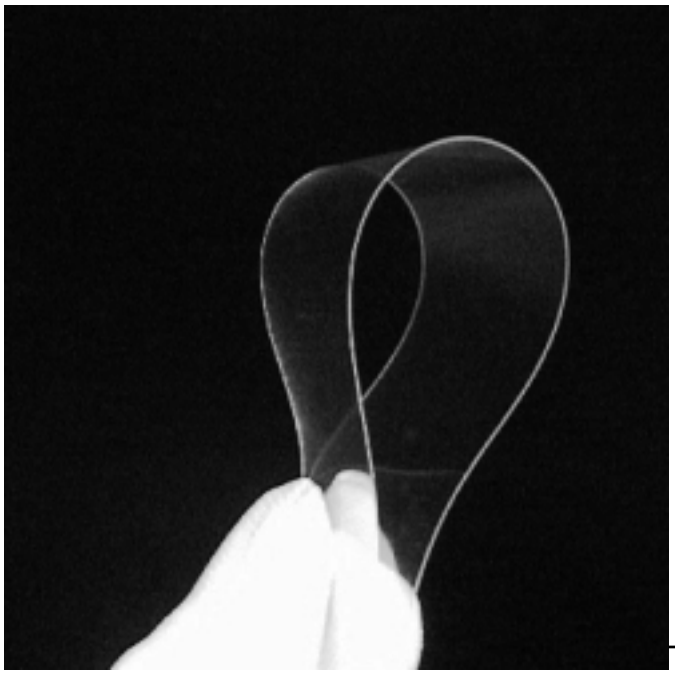
Expanded Uses Envisioned for Transparent Electroconductive Film



The market for transparent electroconductive film is expected to enjoy steady growth over the next few years as expanded applications are developed in sectors including touch panels, electronic paper and organic electroluminescent (EL) lighting.

Touch panels, which are operated by touching the screen with a finger or a pen, are used in a wide range of fields, including office and factory automation, game consoles, personal digital assistants (PDAs) and ATMs. Within a few years, the market for touch panels is expected to grow by around 30 percent. This market alone consumes 2.5 million square meters of transparent electroconductive film.

A transparent electroconductive film is thin, light, resilient and flexible, making it superior to glass in many ways. Utilizing such advantages, the film is used as major transparent electrodes of resistive touch panels. Generally, resistive touch panels are composed of two conductive-coated substrates separated by a narrow gap. When an object, such as a pen, presses down on a point on the panels outer surface, both substrates come into contact with each other, and then the subsequent voltage change triggers the data transmission. ELECLEAR also is used mainly for a resistive touch panel, commanding majority market shares for game consoles, smartphones and PDAs.

Superior visibility, anti-smudging and durability ELECLEAR is composed of hard coating, undercoating and indium tin oxide (ITO) layers on top of a polymer-film substrate. The hard-coating and undercoating layers incorporate proprietary coating technology to prevent glare and rainbow patterns caused by film deflection and

flicker, as well as offering strong resistance to finger smudging. ELECLEAR also is highly durable - in a test, its ITO layer remained unaffected after 10,000 finger taps, while conventional films deteriorated after 5,000 taps.

Based on polyethylene terephthalate (PET) manufactured by Teijin DuPont Films or polycarbonate (PC) manufactured by Teijin Chemicals, such films are applicable to not only resistive but also capacitive touch panels, which detect differences between the electrostatic capacitance of a fingertip and conductive film to identify touch position.

For more information, please visit [1]

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