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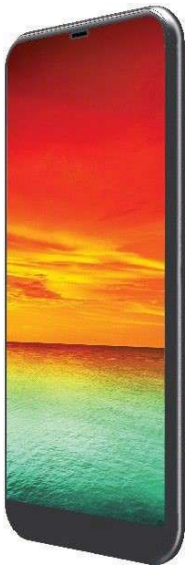
Technical Data | May 2026

3M™ Contrast Enhancement Film
(CEF08XX/OCA 821XX Series)

- 3M film CEF0801/3M OCA 82101
- 3M film CEF0802/3M OCA 82102
- 3M film CEF0803/3M OCA 82103
- 3M film CEF0804/3M OCA 82104
- 3M film CEF0805/3M OCA 82105
- 3M film CEF0806/3M OCA 82106
- 3M film CEF0807/3M OCA 82107
- 3M film CEF0808/3M OCA 82108
- 3M film CEF0809/3M OCA 82109
- 3M film CEF0810/3M OCA 82110
- 3M film CEF0812/3M OCA 82112
- 3M film CEF0814/3M OCA 82114



Product Description

3M™ Contrast Enhancement Film (CEF08XX/OCA 821XX Series) are specialized optically clear adhesives offering clarity and bonding for smooth or textured transparent display substrates. 3M film CEF08XX is recommended for general purpose, non-touch applications. No UV curing required.

Key Features

- General purpose adhesive
- Easy converting for good edge quality
- 3M film CEF08XX Series products are die cuts of film
- 3M OCA 821XX Series products are available in roll good form

Product Construction

Product	3M™ film CEF0801 (OCA 82101)	3M™ film CEF0802 (OCA 82102)	3M™ film CEF0803 (OCA 82103)	3M™ film CEF0804 (OCA 82104)	3M™ film CEF0805 (OCA 82105)	3M™ film CEF0806 (OCA 82106)
Adhesive Type:	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic
Adhesive Carrier:	None	None	None	None	None	None
Approximate Thickness:						
Release Liner:	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester
Adhesive:	25 µm (1.0 mils)	50 µm (2.0 mils)	75 µm (3.0 mils)	100 µm (4.0 mils)	125 µm (5.0 mils)	150 µm (6.0 mils)
Release Liner:	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester

3M™ Contrast Enhancement Film (CEF08XX/OCA 821XX Series)

Product	3M™ film CEF0807 (OCA 82107)	3M™ film CEF0808 (OCA 82108)	3M™ film CEF0809 (OCA 82109)	3M™ film CEF0810 (OCA 82110)	3M™ film CEF0812 (OCA 82112)	3M™ film CEF0814 (OCA 82114)
Adhesive Type:	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic	Acrylic
Adhesive Carrier:	None	None	None	None	None	None
Approximate Thickness:						
Release Liner:	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester
Adhesive:	175 µm (7.0 mils)	200 µm (8.0 mils)	225 µm (9.0 mils)	250 µm (10.0 mils)	300 µm (12.0 mils)	350 µm (14.0 mils)
Release Liner:	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester	50 µm (2.0 mils) Clear Polyester

The 3M family of optically clear adhesives for electronic displays are usually available in two forms. 3M OCA come in roll good form. 3M Contrast Enhancement Films (CEF) are available in die-cut form.

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.

Environmental Testing:

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.). Sample construction is optical glass/3M film CEF08XX/PET.

	Condition	Duration
High Temperature	+95°C	800 hours
Low Temperature	-40°C	500 hours
High Temp/Humidity	+65°C/90%RH	800 hours
Thermal Shock	-40°C and +85°C (1 hour dwell, <1 min ramp time)	500 hours
UV	0.55 W/m^2 at 340nm, Daylight filter	500 hours

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Peel Adhesion:

ASTMD3330 modified,180 degree peel from float glass, 1cm wide peel strips, 12in/min (305mm/min), 2.0 mil polyester backing, 3M film CEF08XX.

Product	3M™ film CEF0802	3M™ film CEF0805	3M™ film CEF0807	3M™ film CEF0808	3M™ film CEF0809	3M™ film CEF0810
Units	N/cm	N/cm	N/cm	N/cm	N/cm	N/cm
20 minute dwell at RT						
Stainless Steel	6.3	7.1	6.6	7.3	7.0	9.0
Glass	6.5	7.6	7.6	8.8	8.6	9.8
Acrylic	4.5	6.2	5.6	6.3	6.7	6.7
Polycarbonate	4.6	5.5	5.1	4.7	4.9	6.2
75 minute dwell at RT						
Stainless Steel	8.4	10.5	10.1	10.8	10.9	10.6
Glass	7.9	9.2	9.3	10.6	9.8	10.6
Acrylic	5.6	7.2	7.3	7.2	8.1	8.3
Polycarbonate	5.8	7.8	7.1	7.0	7.9	8.0

Haze:

Haze is measured according to ASTM D1003-92, 3M film CEF08XX on optical glass

3M™ film CEF0802	3M™ film CEF0805	3M™ film CEF0807	3M™ film CEF0808	3M™ film CEF0809	3M™ film CEF0810
0.1%	0.2%	0.2%	0.2%	0.2%	0.3%

Color:

Ultra Scan Pro (Hunter Lab), ASTM E308, D65/10° 3M film CEF08XX on LCD glass.

Color			
3M film CEF0802	L* = 97.1	a* = -0.02	b* = 0.15
3M film CEF0805	L* = 97.1	a* = -0.05	b* = 0.19
3M film CEF0807	L* = 97.1	a* = -0.04	b* = 0.18
3M film CEF0808	L* = 97.1	a* = -0.05	b* = 0.18
3M film CEF0810	L* = 97.1	a* = -0.05	b* = 0.20

Refractive Index:

(+ 0.0005 Metricon measurements from standard deviation of ellipsometry) 3M film CEF08XX Series.

3M™ film CEF0802	3M™ film CEF0805	3M™ film CEF0807	3M™ film CEF0808	3M™ film CEF0809	3M™ film CEF0810
1.475	1.473	1.473	1.473	1.474	1.473

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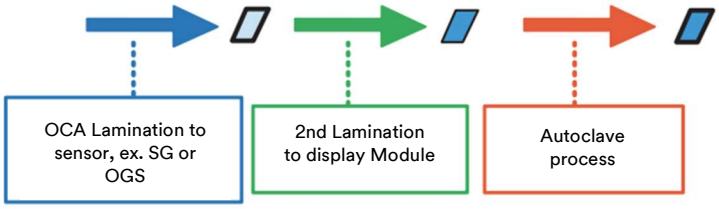
Suggested Lamination Process

Step 1: Remove secondary liner, and then laminate 3M film CEF08XX to first adherent substrate by roller at room temperature
Recommendation: roller pressure 0.1 – 0.2 MPa, roller speed 0.5 – 1m/min
Step 2: Remove primary liner, and then laminate 3M film CEF08XX/first adherent to second adherent by vacuum lamination (if rigid-to-rigid bonding) remove primary liner, and then laminate 3M film CEF08XX/first adherent to second adherent
Recommendation: Vacuum condition < 50 Pa, pressure around 0.1 – 0.2 MPa
Step 3: Autoclave process recommendation: 30-60°C/3-5kgf/cm^2/20-30min



Storage

- 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 needs to be unpacked and handled in a clean-room facility.
- CEF should be properly stored at room temperature conditions of 22 ± 2°C and 50 ± 20% relative humidity.

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

3M™ Contrast Enhancement Film (CEF08XX/OCA 821XX Series)

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