

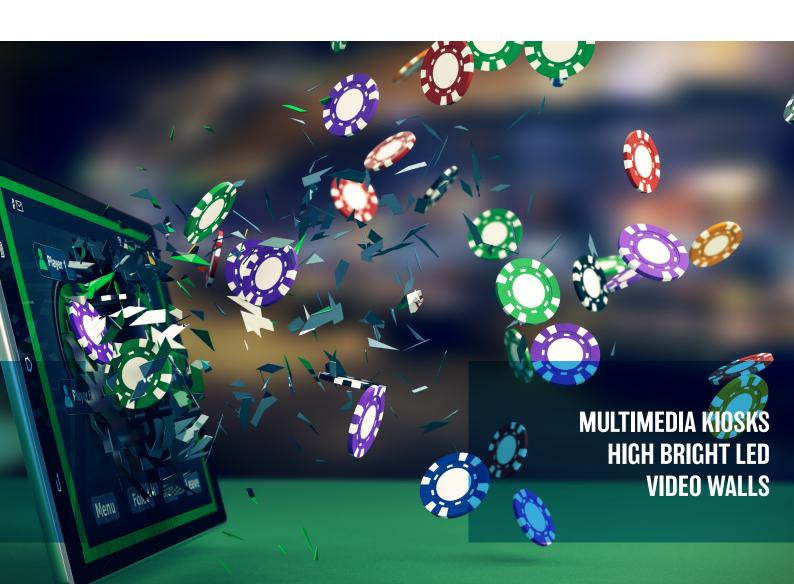


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# CASINO/GAMING SOLUTIONS



# **About Us**

#### ......

For over a decade ACDisplays 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 ACDisplays 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**

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**MILITARY** 



**AVIONICS** 

HOTEL



**MARINE** 



**MARKETING MEDICAL** 



**RESTAURANT** 



**RETAIL** 

**TRANSPORTATION** 







# **Casino & Gaming**

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ACDisplays provides flexible off-the-shelf and custom LCD solutions for the gaming industry. Our team of experts provide the perfect display options to meet your project requirements.

From enhancing solutions to LCD repair, our goal is to help you extend the life of your panel for effective cost savings and optimal design performance.

Our line of off the shelf displays are available to drop into your existing design or for purchase on their own.

We also offer extended lifecycle warranties and inspection services for added equipment protection.

All design solutions are dependent on individual applications and lead to a completely unique technical solution to fulfill customer requirements.

Our team can help you acquire new, EOL or refurbished LCDs, and can customize virtually any panel to meet your specific requirements. From a simple spec enhancement to full solution kitting, ACDisplays handles LCD sourcing, logistics, assembly and repair—all in one place.



# **TOUCHSCREEN INTEGRATION**

We offer popular technologies like projected capacitive, resistive, surface capacitive, IR, and SAW touch sensors.

# LED INTEGRATION

Retrofit advanced LEDs for sunlight readability and low power usage.

# **GLASS SUPPLY**

Optical clarity, display strength with integrated coverglass & custom screen-print designs.

# **TURNKEY & DESIGN**

Work with our team to create turnkey solutions on new or existing designs.

## **TOUCH TABLES**

Hold meetings and communicate business messages with superior and sensitive touch table technology.

# **MULTIMEDIA KIOSKS**

AGDisplays offers a wide range of multimedia kiosks to effectively reach your customer.

# FILM ENHANCEMENTS

Increase LCD functionality, versatility & performance. Retrofits into any sized LCD.

# **VIDEO WALLS**

With narrow bezels for a seamless feel, users are captivated by the media displayed on our video walls.

# **DIGITAL SIGNAGE**

Digital signage offers fast on-sight installation and easy access for maintenance & repairs.

# **List of Products**

#### .....



# **RUGGED MOBILE**

These devices meet military standards for shock & vibration, limited water submersion and dust ingression.



## **TABLETS**

AGDisplays makes commercial off the shelf tablets easy to purchase with flexible spec options and easy purchasing.



## TOUCH DISPLAYS

Our touch panels are eligible for performance upgrades like ruggedization, optical bonds and EMI protection.



## LCD DISPLAYS

Our LCD design solutions maximize standard LCD performance in any environment.



## MEDICAL DISPLAYS

Our LCDs support medical applications with long life cycles, high bright display readability and sharp contrast.



## MARINE DISPLAYS

Marine displays can be IP rated and are designed specifically for use in all marine/boating applications.



## DIGITAL SIGNAGE

Digital signage offers fast on-sight installation and easy access for maintenance & repairs.



# PANEL MOUNT DISPLAYS

Panel mount displays are designed for industrial environments and can be outfitted to meet specific requirements.



# **TOUCH TABLES**

Hold meetings and communicate business messages with superior and sensitive touch table technology.



# **MULTIMEDIA KIOSKS**

AGDisplays offers a wide range of multimedia kiosks to effectively reach your customer.



# **SPECIALTY DISPLAYS**

Bring interaction, creativity and technology together with 3D displays, all in ones and interactive whiteboards.



# VIDEO WALLS

With narrow bezels for a seamless feel, users are captivated by the media displayed on our video walls.



# **Touch Integration**

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Touchscreen technologies are not all created equal. In fact, their structures and features differ widely from technology to technology. From the simple touchscreen on a home printer, to the quick touchscreen experience of the latest smartphone.

With ACDisplays, you're not the end user, you are the creator. With so many sizes, technologies and specifications floating about, it's impossible to just select one from the masses without being informed first.

# **SURFACE ACOUSTIC WAVE**

#### **FEATURES**

- High Transmission
- Durable glass construction
- Pressure sensitive
- Advanced technology

#### **END USER BENEFITS**

- High optical clarity
- Rugged in indoor environments
- Activated with stylus, glove or fingernail

# **INDUSTRIES**

- Medical
- Touchscreen Kiosks
- Indoor Retail Environments

# **Touch Integration**

# RESISTIVE

......

### **FEATURES**

- Low light transmission at 75%
- Activation with any object
- Protective substrate on top of glass layer
- Able to be assembled from component parts, screen and sensors

#### **END USER BENEFITS**

- No glass shattering
- Works in rain or other liquids
- Good functionality in hot or cold weather
- Input is acceptable with any stimulus: finger, pen, gloved fingers, stylus, and anything else

## INDUSTRIES/APPLICATIONS

- Marine
- Commercial
- Food and beverage

# PROJECTIVE CAPACITIVE

### **FEATURES**

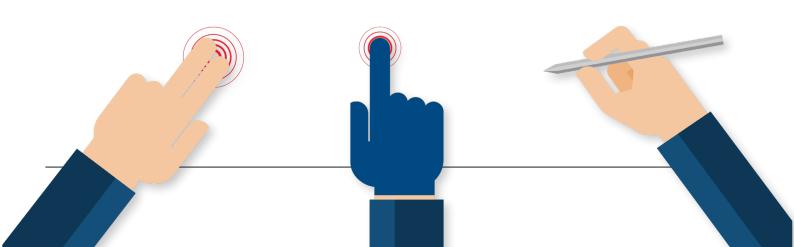
- Integration with various cover lens options: standard, tempered, chemicallystrengthened glass
- Single, dual or multi-touch
- High light transmission, in excess of 90%

#### **END USER BENEFITS**

- Superior image clarity
- High durability in rough environments
- Flexible touch points
- High transmissivity
- Input triggered by bare hands, latex gloves and stylus

## INDUSTRIES/APPLICATIONS

- Retail
- Gaming
- Digital Signage



# **Touch Integration**

......

# **SURFACE CAPACITIVE**

#### **FEATURES**

- Fast, sensitive touch response
- **Glass layer for ruggedization**
- Protective cover

#### **END USER BENEFITS**

- Good image clarity
- Highly scratch resistant
- Fingertip or stylus activation
- Durable in rough environments
- Resistance to contaminants and liquids

## INDUSTRIES/APPLICATIONS

- **Gaming**
- **Entertainment**
- Point of Sale
- Kiosks

# INFRARED

#### **FEATURES**

- High light transmission
- No glass substrate
- Light beam touch technology
- Scratch resistant

## **END USER BENEFITS**

- Unlimited touch life
- **Durable lifetime**
- Superior image quality
- Finger and glove touch activation

# INDUSTRIES/APPLICATIONS

- Retail
- Hospitality



# **High Bright Integration**

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AGDisplays provides LED backlight solutions that are customized to your requirements, with flexible brightness and design customization. We expertly utilize dynamic color mixing and color sequencing capabilities.



ACDisplays are considered pioneers in high bright LED technology. We carry our own line of High Bright LED rails that we continue to advance as the industry changes. We offer custom-sized LED backlight solutions that we design and tailor to custom-fit your exact needs.

The AGDisplays design team works expertly with your specifications to integrate LED designs without compromising quality and readability. Our dependable component selections make the LED backlights and controllers offered by AGDisplays some of the most reliable in the industry.

- High sunlight readability
- NVIS-compatible options
- High color gamut achievable
- Lower EMI output and better EMI resistance
- Improved shock and vibration
- Extended lifespan: 10,000-100,000 hours
- Durable in extreme hot and frigid cold
- Protection against extreme humidity
- Low power consumption & high brightness output
- Environmentally safe: LEDs are ROHS-compliant, mercury- & lead-free, reduced EMI emissions
- Smaller LEDs for a slim and light design
- Custom-manufactured LED controllers

# **High Bright Integration**

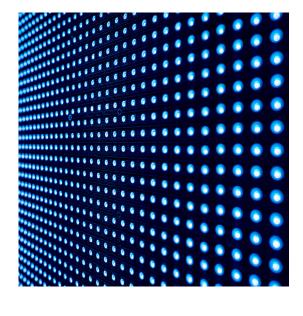
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LED backlighting is typically designed as edge-lit or in a direct backlighting arrangement. Both designs have the LEDs concentrated into a diffuser source (light guide of the display) distributing the light uniformly throughout the viewing area.



# **EDGE-LIT BACKLIGHTING**

With an edge-lit backlight design, LEDs are aligned along edge of the internal light guide of the LCD. The backlight array may be mounted on one, two, or all four edges, depending on the size of the display and the amount of luminance required. With this design, light from the LEDs is captured and spread across the viewing area by way of the light guide. Benefits of this design include a slimmer profile and lower cost of LEDs. This design is easily designed into any sized LCD, and is a great option for thin applications. ACDisplays uses our low footprint Ceneration 4 high bright LEDs in this and our direct backlight design.



# DIRECT BACKLIGHTING

In a direct backlighting arrangement, LEDs are placed in a flat array behind the light guide and the diffuser plate. Direct backlighting works as a uniform source of light, like most CCFLs. One of the pros of integrating a direct backlight arrangement is that it allows for local-dimming, which means the display is able to dim specific areas to create vivid images, drastically increase the apparent contrast ratio, provide precise color adjustment and enhance overall viewing quality. Blacks are true black and grays are more defined.

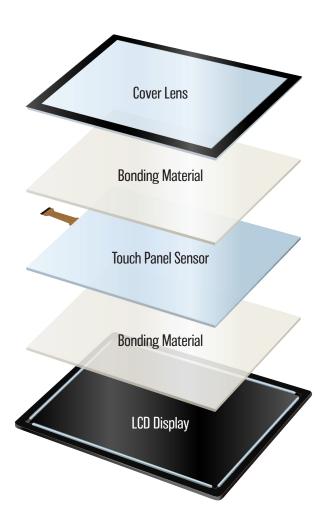
# **Custom Glass**

#### ......

Display assemblies with integrated strengthened cover glass have become a popular solution in years past. Utilizing a glass substrate has the superior advantage of increased hardness and scratch resistance as well as having a higher design value.

Pairing glass with various strengthening methods increases the robustness even more. AGDisplays offers a variety of cover glass options to add durability and protection to an LCD. Each material substrate provides unique benefits. Glass options we offer include chemically strengthened soda lime: clear and tinted, grey glass, low iron, AG etched, low emissivity, heat absorbing float glass; AGC Dragontrail™; Corning® Gorilla® Glass.

AGDisplays integrates the cover glass displays using a process called bonding. We offer three different bond integration methods: optical bond, OCA bond, and tape bond. Service options are available based on the size and specifications of your project.



- Chemically-Strengthened
- Scratch and Crack Resistant
- Improved Surface Quality
- Enhanced Response
- Thin and Light without Fragility
- Promote Sunlight Readability
- Ruggedized
- Protection From EMI Interference

# **Custom Glass**

......

# **CAPABILITIES**

#### CUTTING

- Water jet: max material size 90"x46", min material size 2"x2"
- Scribe cutting: excalibur, bystronic, TLC, handcutting, precision XY sawing

## **SCREEN PRINTING**

- Ekra X4, Argon Large, Cameo/Saturn, Saturn, Custom Press
- Ink types: epoxy/polyester, frit
- Etching & bus bars: Ekra X4, Cameo 18, Cameo 30, Saturn
- Edge printing

#### **EDGING**

- Angled and multilevel bevels, seams, corner dubbing, circle & flat ground, pencil & polished
- Edge types: flat ground, flat polish, flat polish with arris, pencil ground, pencil polished, safety seamed, dubbed corners, stepped and route surfaces, beveled edges, bullnose edges (half & full)







# **Custom Glass**

# .....

# **CHEMICAL STRENGTHENING**

#### STANDARD SODA LIME

- Soda lime is toughened through a sodium and potassium ion exchange. Often requested for thin display applications
- Thickness: min .30 mm max 19 mm

#### HIE GLASS

- 6-8x stronger than float glass.
- Typically used for electronic displays like tablets, mobile devices, touchscreens.
- Improves impact resistance, flexibility strength, scratch resistance, resistance to temp changes.

## HEAT TEMPERING (ASTM C-1048-04)

- Heat strengthening
- Safety tempering (dices when broken)

# **POPULAR OPTIONS**

ACC Dragontrail™ is a chemically strengthened and tempered float-glass material that is 6x more durable than soda lime glass. With this strength, the glass can be produced in thinner material.

#### Vicker's Hardness

Unstrengthened 596 kg f/mm² Strengthened 673 kg f/mm²

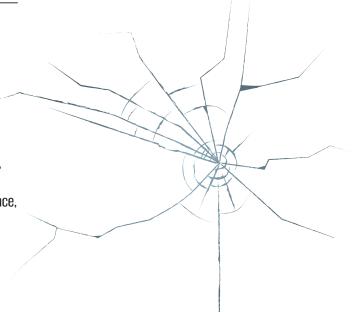
Thickness Availability

Standard 0.8 to 1.1 mm Special Request (MOO req.) 0.5 to 5.0 mm <u>Corning® Gorilla® Glass</u> is a thin sheet glass with a high degree of chemical strengthening. Benefits of Gorilla® Glass include high scratch resistance, high retained strength after use, and pristine surface quality.

#### Vicker's Hardness

Unstrengthened 534 kg f/mm<sup>2</sup> Strengthened 649 kg f/mm<sup>2</sup>

Thickness Availability 0.4 mm to 2.0 mm

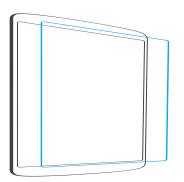


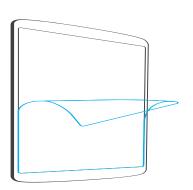
# Film Solutions

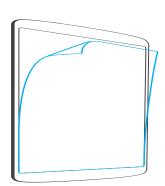
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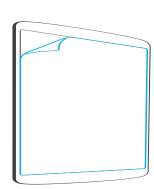
Increase brightness, eliminate reflection and glare, prevent EMI interference, add privacy features and more, just by integrating a film enhancement to your LCD configuration. LCDs purchased off the shelf are likely not properly built for extreme and industrial conditions, so ACDisplays offers quick 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, ACDisplays builds film enhancement per customer project so that we can guarantee a optimized design specifically for your panel.

- 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 (AC) treatments minimize reflections from ambient lighting, noticeably improving readability. AC 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. AC gives a matte appearance on the front of the LCD.

# **ANTI-REFLECTIVE**

Anti-reflective (AR) film improves the durability and lifetime 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**

AGDisplays' 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.

# **Turnkey Design**



A turnkey LCD solution is a project built so that the end customer is sold a completed LCD product, ready for use. It is our specialty to take on the responsibility for designing and developing a product that is ready to be used upon completion.

We have a team of experts ready to take on any challenging turnkey LCD need you have. ACDisplays offers in-house assembly, testing and quality measures, packaging and drop ship capabilities. We are able to accommodate small and large volume production quantities.

LCD turnkey projects involve kitting LCD peripherals and components or just selling commercial off the shelf LCD products that are applicable across all industries.

- Project administration and management control
- Subcontracting
- Focus on the total integrated system
- Considerable experience and skill in panel selection
- Development team that provides options based on budgets
- Quality functionality testing
- Inventoried spare parts
- Focus on procurement efficiency and flexibility
- Experience and expertise in all major industries, applications, and environments
- Quick reaction time, less opportunity for miscommunication
- Hassle-free design changes
- Cost targets high priority
- Adherence to all US industry standards and specifications
- Regular shipments to destinations around the world
- Comprehensive technician training and familiarity of quality improvement methods
- Complete factory testing prior to shipment
- In-house assembly, testing and quality measures, packaging and drop ship capabilities

# **Thank You**

# **COMMUNITY OF EXPERTS**

Whether we are met with a new design or challenged with improving an existing design, ACDisplays supports your team by delivering unparalleled LCD expertise and technology. ACD partners benefit from our efficient design process and our dedication to creating quality design solutions.

We saw the need for off the shelf products, so we've added an expansive line of open/closed frame LCDs, digital signage, and all-inone products. We offer unique LCD products like advanced touchscreen tabletops, high quality medical displays and rugged mobile devices. All of which are eligible for value add integration services. Our products are used across many industries including Military, Avionics, Marine, Industrial, Medical, Transportation and many more.







# **CERTIFICATIONS**

ACDisplays values high-quality working and design standards. We support your teams with the knowledge & expertise needed to make the strategic design and manufacturing decisions.









AGDISPLAYS IS ISO 14001, 45001 & R2 Certified

# **CONTACT US**

#### **HEADQUARTERS**

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#### **CET CONNECTED WITH AGDISPLAYS**

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