

3M™ Contrast Enhancement Film

CEF06XXN (826XXN) Series

- High durability in reliability testing on PC/PMMA

Product Description

3M™ Contrast Enhancement Films (CEF) are specialized optically clear adhesives offering excellent clarity and adhesion to various transparent display substrates. 3M CEF06XXN is bare ITO compatible and recommended for plastic cover lens to sensor bonding. No UV curing is required.



Construction

Product	3M CEF0602N (8262N)	3M CEF0604N (8264N)	3M CEF0607N (8267N)	3M CEF0608N (8268N)	3M CEF0610N (8260N)
Adhesive Type:	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic
Adhesive Carrier:	None	None	None	None	None
Approximate Thickness:					
Release Liner:	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester
Adhesive:	50 um (2.0 mils)	100 um (4.0 mils)	175 um (7.0 mils)	175 um (8.0 mils)	250 um (10.0 mils)
Release Liner:	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester	75 um (3.0 mils) Clear Polyester

Typical Physical Properties and Performance Characteristics

Note: The following technical information and data should be considered representative or typical only and should not be used for specification purposes.

Durability Performance to Environmental Conditions:

The following environmental tests were conducted in the 3M laboratory under the conditions specified without any appreciable deterioration in visible appearance (no bubbles, delamination, whitening, etc.).

Construction	Condition	Duration
LCD Glass/3M CEF0607N/PC (1 mm)	65°C/90%RH	800 hours
LCD Glass/3M CEF0607N/PMMA (1 mm)	65°C/90%RH	800 hours
LCD Glass/3M CEF0607N/PET (2 mil)	65°C/90%RH	800 hours
LCD Glass/3M CEF0608N/PC (1 mm)	65°C/90%RH	800 hours
LCD Glass/3M CEF0608N/PMMA (1 mm)	65°C/90%RH	800 hours
LCD Glass/3M CEF0608N/PET (2 mil)	65°C/90%RH	800 hours

Peel Adhesion:

ASTM D3330 modified, 180 degree peel,
1 cm wide peel strips, 12 in/min (305 mm/min), 2.0 mil
polyester backing

Float Glass			PC		PMMA	
Dwell Time	20 min dwell at 23°C/50%RH	3 days dwell at 23°C/50%RH	20 min dwell at 23°C/50%RH	3 days dwell at 23°C/50%RH	20 min dwell at 23°C/50%RH	3 days dwell at 23°C/50%RH
Units	N/cm	N/cm	N/cm	N/cm	N/cm	N/cm
3M CEF0602N	7.0	7.2	4.2	6.4	5.0	6.3
3M CEF0604N	7.2	7.4	4.3	7.0	5.3	6.5
3M CEF0607N	10.7	11.3	5.5	9.0	6.6	9.1
3M CEF0608N	12.6	12.2	5.6	8.1	6.8	9.3

Color:

Ultra Scan Pro (Hunter Lab), ASTM E308, D65/10°
3M CEF06XXN on LCD glass

3M CEF0602N (8262N)	3M CEF0604N (8264N)	3M CEF0607N (8267N)	3M CEF0608N (8268N)
L* = 96.9	L* = 96.9	L* = 96.9	L* = 96.8
a* = 0.00	a* = 0.00	a* = 0.00	a* = 0.00
b* = 0.18	b* = 0.23	b* = 0.27	b* = 0.37

Refractive Index:

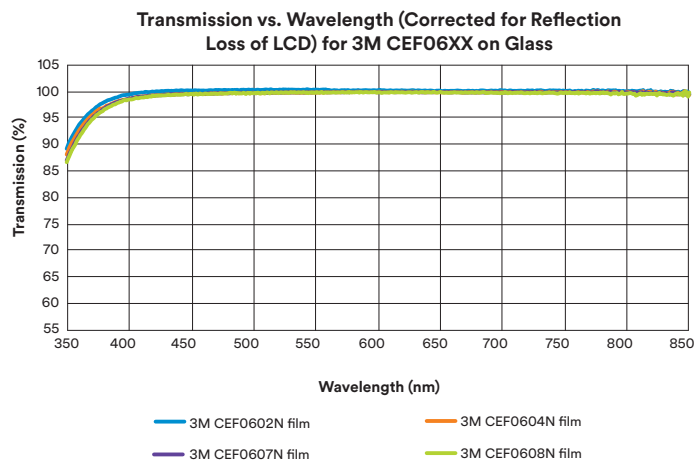
(+ 0.0005 Metricon measurements)

3M CEF06XXN (826XXN)		
405 nm	532 nm	633 nm
1.4968	1.4843	1.4792

Haze:

Haze is measured according to ASTM D1003-92, 3M CEF06XXN on LCD glass

3M CEF0602N (8262N)	3M CEF0604N (8264N)	3M CEF0607N (8267N)	3M CEF0608N (8268N)
0.1%	0.2%	0.2%	0.3%

Transmission Curve:**Typical Electrical Properties at Room Temperature:**

ASTM-D150-92. 3M CEF06XXN (826XXN)

Dielectric Constant:

3M CEF06XXN (826XXN)	
Frequency (KHz)	Dielectric Constant
100	5.67
500	5.06

Suggested Lamination Process

Step 1: Remove secondary liner, and then laminate 3M CEF06XXN to first adherent substrate by roller at room temperature

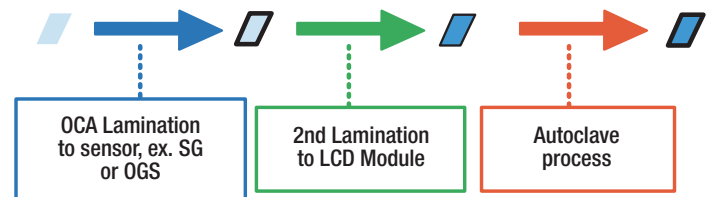
Recommendation: roller pressure 0.1 – 0.2 MPa, roller speed 0.5 – 1 m/min

Step 2: Remove primary liner, and then laminate 3M CEF06XXN/first adherent to second adherent by vacuum lamination

Recommendation: Vacuum condition < 50 Pa, pressure around 0.1 – 0.2 MPa

Step 3: Autoclave process

Recommendation: 30-60°C/3-5kgf/cm²/20-30min

**Storage**

- Store in original packaging or plastic bag
- Avoid applying pressure or resting objects on the product to prevent marking, denting, or deforming the surface
- Wear gloves to prevent fingerprints or nail marks when handling
- Product should be unpacked and handled in a clean-room facility
- Store at room temperature conditions of 22 ± 8°C and 50 ± 20% relative humidity

Regulatory

For regulatory information about this product, please contact your 3M representative.

Technical Information

The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes reliable, but the accuracy or completeness of such information is not guaranteed.

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