



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## 3M Optical Systems

### Vikuiti™ Enhanced Specular Reflector (ESR)



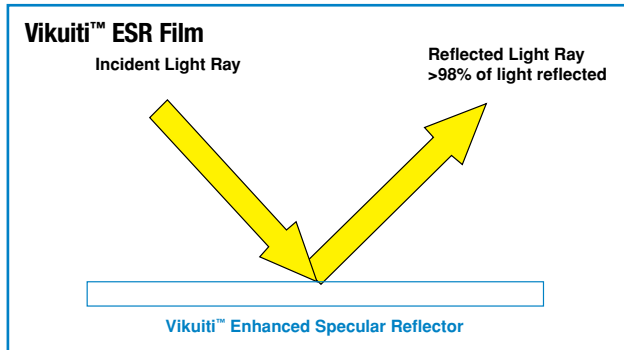
Vikuiti™ Enhanced Specular Reflector (ESR) provides a brighter, more efficient display. The thin, non-metallic, 100% polymer film creates 98% reflectance across the visible spectrum. Vikuiti ESR is a specular surface reflector and can be used with all Vikuiti™ Brightness Enhancement Films and Vikuiti™ Dual Brightness Enhancement Films.



# Vikuiti™ Enhanced Specular Reflector (ESR)

## How it works

Vikuiti™ Enhanced Specular Reflector (ESR) utilizes multi-layer optical film technology to create a highly efficient, specular reflector. Vikuiti ESR can be used alone or combined with other Vikuiti™ Display Enhancement Films for even greater performance improvement.



## Nominal film properties

Film properties	Vikuiti™ ESR Film
Reflectance	>98%
Physical Characteristics	
• Thickness (microns)	65µm (2.6 mils)
• Shrinkage (15 minutes @ 150°C)	<1%
• Specific Gravity	1.29

The technical data for the products are typical, based on information accumulated during their life, and are not to be used in the generation of purchase specifications which define property limits rather than typical performance.

### Important Notice to Purchaser

The following is made in lieu of all warranties, express or implied, including any implied warranties of merchantability or fitness for a particular purpose. 3M warrants that, at the time of shipment, product will meet 3M's published specification or that specification agreed in writing between 3M and purchaser. Should product not meet specifications at time of shipment, 3M will replace or refund the purchase price of such quantity of the product found not to meet specifications. Purchaser shall determine the suitability of the 3M product for purchaser's application. 3M shall not be liable under any legal theory, including in contract or in tort, for any injury, loss, or damage, whether direct, indirect, incidental, special or consequential, arising out of the use of or the inability to use the product. **The warranties and remedies set forth herein are purchaser's sole and exclusive warranties and remedies.**

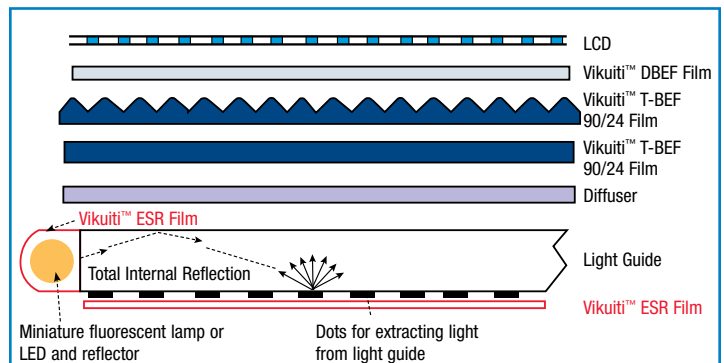


**Optical Systems Division**  
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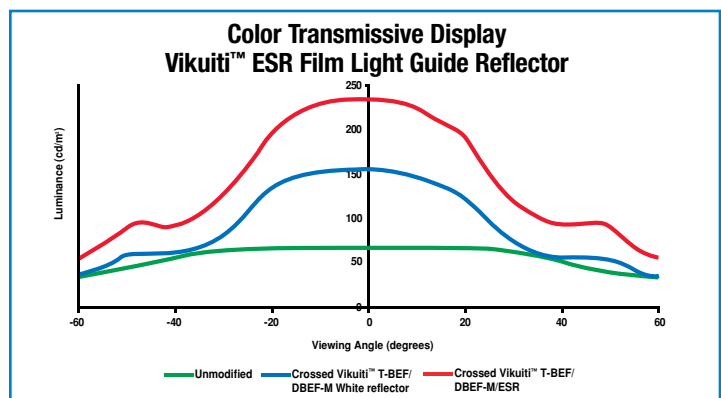
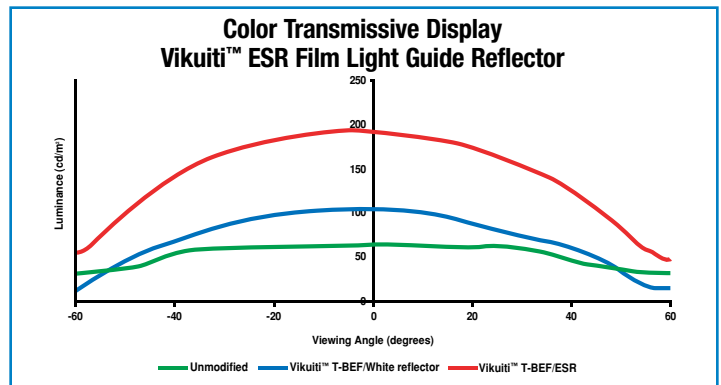
For more information, visit our website  
[3M.com/displayfilms](http://3M.com/displayfilms)

## Vikuiti™ ESR Film in a typical LCD



### Product Size Offering

- Custom Sizes—Converted to Customer Sizes
- Product Kits—30 Sheets 11" x 11"



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