



# APPLICATION SPOTLIGHT

## Flame Retardant Polyester Film for LED Lighting

### Polyester for LED Light Management

Polyethylene Terephthalate (PET) film has long been valued for its inherent heat, chemical resistance and tensile strength properties. While offering unique versatility, PET flame retardance was typically at the VTM-2 level or higher. This UL rating limited the performance range of polyester in the growing electronics, flexible circuitry, light management and related markets.

New flame retardant films from DuPont Teijin Films™ now offer design engineers in the electronics, transportation, construction and label industries design freedom, including higher performance at a competitive cost. Halogen-free, white Teijin® Tetoron® UF Polyester film and Teonex® QF Polyethylene Naphthalate (PEN) films combine inert chemical resistance, internal strength and dielectric properties with the VTM-0 flame rating available from UL's UL 94 flame classification testing. Competitive thermo engineered plastics, such as polyimide (PI) film, offer flame retardance, but at a higher price.



LED lighting is one targeted application for Teijin® Tetoron® UF Polyester film. High flame retardance has become a requirement for insulation and structural parts used in LED lighting and electronic products. UF grades have high reflectance performance which helps to increase the brightness of LED lighting.



Both Teijin® Tetoron® UF Polyester film and Teonex® QF PEN films are white and halogen-free, and they are available from Tekra, A Division of EIS, Inc. in thicknesses ranging from 25-250 microns. Beyond LED light management, typical applications include insulating materials and labels for electronic products such as PCs, office equipment and batteries, plus flexible printed circuitry. At thicknesses of 125 microns or more, the white PET and PEN films provide more than 90% diffuse reflectance across the visible wavelength.



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