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3M Worldwide : United States : Electronics Manufacturing



Prism Films



More Information

Total Internal Reflection (TIR) is a special case where the exit of light from a first material of higher refractive index to a second material of lower refractive index is prevented. In the TIR zone, light rays are trapped by reflection inside the first material and no light is allowed to refract into the second material.

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Vikuiti™ Brightness Enhancement Films (BEF) are made utilizing a 3M core competency — [microreplication](#). The microreplicated prism structure of Vikuiti BEF film allows you to manage the angle of light exiting from your display. By using the available light as efficiently as possible your display can be made brighter without adding additional light sources. Vikuiti BEF films work by utilizing the principles of [refraction](#) and [total internal reflection](#). The process of refracting usable light towards the viewer and reflecting most of the remaining light back into the display is called [recycling](#). This form of light management can be done with a single sheet of Vikuiti BEF film or two sheets crossed at 90 degrees to each other. The microreplicated prism structure of Vikuiti BEF films passes light towards the viewer with a [distribution](#) or [viewing angle](#) determined by the prism geometry. Vikuiti BEF films can also be used with [Vikuiti™ Dual Brightness Enhancement Films \(DBEF\)](#) and [Vikuiti™ Enhanced Specular Reflector \(ESR\)](#) to further increase the efficiency of your display.

To see how Vikuiti BEF films work, please view the [animated product demonstration](#).

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