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Advanced LCD Solutions Specialist

FILM ENHANCEMENT SOLUTIONS



**BRIGHTNESS ENHANCING
PRIVACY FILM
ANTI-GLARE**

About Us



For over a decade AGDisplays has been a leading provider of high quality LCD enhancement products and services for the industrial markets. We lead the way in offering an extensive range of custom panel solutions that improve standard display attributes while maximizing performance in any environment. The AGDisplays teams are experts in LCDs, from building simple or complex designs to integration work.

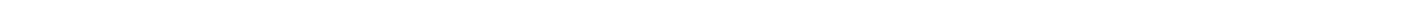
In our 124,000 sq. foot facility, we offer over 800 off the shelf products that include tablets, open and closed frame LCDs and much more. Our knowledge in innovative LCD technology and our high-quality control standards separate us from the rest. At AGDisplays, our teams have a true commitment to being your trusted partner.



OUR SERVICES

- Off The Shelf LCD Products
- NVIS Integration and Design
- OCA, Optical & Bonding Services
- Custom LED Integration & Design
- Touch Screen Integration & Design
- Custom Glass Supply Services
- Turnkey & Design Services
- EMI Shielding & Design

- Film Enhancements & Repolarization
- Certificated FAA Part 145 Repair Station
- Component Assembly & Integration
- LCD Controller, Cabling & Design
- Testing/Certification of EOL Panels
- Drop-in Replacement
- Industrial Repair Program
- Zero Dead Pixel Inspection



Industries Served



MILITARY



AVIONICS



HOTEL



MARINE



MARKETING



MEDICAL



RESTAURANT



RETAIL



TRANSPORTATION

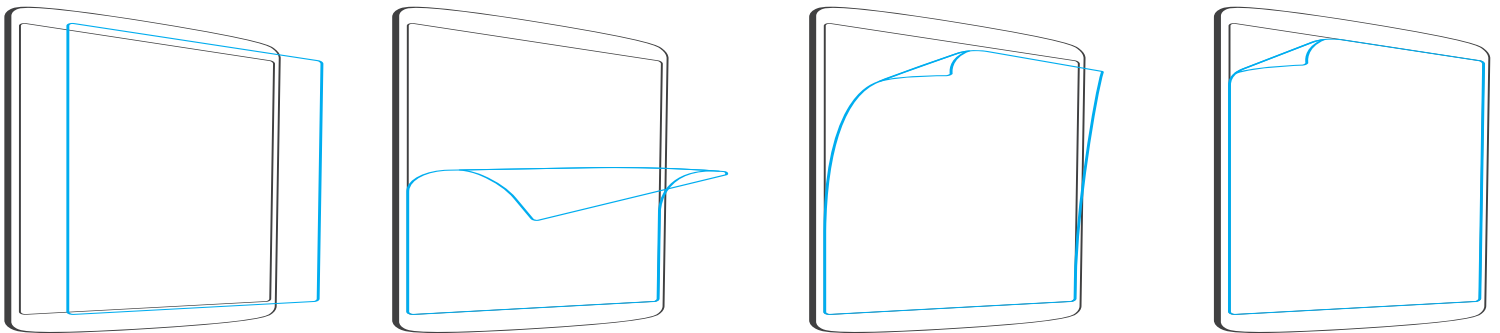


Film Solutions



Increase brightness, eliminate reflection and glare, prevent EMI interference, add privacy features and more, just by integrating a film enhancement to your LCD configuration. LCDs purchased off the shelf are likely not properly built for extreme and industrial conditions, so AGDisplays offers quick and easy LCD solutions to achieve readability and clarity levels without having to upgrade to new and expensive LCD technology.

Film enhancements working with LED backlight sources and ambient light to optimize light refraction for enhanced clarity and image quality. Our film products are easily integrated into your current LCD, and may be retrofitted into any sized solution. This service is a passive enhancement, meaning there is no change in neither electrical components nor additional wattage consumption.



Since film enhancement is non-evasive, power consumption remains the same, and there is no concern to readjust thermal management.

Our most popular high bright solution can increase brightness by 40-140% and intensify color contrast, optics, brightness and overall image quality. Brightness increase doesn't increase LCD power consumption. So, how does it work? While one film refracts light towards the viewer, a second film reflects the light back into the LCD, essentially recycling the light until it exits the LCD.

Due to the limitless variations in LCD specifications, AGDisplays builds film enhancement per customer project so that we can guarantee a optimized design specifically for your panel.

BENEFITS

- Up to 140% increase in brightness without increase in power consumption
- Increased display contrast and readability
- Enhanced optics and image clarity
- Increased side-viewability
- Front glass protection
- Resistance to scratches and contaminants
- Increased color sharpness
- Privacy of information

Film Solutions



ANTI-GLARE

Anti-glare (AG) treatments minimize reflections from ambient lighting, noticeably improving readability. AG applied to glass and other substrates reduces surface reflection. The textured film diffuses specular reflections, removing the external reflection a user may experience. This film also improves scratch resistance. AG gives a matte appearance on the front of the LCD.



ANTI-REFLECTIVE

Anti-reflective (AR) film improves the durability and life-time of your display surface. Anti-reflective properties increase the contrast and sharpness as well as decrease the reflection from your LCD screen without having to increase your LCD's power consumption. Anti-reflective film can be identified as having a slightly purple tint.



BEF

Brightness Enhancement Film or BEF film can increase the brightness of LCDs through utilizing refraction and reflection, increasing the efficiency of your backlight source. Light exits the LCD at a specific angle; light outside of this angle is reflected back into the LCD until it exits at the proper angle. Multiple BEF films used in unison can enhance light properties.

DBEF

Dual Brightness Enhancement Film (DBEF) is another thin film reflective polarizer that enhances LCD brightness. It uses light normally lost to absorption in the bottom LCD polarizer and redirects it until allowing it to exit the LCD backlight assembly. Using DBEF film in conjunction with BEF film can often offer the highest yield of light output.

Film Solutions



ESR

Enhanced Specular Reflector (ESR) is designed to maximize the usage and distribution of light from the LCD's light source. ESR film allows light distribution from the backlight to increase the LCD's viewing angle. This film used with other brightness enhancing films can obtain the highest light output. Good solution for LCDs used in direct sunlight light.

PRIVACY FILMS

ACDisplays' privacy film solution decreases viewing angles, allowing an increase in privacy by keeping information away from prying eyes. It works by controlling the distribution of light in relation to the viewing angle of the display. Light control films direct light only in the direction of the user; viewed from the front, the display is clear and bright. Viewed from either the left or right side, the display view is black.



LIGHT DIFFUSION

Diffusion films improve LCD functionality by providing brightness uniformity throughout the active area. Light travelling through the stack up of an LCD will have no inherent direction and will be travelling in all directions. The function of the diffuser film is to redirect light in one direction, toward the next film. Employing diffuser films can provide up to 98% total light transmittance.

QUARTER WAVE RETARDER

This film offers uniform birefringence, increasing the wide angle view performance of the panel while keeping haziness low. Birefringence refers to the double refraction of light seen through a transparent material. This film works to provide a uniform view of the images on the LCD when being viewed from the left, right, top or bottom.

