar glass

**This partnership will further Caelux’s mission to make solar energy more powerful and cost-effective**

**Berlin, Germany — March 5, 2025** — [LayTec](#) proudly announces that [Caelux](#)<sup>®</sup>, a California-based pioneer in utilizing perovskites to make solar energy more powerful and cost-effective, has selected LayTec to supply an advanced optical inspection tool for quality assurance in its state-of-the-art thin film production line. LayTec’s metrology tool will help Caelux to obtain maximum yield and thin film quality in manufacturing of perovskite-based solar modules, meant to serve as a performance-boosting front glass in photovoltaic modules.

Caelux provides the simplest path for silicon photovoltaic module companies to leverage advanced perovskite technology to boost their product’s performance. Caelux creates a perovskite solar cell coated directly on glass that can be used as a power-producing front sheet for nearly all traditional silicon solar panels being produced today. As perovskites convert UV and visible light more efficiently than silicon and pass the remaining infra-red light through to the silicon layer, the resulting perovskite/silicon tandem module generates up to 30% more energy than silicon alone, for the same panel area.

Through this partnership, LayTec’s fully automated optical metrology system will inspect and deliver precise measurements of film thickness, reflectivity, transmittance, and sheet resistance for Caelux, enhancing quality control and enabling adaptation of the measurement mode. LayTec’s system ensures comprehensive monitoring of quality and homogeneity across all key layers of the thin film stack, allowing Caelux to implement an even more precise quality assurance and obtain further insights into the correlation of thin film parameters and device performance.

“This partnership with LayTec is a critical step in our commitment to providing the highest quality perovskite solar glass,” said Scott Graybeal, CEO of Caelux. “The invaluable insights and data provided by LayTec’s advanced inspection tools will allow us to implement a level of precision that is essential for our company’s continued innovation. We’re looking forward to utilizing LayTec as we bring Caelux<sup>®</sup> One to market and further showcase how perovskites can be leveraged to boost solar in an impactful, cost-effective way.”

“We are honored to support Caelux on its path towards mass production of its innovative market-leading solar glass,” said Volker Blank, CEO of LayTec. “Providing customized metrology systems for transferring innovative new technologies from the pilot to the high-volume manufacturing scale has been our passion for 25 years and we are very much looking forward towards the next steps of this trustful partnership.”

Caelux One is an innovative product that integrates seamlessly into existing photovoltaic module manufacturing processes to boost performance, reduce installation costs, and accelerate the proliferation of lower cost solar panels.

Caelux's perovskite technology is compatible with new silicon photovoltaic modules at all deployment sites. The architecture requires very few changes to the panel manufacturing process, and no changes to the outdoor panel installation process. The panel manufacturer simply connects silicon and Caelux's perovskite active glass in parallel, in what is known as a "voltage-matched four-terminal architecture".

### **About LayTec:**

LayTec develops and manufactures, among others, integrated in-situ and in-line metrology for thin film PV deposition processes covering a wide range of deposition and film formation techniques for academic as well as mass production environments. Within its metrology portfolio, LayTec provides metrology systems for non-destructive monitoring of film properties such as thickness, color, band gap, sheet resistance, composition and roughness. Currently, the company has more than 3500 metrology systems installed worldwide, serving various fields of the semiconductor and photovoltaic industry, and offers a global customer support and service network [www.laytec.de](http://www.laytec.de).

### **About Caelux:**

Caelux's proprietary technologies improve the performance of any new crystalline silicon module, making solar energy more powerful and cost-effective. Headquartered in Baldwin Park, California, Caelux is at the forefront of the emerging science of perovskites, a special class of nanomaterials. Its flagship product, Caelux® One, is an innovative product that integrates seamlessly into existing PV module manufacturing processes, boosting performance, reducing installed costs, and accelerating the proliferation of solar. For more information, visit [www.caelux.com](http://www.caelux.com) or connect on [LinkedIn](#).

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