

Product Description

- 2-mil, white vinyl film
- Use films 3635-30 and 3635-70 for fluorescent lighting applications
- Use films 3735-50 and 3735-60 for LED applications

Product Features

- Available in four light transmission levels
- Pressure sensitive, permanent adhesive adheres to flat, rigid substrates
- Create custom lighting effects for backlit applications
- Control brightness and light distribution within light boxes without hotspots
- Eliminate need to back-spray thermoformed applications
- Expected Performance Life of 7 years (unwarranted period for unprinted film with no graphic protection, applied to a flat, vertical, outdoor surface)

Quick Links

- [3M Graphics Warranties](#)
- [Technical Information Selector](#)
- [Safety Data Sheets \(SDS\)](#)
- [Flammability](#)
- [Videos](#)

Recommended Types of Graphics and End Uses

- Internally-illuminated signs
- Thermoformable under controlled conditions
- First surface applications using films 3635-30, 3735-50, and 3735-60 without being covered by another film
- Second surface applications without applying another film

When constructed and used as described in this Bulletin, these types of graphics and end uses may be warranted by the 3M™ MCS™ Warranty. Please read the entire Bulletin for details.

Recommended Compatible Products

Films

- [3M™ Scotchcal™ Translucent Film Series 3630](#)
- [3M™ Scotchcal™ Translucent Film Series 3730](#)
- [3M™ Scotchcal™ Translucent Film IJ3630-20](#)
- [3M™ Scotchcal™ Translucent Film IJ3730-50](#)
- [3M™ Scotchcal™ Translucent Film IJ3730-60](#)

Graphic Protection

- [3M™ Scotchcal™ Gloss Overlaminates 3640GPS](#)
- [3M™ Scotchcal™ Matte Overlaminates 3642GPS](#)
- [3M™ Scotchcal™ Gloss Overlaminates 3658G](#)
- [3M™ Scotchcal™ Matte Overlaminates 3660M](#)

Application Tapes

See [3M Instruction Bulletin AT-1](#) to determine what application tape is recommended for your film or finished graphic.

Certificate of 3M™ MCS™ Warranty

Graphic manufacturers who produce digitally printed graphics made with all 3M Graphics Products, including 3M Ink purchased through a qualified 3M Distributor or 3M Printing Partner, may register to be recognized with a Certificate of 3M™ MCS™ Warranty. Only graphic manufacturers having a current Certificate of 3M™ MCS™ Warranty are eligible to extend this warranty to their customers.

NOTE: For non-digitally printed Finished Graphics, check your eligibility for the 3M™ MCS™ Warranty by viewing the Warranty Period found within the Product Bulletin or using the warranty selector at www.3mgraphics.com/warranties.

Characteristics

These are typical values for unprocessed product. Processing may change the values.

Physical Characteristics

Characteristic	Value	
Material	Vinyl	
Color	White color; uniform in both reflective and transmitted light	
Thickness	Without adhesive: 2 mil (0.05 mm) With adhesive: 3 – 4 mil (0.08 – 0.10 mm)	
Adhesive	Pressure-sensitive	
Adhesive Color	Clear	
Liner	78 pound, white kraft paper	
Tensile Strength	5 pounds/inch at 73 °F (0.9 kg/cm at 23 °C)	
Chemical Resistance	<ul style="list-style-type: none"> Resists mild alkalis, mild acids, and salt Excellent resistance to water (<i>does not include immersion</i>) 	
Flammability	ASTM E84 reports: 3635-30 ; 3635-70 ; 3735-50 & 3735-60 or go to the On-line Product Catalog at 3Mgraphics.com All other test reports: call 1-800-328-3908	
Light Transmission*, nominal	3635-30: 42% ± 2% 3635-70: 65%	3735-50: 52% ± 2% 3735-60: 63% ± 2%

*Contact your 3M representative for alternatives if your application requires a different light transmission value than listed above.

Application Characteristics

Characteristic	Value	
Finished Graphic Application Recommendation	Surface type: Flat Surface type: Acrylic, polycarbonate, PETG (glycol-modified polyethylene terephthalate) Application method: Wet application method or cold roll laminator Application temperature: 60 °F (16 °C) minimum	
Adhesion Strength	Acrylic panels: 3 pounds/inch (0.5 kg/cm)	
Applied Shrinkage	0.015 inch (0.4 mm)	
Finished graphic exposure temperature	-20 to +175 °F (-29 to +80 °C) (not for extended periods of time at the extremes)	
Recommended Light Source (for best results)	Films 3635-30 and 3635-70: Fluorescent bulbs	Films 3735-50 and 3735-60: LEDs
Graphic Removal	Permanent (not intended to be removed)	

Warranty Information

Warranty Coverage Overview

The warranty coverage for eligible graphics is based on the user both reading and following all applicable and current 3M Graphics Product and Instruction Bulletins. The warranty period for eligible graphics is as stated in the 3M Graphics Warranties Matrices at the time that the film was purchased. Information found at [3MGraphics.com/warranties](https://www.3M.com/graphics/warranties) includes:

- [3M Graphics Warranties Bulletin](#)
 - This bulletin contains information on limitations and exceptions, and warranty period reductions for 3M Graphics Warranties. The warranty period may be reduced and stipulations may apply for certain constructions, applications, and graphic exposures as covered in this Bulletin.
- [3M Graphics Warranties Selector](#)
 - Use this selector to search for your vertical warranty period by product type, ink type, film name, and/or ink/printer platform.
- [U.S. Desert Southwest Region Map](#)
 - Use this map of hot, arid desert areas to determine if you are subject to reduced warranted durabilities.

The warranties set forth in this Bulletin are made in lieu of all other express or implied warranties, including any implied warranty of merchantability, fitness for a particular purpose, or arising out of a course of dealing, custom, or usage of trade.

3M Basic Product Warranty

3M Graphics Products are warranted to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in its applicable 3M Graphics Product Bulletin and as further set forth in the [3M Graphics Warranties Bulletin](#).

Limited Remedy

The limited remedy applicable to each warranty is addressed in the 3M Graphics Warranties Bulletin found at [3MGraphics.com/warranties](https://www.3M.com/graphics/warranties).

Limitation of Liability

Except to the extent prohibited by law, 3M SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO PURCHASER OR USER FOR ANY DIRECT (EXCEPT FOR THE LIMITED REMEDY PROVIDED HEREIN), INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, LABOR, NON-3M MATERIAL CHARGES, LOSS OF PROFITS, REVENUE, BUSINESS, OPPORTUNITY, OR GOODWILL) RESULTING FROM OR IN ANY WAY RELATED TO 3M'S GRAPHICS PRODUCTS, SERVICES, OR THIS BULLETIN. This limitation of liability applies regardless of the legal or equitable theory under which such losses or damages are sought.

Warranty Period Matrices - Vertical

Table A. Non-Thermoformed Outdoor Signs Warranty Period (in years) for Finished Graphics in U.S. Vertical Exposure (see [3M Graphics Warranties Bulletin](#) for Graphic Type Definitions and Exposure Definitions).

Substrate	Application Surface	Graphic Protection	U.S. Vertical Exposure (in years)	
			Diffuser 3635-30 3735-50 3735-60	Diffuser 3635-70*
Acrylic Non-solar grade Polycarbonate PETG Glass	First	None*	6	0*
	First	3640GPS 3642GPS 3658G 3660M	9	3*
Acrylic Non-solar grade Polycarbonate PETG Glass	Second	None	6	5*
Solar grade Polycarbonate UV-grade PETG	Second	None	9	6*

* For warranted first surface applications, diffuser film 3635-70 must be completely covered by one of the following 3M UV-resistant films: film series 3630 or 3730, films IJ3630-20, IJ3730-50, IJ3730-60, or overlaminates 3640GPS, 3642GPS, 3658G or 3660M.

Table B. Thermoformed Outdoor Signs Warranty Period (in years) for Finished Graphics in U.S. Vertical Exposure (see [3M Graphics Warranties Bulletin](#) for Graphic Type Definitions and Exposure Definitions).

Substrate	Application Surface	Graphic Protection	U.S. Vertical Exposure (in years)	
			Diffuser 3635-30 3735-50 3735-60	Diffuser 3635-70*
Acrylic Non-Solar grade polycarbonate PETG	First	None	4	0
	First	3640GPS 3642GPS 3658G 3660M	6	0
Non-Solar grade polycarbonate PETG	Second	None	4	3*
Acrylic Solar grade polycarbonate UV-grade PETG	Second	None	6	3

* For warranted first surface applications, diffuser film 3635-70 must be completely covered by one of the following 3M UV-resistant films: film series 3630 or 3730, films IJ3630-20, IJ3730-50, IJ3730-60, or overlaminates 3640GPS, 3642GPS, 3658G or 3660M.

Reduced Warranty Period for Other Graphic Exposures

For other graphic exposures, determine the applicable reduced warranty period by multiplying the standard warranty period (in years) for your graphic construction as shown in the applicable warranty period tables by the percentage shown for the intended graphic exposure. See "Exposure Types" on page 3 of the 3M Graphics Warranties Bulletin for graphic exposure definitions.

Table C. Reduced Warranty Period for Other Graphic Exposures

If the Graphic Exposure is:	Use this Percentage of Vertical Exposure, Warranty Period	Calculation Examples
Desert Southwest Vertical	70%	0.7 x 7 years = 4.9 years
U.S. Horizontal	0%	0 x 4 years = 0 years

Additional Limitations

See the 3M Graphics Warranties Bulletin at 3MGraphics.com/warranties, for terms, additional limitations of your warranty, if any, information on reduced warranties for different exposures, and limitations of liability.

Factors that Affect Graphic Performance Life

The actual performance life of a graphic is affected by:

- the correct combinations of 3M-recommended graphics products.
- the ink formulation.
- complete ink drying or curing.
- selection, condition and preparation of the substrate.
- surface texture.
- application methods.
- angle and direction of sun exposure.
- environmental conditions.
- cleaning or maintenance methods.

Graphics Manufacturing



Before using any equipment, always read the manufacturer's instructions for safe operation.

Application and Installation

In addition to other 3M Bulletins specified in this document, the following Bulletins provide details that you may need to successfully apply a graphic.

- [3M Instruction Bulletin 2.1](#) Design of Graphics
- [3M Instruction Bulletin 2.4](#) Design of Cabinets for Light Boxes and Channel Letters
- [3M Instruction Bulletin 4.1](#) Sheeting, Scoring and Film Cutting
- [3M Instruction Bulletin 4.22](#) Lamination Basics for Inkjet Printed Graphics
- [3M Instruction Bulletin 4.26](#) How to Construct Backlit Sign Faces
- [3M Instruction Bulletin 5.16](#) Thermoforming
- [3M Instruction Bulletin 5.5](#) Application, General Procedures for Interior and Exterior Dry Application
 - For roll application, the dry method is acceptable.
- [3M Instruction Bulletin 5.7](#) Application, Wet Method for Translucent, Inkjet, Screen Printed and Cut Graphics
- [3M Instruction Bulletin 6.5](#) Storage, Handling, Maintenance, and Removal of Films and Sheetings

Removal

This film uses a permanent adhesive. This film is not easily or cleanly removable. See [3M Instruction Bulletin 6.5](#) for details.

Shelf Life, Storage and Shipping

Shelf Life

The shelf life is **never more than 1 year** from the date of manufacture on the original box.

Storage Conditions

- at an ambient temperature less than 86 °F (30 °C)
- Out of sunlight
- Clean, dry area
- Original container
- Bring the film to print room temperature before using

Shipping

Flat, or rolled out on 6 inch (15 cm) or larger core. This helps prevent the liner, and, if used, the application tape from popping off.

Health and Safety



CAUTION

When handling any chemical products, read the manufacturer's container labels and the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products go to 3M.com/SDS, or by mail or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturer's instructions for safe operation.

Bulletin Change Summary

For the most current 3M Technical Information available to successfully use this product, please view this Bulletin electronically and click on the blue underlined links to view the relevant documents. Please read the entire Bulletin thoroughly.

Release C MAY-2016:

- Updated Product Bulletin to new format. Please read the entire Bulletin thoroughly.

3M Commercial Solutions

3M Center
Building 220-12E-04
St. Paul, MN 55144-1000
1-800-328-3908
Fax 651-736-4233
3M.com/graphics

3M Canada

PO Box 5757
London, ON N6A 4T1
1-800-265-1840
Fax 519-452-6245

3M México S.A. de C.V.

Av. Santa Fe No. 55
Col. Santa Fe, Del. Alvaro Obregón
México D.F. 01210
General 5255-5270-0400
Fax 5255-5270-2277

3M Puerto Rico, Inc.

350 Chardon Avenue
Suite 1100
San Juan, PR 00918
General 787-620-3000
Fax 787-620-3018