

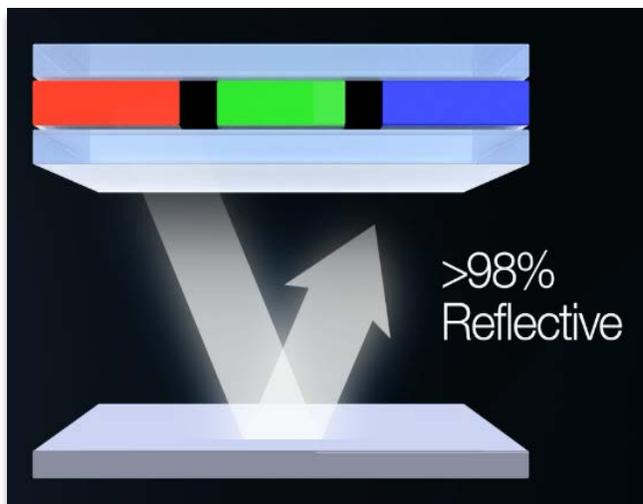
3M™ Enhanced Specular Reflector (ESR)

Description

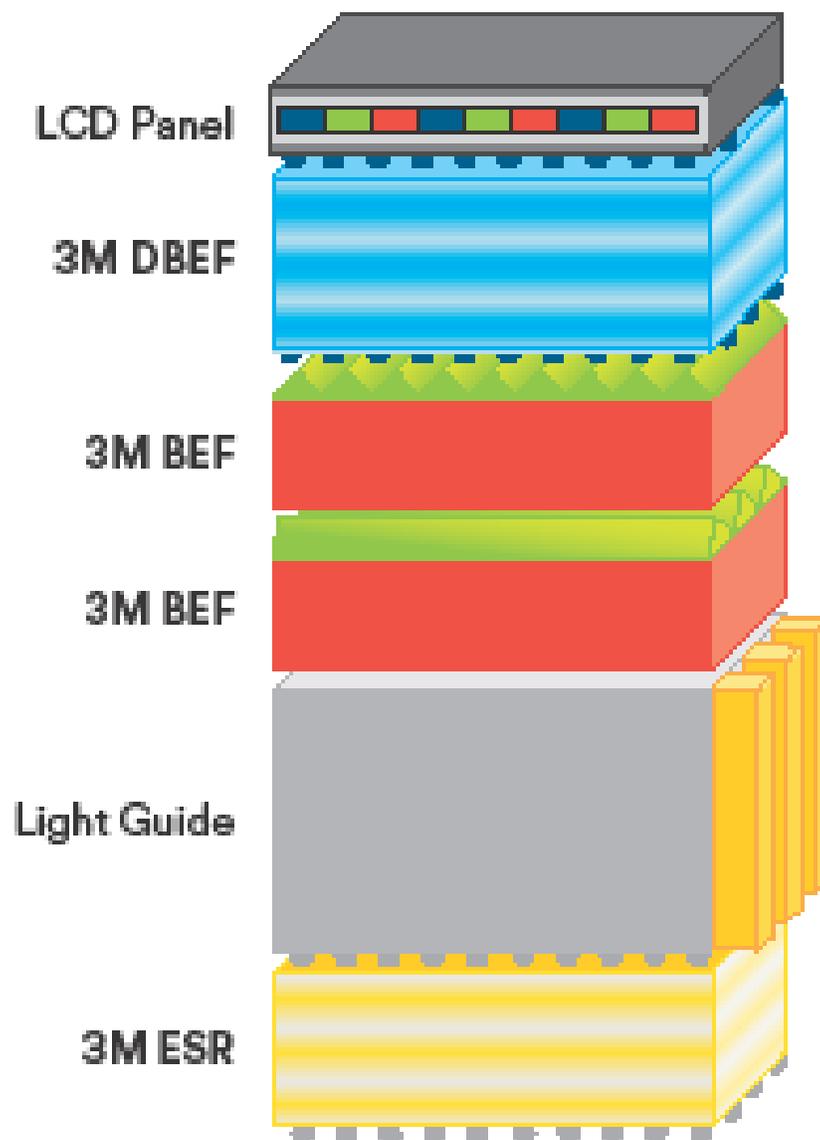
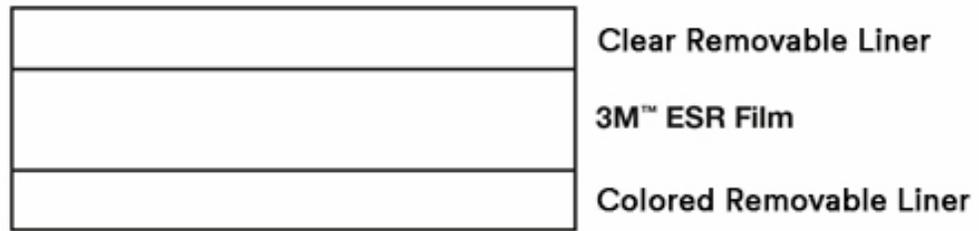
3M Enhanced Specular Reflector (ESR) is an ultra-high reflectivity, mirror-like optical enhancement film. Utilizing 3M's multi-layer polymer technology, its non-metallic thin film construction lends itself to incorporation into a wide variety of configurations and applications. Designed primarily as the rear light guide reflector to be used with other 3M films for high-efficiently brightness enhancement in light recycling LCD applications, it can also be used alone in any application requiring a high-performance specular reflector. Nominal reflectance greater than 98.5%.

3M Enhanced Specular Reflector (ESR) products and thickness

3M ESR	65
3M ESR 80V2 (Higher Temperature ESR)	80
LBR160W (ESR laminated to white PET)	160



3M™ ESR Construction



General Converting, Assembly, and Handling Recommendations

During converting operations, both the front and rear protective liners should remain on the film.

The Hazy clear cling protective liner will be on the most reflective top side of the ESR films. The colored liner will be on back side of ESR films.

Die cutting is the recommended form of converting and will result in the cleanest edges, although shear cutting and laser cutting can also be acceptable. Whatever method used, you should ensure that the part has clean, crisp edges without any raggedness or other damage.

The part may be left free-floating in the cavity to avoid warping or buckling, or it may be tacked down along edges or corners with an adhesive or double-backed tape. It may also be completely laminated across its entire width.

If left free-floating, the part should be precisely cut so as to provide a close fit in the cavity, yet not so close as to experience binding or warping problems from thermal expansion.

Remove both protective liners by tacking near an edge or corner with a piece of aggressive tape and pulling gently.

Be aware that handling any polymer film can generate electro-static charges, which can attract dust and debris.

Remove any loose debris from the film by using compressed air.

Avoid fingerprints and debris by wearing clean latex gloves and holding the product at the edges.

Keep the area very clean to lessen the likelihood of debris contamination. Maintaining class 1000 cleanroom condition is recommended.

Using anti-static measures, such as ionized air blowers whenever possible, is recommended.

As always, protect the film, especially the edges, from any damage.

Storage

Material should be stored in its original packaging, laying in a horizontal orientation, away from direct sunlight. Heavy objects should not be piled on top of it to avoid damaging the product. Ambient temperature and humidity should be controlled to 10–30 degrees C at 50 ± 20% R.H.

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, for twelve months after the date of receipt at purchaser's location provided that the product is stored flat in accordance with the requirements in the section titled Storage above and in the original package. Should product not meet specifications at time of shipment and for twelve months thereafter, 3M will replace or refund the purchase price of such quantity of the product found not to meet specifications. Given the variety of factors that can affect the use and performance of a 3M Product (the "Product"), some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M Product to determine whether it is suitable for user's particular purpose and suitable for user's method of application.

3Ms' statements, engineering/technical information, and recommendations are provided for user's convenience, but their accuracy or completeness is not warranted.

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.



Display Materials and Systems Division
3M Center, 235-1E-54
St. Paul, MN 55144-1000
1-800-553-9215
www.3m.com/displayenhancement



Minimum 10% Post-Consumer Fiber

Please recycle. Printed in U.S.A.
3M is a trademark of 3M Company. ©3M 2018. All rights reserved.
75-0501-4039-3

28577SA042715JF