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# Fast, Clear, Bubble-Free, Optically Clear Bonds

UV Display Bonding Adhesives

Dymax display bonding adhesives are specifically formulated for applications where crystal-clear, invisible bonds are required. The adhesives bond glass to glass, glass to plastic, and plastic to plastic in seconds upon exposure to UV light. Dymax display bonding adhesives are designed to maximize light transmission, accurate color, brightness, and clarity of liquid crystal displays (LCDs). Reduced air entrapment creates strong, ripple-free bonds that help increase panel strength. These adhesives are commonly used to laminate LCDs, cover glass, and touch screens used for monitors, kiosk panels, and mobile phones.

The "on-demand cure" of these adhesives allows substrates to be repositioned precisely until parts are ready to be cured. Using a thin layer of Dymax adhesive controls cost and can reduce the weight of the final product. The adhesive also acts as a barrier against stress, significantly improving product reliability and warranty costs. Dymax display adhesives come in a variety of viscosities for ease of use and controlled dispensing and are available in a wide range of packaging sizes.



Optical bonding increases clarity, viewing angle, and vibration resistance

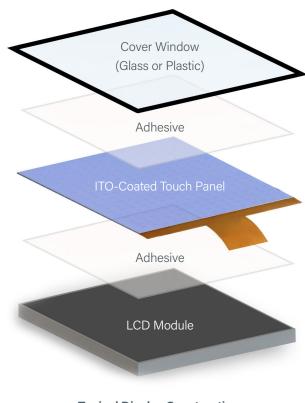
- One component, no mixing required
- Fast cure with excellent bond strength to a variety of substrates
- Easy flow characteristics for flat panel lamination
- Low shrinkage minimizes visible distortion after cure
- Excellent re-workability
- · High optical clarity
- · Flexible with low stress and low modulus
- Very low yellowing for increased light transmission, enhanced brightness, optical clarity, and better contrast ratios transmission
- Enhanced thermal cycling
- Great for enhancing LCD and plasma screens, monitors, outdoor kiosks, navigation systems, mobile phones, and more.

Product	Description	Viscosity, cP	Refractive Index	Yellowness b* initial, 5 mil thick	Durometer Hardness	Volumetric Shrinkage	Transmittance at 570 nm
9701	Low viscosity; low shrinkage; excellent re-workability; non-yellowing; good thermal shock resistance; bonds to various substrates	200	1.50	0.08	00-70	4.9%	99%
9702	Low shrinkage; excellent re-workability; non-yellowing; good thermal shock resistance; bonds to various substrates	950	1.49	0.12	00-70	4.2%	100%
9703	Gel viscosity; low shrinkage; excellent re-workability; non-yellowing; good thermal shock resistance; bonds to various substrates	30,000	1.48	0.47*	00-80	4.2%	97%

\* 20 mil thick film

### **Commonly Bonded Substrates**

Glass			
Adhesive			
Glass			
Glass			
Adhesive			
РММА			
Polycarbonate			
Adhesive			
Glass			
PET			
Adhesive			
Glass			
PET			
Adhesive			
ITO Glass			
Glass			
Adhesive			
Stainless Steel			



**Typical Display Construction** 

## Common Applications of Dymax LCD Laminating and Bonding Adhesives

Dymax adhesives can be used in lamination applications to prevent screen glare.

#### **Interactive Touch Kiosks**

Adhesive bonds remain pliable without affecting performance.

#### Airport, Bus Station, and Train Station Information Monitors

Various unlike substrates can be laminated with a single adhesive. Not affected by temperature variations.

#### **LCD Portable Games**

Economical-to-use adhesive solutions keep product costs down.

#### **Smart Connected Devices**

Adhesives maximize light transmission, accurate color, brightness, and clarity of the LCD.

#### **Outdoor Kiosks**

ving and harsh environments.

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#### **Dispensing & Light-Curing Systems for Display Bonding**

A range of dispensing and curing options are available from Dymax including handheld and mountable dispensing valves, conveyorized curing systems, flood lamp systems, and spot-curing lamps.

#### Conveyors

Dymax UVC conveyor systems come in a range of curing widths to accommodate LCD screens from 3" up to 42". Customized conveyors are also available. Contact Dymax for more information and free consultation.

#### **Flood Lamps**

Dymax flood lamp systems are available for incorporating into existing assembly lines or for mounting over Dymax UVC conveyor systems. Contact Dymax for more information and free consultation.

#### **Spot Lamps**

Dymax spot-curing systems are used to cure beads sealing the gaps between the LCD to bezel.

#### **Dispensing Systems**

Dymax has developed high-quality, field-proven dispense systems to fit many types of adhesive and fluid dispensing applications. These systems include various automated and manual dispensing valves, spray valves and guns, controllers, material reservoirs, and related components for seamless integration into assembly processes. The systems provide accurate, consistent dispense for a range of low- to high-viscosity fluids. Dispensing systems with adjustable suck-back control and dispensing valves that offer contaminate-free dispensing are available.



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