

## 3M Introduces New 3M™ Ultra Barrier Solar Film

Moisture resistant front-side film to support scale-up of flexible CIGS, CdTe, and OPV

ST. PAUL, Minn.--([BUSINESS WIRE](#))--3M today introduced its 3M Ultra Barrier Solar Film for flexible Copper Indium Gallium Selenide (CIGS), Cadmium Telluride (CdTe), and Organic Photovoltaic (OPV) solar modules. 3M Ultra Barrier Solar Film is highly transparent, provides moisture vapor transmission rates (MVTR) below  $5 \times 10^{-4}$  g/m<sup>2</sup>/day, and demonstrates excellent durability. The product is the result of more than a decade of development in transparent barrier technology as well as over 45 U.S. patents and patent-pending applications covering construction, materials and processes. The company also plans to begin high-volume production of the Ultra Barrier Film to supply 3M's global thin film solar customer base, including manufacturers throughout the United States, Europe and Asia.

Designed to address the needs of flexible thin film solar manufacturers, 3M Ultra Barrier Solar Film acts as a replacement for glass with high light transmission, superb moisture barrier performance, and excellent weatherability. Compared with glass-glass modules, large area, light weight flexible PV modules manufactured with 3M Ultra Barrier Solar Film can achieve lower balance of systems (BOS) costs by requiring less installation time, removing the need for metal racking, and reducing logistics expenditures. 3M Ultra Barrier Film also enables lower module manufacturing costs by allowing manufacturers to commercialize large area modules, effectively reducing fixed costs associated with module manufacturing, assembled in a continuous roll-to-roll process.

"3M Ultra Barrier Solar Film is a great illustration of the value that 3M is bringing to the Renewable Energy market by leveraging its broad technology portfolio to commercialize innovative products that enable our customers to accelerate their efforts to achieving grid parity," said Derek DeScioli, Business Development Manager for the 3M Renewable Energy Division. "High efficiency flexible solar modules manufactured with 3M's Ultra Barrier Solar Film not only have the potential to drastically reduce the total system costs for rooftop solar installations, but also have an array of niche applications where our customers can take advantage of the unique module form factor."

3M's Renewable Energy Division offers a robust portfolio of new and existing products, bringing more than 100 years of combined expertise in coatings, film, tape, adhesive and optical technologies to the rapidly expanding renewable energy and energy efficiency markets worldwide. In addition to the company's world-class R&D facilities, 3M works closely with leading national labs to develop and refine its energy generation and energy conservation technologies. 3M has expanded its global manufacturing capabilities for Renewable Energy Division products several fold in recent years to bring key products to commercial-scale production to meet increasing market demand.

Visit 3M at Solar Power International: 3M will be displaying the Ultra Barrier Solar Film and additional solar component technologies at booth #407.

### About 3M

A recognized leader in research and development, 3M produces thousands of innovative products for dozens of diverse markets. 3M's core strength is applying its more than 40 distinct technology platforms – often in combination – to a wide array of customer needs. With \$23 billion in sales, 3M employs 75,000 people worldwide and has operations in more than 65 countries. For more information, visit <http://www.3M.com> or follow @3MNews on Twitter.

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