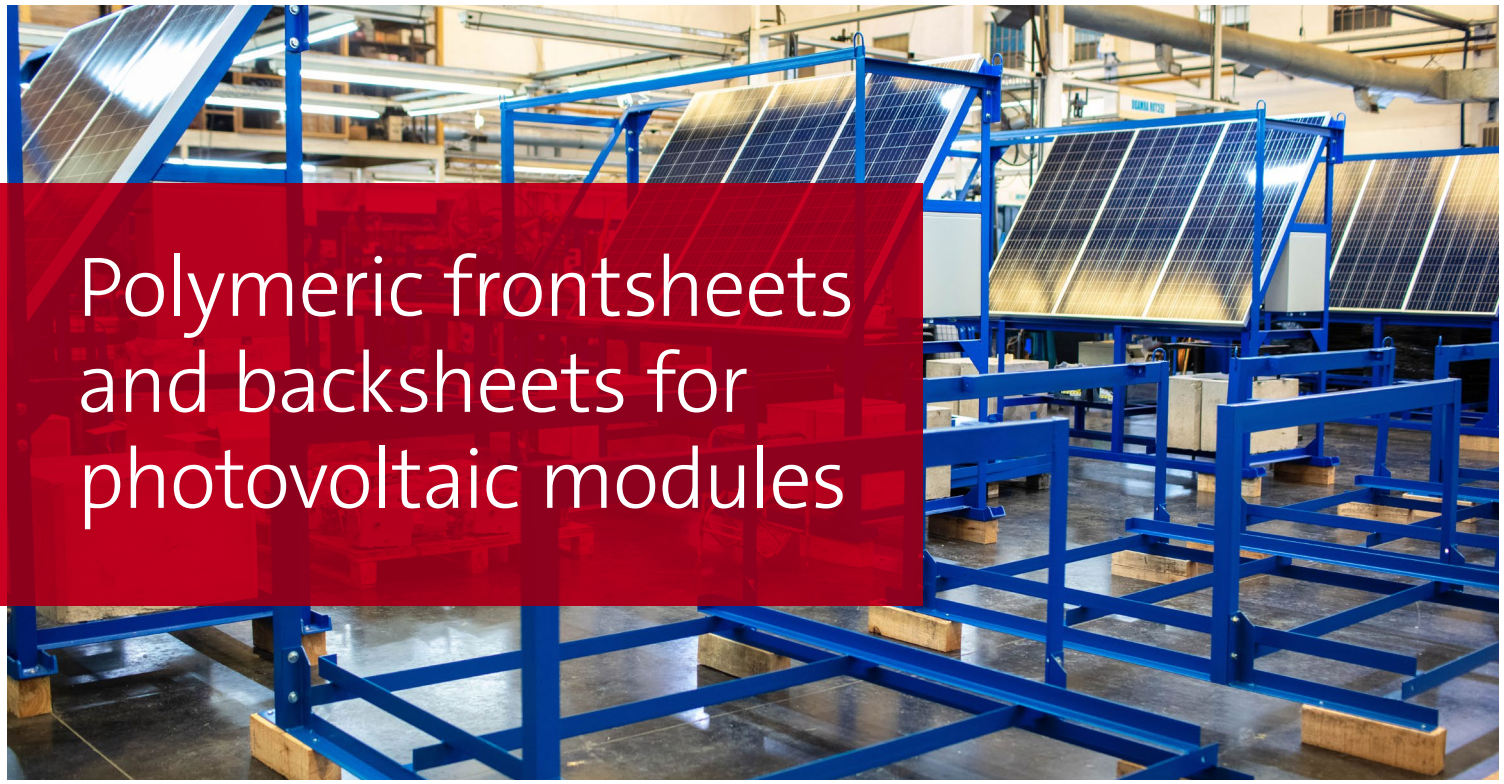

Polymeric frontsheets and backsheets for photovoltaic modules

The renewable energies market continues to grow and evolve, and safety standards and requirements for photovoltaic (PV) modules are following suit. Manufacturers must innovate to remain competitive while keeping pace with the changing regulatory landscape. In particular, as PV systems push into higher-voltage applications, the risk of failure increases, and components must perform as expected. Photovoltaic frontsheets and backsheets are among the most important components in a PV module. UL Solutions can help manufacturers determine if their products meet the newest safety requirements—including the new requirements outlined under IEC 62788-2-1* and the revised second edition of IEC 62788-2*—to support PV module performance.

Regulatory and testing expertise for the future of solar energy

Along with higher-voltage applications, PV modules must also be able to withstand extreme environmental stress factors encountered during the module's lifetime. Frontsheets and backsheets play a critical role, providing electrical insulation and a layer of protection for the inner components of the module. Primarily, these important safety layers guard against UV radiation as well as moisture penetration and high temperatures, insulate critical electrical components, and provide durability. Failure of either the frontsheet or backsheet can lead to performance degradation and electrical shock hazard.

To address these concerns, the IEC established new requirements under IEC 62788-2-1* and updated the second edition of IEC 62788-2* to include mechanical, electrical and visual tests after environmental stress exposure. These changes affect frontsheets, backsheets and additional polymeric materials used in PV modules. UL Solutions is a member of IEC technical committee 82 (TC 82), Solar Photovoltaic Energy Systems, and can help you understand these changes and demonstrate your compliance with these new requirements.

Our services include:

- Frontsheet and backsheet testing according to the new IEC requirements
- Performance testing of polymeric materials used in new PV constructions according to the new IEC requirements
- Issuance of a UL Solutions Yellow Card for material recognition

**Pending IEC standard publication*

UL Solutions

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Why UL Solutions

A global leader in applied safety science, UL Solutions transforms safety, security and sustainability challenges into opportunities for customers in more than 100 countries. UL Solutions delivers testing, inspection and certification services, along with software products and advisory offerings, that support our customers' product innovation and business growth. The UL certification Marks serve as a recognized symbol of trust in our customers' products and reflect an unwavering commitment to advancing our safety mission. We help our customers innovate, launch new products and services, navigate global markets and complex supply chains and grow sustainably and responsibly into the future. Our science is your advantage.

To learn more, please contact us or visit www.UL.com/pvmaterials

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CS489573-0822