Display Solutions for the World’s Electronic Display Industry

HIE™ Glass  Fabrication  Coatings  Graphics  Protection  Films
We are Abrisa Technologies – Your Total Solution Partner

Abrisa Industrial Glass (AIG), Santa Paula, CA – ISO Cert
This 100,000+ sq. ft. manufacturing facility is dedicated to solution-based, industrial flat glass manufacturing, products and services, including screen-printing, etching, cutting and edging, CNC machining, higher level assembly, and more.

ZC&R Coatings for Optics (ZC&R), Torrance, CA – ISO Cert
This 21,000 sq. ft. manufacturing facility offers custom and OEM precision coating solutions for optical thin film products. ZC&R’s PVD and ION-assist depositions provide a wide range of standard and custom coatings to meet our customer's ever evolving needs.
Abrisa Technologies’ broad scope of design and manufacturing capabilities, vertical integration, and single-point accountability allows you to put your trust in one company for supply chain simplicity, convenience, reduced cost of ownership, and delivery of verified and certified product(s) every time.

- **Float & Specialty HIE™ Glasses in mm to meter sizes**
- **Specializing in Ultra-Thin Glass – as low as 0.03 mm Borosilicate & Aluminosilicates**
- **Fabrication for Shape & Features to Your Specific Needs**
- **Chemical or Heat Strengthening for Damage Resistance**
- **Coatings for Filtering, Throughput Reflection & Conductivity**
- **Screen Printing for Electrical Connectivity, Branding & Displays**
- **Value-Added Assembly Films, Chemistry, ID Marking, Laser Cut Gaskets & Masks**
Your Total Solution Partner

We listen to our customers’ wholistic needs.

As **Your Total Solution Partner**, we offer a unique suite of specialized expertise, volume manufacturing experience, vertically integrated capabilities, and services to fulfill your display needs, now and into the future.

It begins with understanding your market challenges, applications, and collaborating with you from concept to production, every step of the way. Customers know they can rely on Abrisa Technologies for:

- Expertise in Both Glass Technology & Optical Coatings
- Manufacturable Solutions with Optimized Fitness-for-Use
- Over 40 Years of Experience in Volume Manufacturing
- Unique & Integrated Capabilities for Ready-to-Install Solutions
- Total Solution Product Verification & Certification
- Program, Inventory management & Other Commercial Services
- Innovation & Production Needs, Now & for Years to Come
Abrisa Technologies offers complete display glass solutions for:

- Combo Scanner/Information Displays
- Avionics/Vehicular Navigation Displays
- Outdoor & Field Portable Displays
- Biocompatible Medical Instrument Displays
- Wearables, 3-D Augmented (AR), Virtual Reality (VR)
- Large Heads-Up, Video Wall & Gaming Displays
- Interactive Touch Control Panel Displays
- Hospitality Mirror/Display Combinations

Well-stocked inventory of strengthened and un-strengthened glass:

- **Glass Selection**: Strengthened HIE™ Aluminosilicates, Borosilicates, Low/Non-Alkaline, Cut-to-Order Float glass with & without Anti-Reflection (AR) Coating, Non-Glare & Specialty Ultra-Thin (< 0.2mm) Technology Glass
- **Performance Criteria**: Optical, Thermal, Chemical, Electrical & Mechanical Properties
- **Sizes**: mm’s to 0.03mm Thick, Displays from mm’s to meters. Large Sheet Sizes Available for Fabrication Versatility

Total Solutions - Glass Fabrication, Strengthening, Coatings, Graphics & Value-Add:

- **Fabrication**: Waterjet & Precision CNC for Custom Formats & Registered Features for Airtight Seals
- **Damage Resistance**: Chemical Strengthening, Heat Toughening or Tempering on Large Selection of Glass
- **Optical Coating**: Thin film Coating Solutions (Anti-Reflective, ITO, Filter, UV/IR Block, Oleo/Hydrophobic)
- **Screen Printing**: Graphics, Bus Bars, Aesthetic & Branding
- **Ready-to-Install Services**: Optical, Aesthetic & Safety Films, Mounting Tape & Gaskets, Masking, Laser Marking ID
Abris Technologies’ Display Solutions

Ultra-Thin SCHOTT AS 87 eco Aluminosilicate Glass

SCHOTT D 263® T eco Ultra-Thin Glass

PRO-NG™ 120 HIE™ Non-Glare Glass

SCHOTT Borofloat® 33 Borosilicate Float Glass

Semi-Transparent Mirrors for Hidden Displays

Low Reflection & Non-Glare Glass Solutions

Vehicular Information Display & Interface Applications

CleanVue™ Pro Oleophobic & Hydrophobic Coating Solutions

Dead Front Panels for Backlit User Interfaces

Total Solutions for Ready-to-Install Enhancement Glass

Sensor & Scanner Window Solutions

Large 84” Diagonal HI-OD™ Screen Printed Display Glass Solutions
Thin & Ultra-Thin Lightweight Mirrors (0.1mm – 0.55mm)

Bus Bars for Transparent Conductive Coatings

On-Demand Laser Cut Gaskets & Masks

Low Sparkle Non-Glare Glass

PRO-HC-VIS1 Anti-Abrasion Hard Coat Clear Glass

Laser Marked Display Graphics On-Demand
In-Stock Ultra-Thin HIE™ Aluminosilicate & Borosilicates

<table>
<thead>
<tr>
<th>Ultra-Thin Glass Material</th>
<th>Thickness Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIE™ Strengthened Aluminosilicates</td>
<td>0.1, 0.145, 0.21, 0.25 &amp; 0.33 mm</td>
</tr>
<tr>
<td>SCHOTT AS 87 eco</td>
<td>0.4, 0.55, 0.8, 1.1, 1.5 &amp; 2.0 mm</td>
</tr>
<tr>
<td>Corning® Gorilla® Glass 3</td>
<td>0.8 &amp; 1.1 mm</td>
</tr>
<tr>
<td>AGC Dragontrail™</td>
<td>0.8 &amp; 1.1 mm</td>
</tr>
<tr>
<td>Low or Non-Alkaline Borosilicates</td>
<td>0.03, 0.05, 0.07, 0.1, 0.145, 0.175, 0.21, 0.25, 0.3, 0.4, 0.5, 0.55, 0.7, 0.9, 1.0, 1.1 mm</td>
</tr>
<tr>
<td>SCHOTT D263® T eco</td>
<td>0.7 &amp; 1.1 mm</td>
</tr>
<tr>
<td>Corning® Eagle XG®</td>
<td>0.3, 0.5 &amp; 0.7 mm</td>
</tr>
<tr>
<td>AGC EN-A1</td>
<td>0.3, 0.5 &amp; 0.7 mm</td>
</tr>
</tbody>
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Specialty Ultra-Thin Material (< 0.2mm) Processing:

- Complex Shape Fabrication
- HIE™ Special Materials Strengthening
- Optical Coating (Including Glass & Silicon Wafers)
- Screen Printing (Graphics, Conductive/Bus Bars)
- Applied Films, Gaskets, Oleophobics/Hydrophobics
More and more applications are requiring thinner, lighter and stronger glass with enhanced flexibility and/or damage resistance. Virtual & augmented reality platforms, wearables, displays, scanners, touch pads, and windows are typical applications requiring this rugged ultra-thin glass while the reduction in weight improves portability.
SCHOTT D 263® T eco Ultra-Thin Glass

Applications:

- Lightweight Windows & Mirrors
- Wafer-Based Micro-Optics
- Optical Caps for Sensors & Diodes
- Ultra-Thin ITO Heaters & Bus Bars
- Biotech Sample & Slide Surfaces
- Heat Resistant In-Cabin Displays
- Low Profile Human Interface
- Low Alkali – Active-Matrix Displays
- Ultra-Thin Cover Glass
- Additive Optical Attributes
SCHOTT Borofloat® 33 Borosilicate Float Glass

Applications:

- Outdoor VIS-NIR Image Sensing
- “True Color” Medical Imaging
- High Intensity Lighting & Curing
- 3D Additive Manufacturing Platforms
- Industrial Sight Glass & View Ports
- Specialty Ruggedized Displays
Ultra-Thin SCHOTT AS 87 eco Aluminosilicate Glass

Applications:

- Cover Glass Displays & Touch Panels
- UAV/Drone Applications
- Screen Protector for Mobile Devices
- Fingerprint Sensors
- Ultra-Thin Glass Applications
- Medical & Bio-Medical
- Automotive Interiors
- Camera Imaging
**PRO-NG™ – Non-Glare Aluminosilicate Glass**

**Applications:**

- Ruggedized Portable Displays
- In-Cockpit Navigation Systems
- In-Vehicle Wide Angle Displays
- Sunlight Readable Displays
- High-Contact Touch Control Pads
- Lightweight, Slim Hand-Helds
Medical/Lab Displays & Platforms

- Bio-Compatable Coatings & Glass
- White/Pantone Color Matching
- Damage Resistant HE™ Glass
- Heated & Anti-Fogging Windows
- Thin Glass Slide Fabrication & Coating
- Laser Etched Unique Identifiers: QR, LOT & S/N
- Easy-to-Clean Surfaces
- Safety Enhancements
Interactive Touch/Control Panels/Displays

- Ready-to-Install Panels
- Scratch Resistant HIE™ Materials
- Ultra-Thin 0.1mm Coated Glass
- Tactile Touch 3D Glass Features
- Precision Insets & Panel Features
- Gray, Filtered Glass & Coatings
- Smudge Resistant Solutions
- Color Matched Branding
Wearables/Virtual Reality Displays

- Lightweight, Low Profile
- Flexible, Small, Ultra-Thin
- Thin 0.1mm Glass Shaping & Coating
- Near-to-Eye Coated Optics & Filters
- Singulated, Diced & Coated Wafers
- Press Fit Mounting Tolerances
- Flush Mounted “Infinity” Edges
- Ready-to-Install Packaging
Avionics/Defense/Simulation/Indicators

- HIE™ Strengthened Materials
- ITO Coated EMI Shields & Heaters
- Bus Bars: Frit, CrNiAu, Silver Epoxy
- Anti-Glare, Photopic AR & Coatings
- HUD, Trim, Green, Red, NIR Filters & B/S
- Laser Etched LOT # & Graphics
- Precision Radii Corners & Chamfers
- Solar Load Reduction
“Hidden/Privacy/Multi-Function Displays”

- Scanner/Display Combos
- “Hidden” LCD Partial Mirrors
- Elegant Exposes Edge Finishes
- Streamline Dead Front Panels
- Pantone Color Matched Graphics
- Applied Privacy & Anti-Glare Film
- HIE™ Damage Resistant Options
- Laser Etched Graphics
Outdoor/Portable/Handheld Displays/Windows

- Lightweight Clear HIE™ Lenses
- Damage Resistant Surfaces
- Corrosion, Solar Resistant Graphics
- Sunlight Readable AR/Anti-Glare
- UV & Solar Suppression Solutions
- Gray, Tint, Safety, Anti-Fog Films
- Moisture Seal & Damping Gaskets
- Oleo/Hydrophobic Coatings
Transportation/Vehicle/Displays/Scanners

- Anti-Scratch HIE™ & Hard Coat Surfaces
- Gauge & Infotainment Displays
- HUD, Obstacle Avoidance, LiDAR
- Anti-Glare/Anti-Reflection Glass
- Laser Scanning Mirrors & Filters
- Seamless Dead Front Control Panels
- Custom Shapes & Precision Fit Edges
- Digital Imaging Filters & Windows
Select Markets We Serve

Display – Digital, Immersive & Interactive Displays
- Damage Resistant HIE™ Thin & Ultra-Thin Aluminosilicates
- Hidden LCD Mirrors, Dead Front Graphics
- Sunlight Readable Coatings & UV/IR Blockers
- Near-to-Eye Display Partial Transmitters
- Ultra-Thin, Lightweight & Flexible Glass

Micro-Opto/Semiconductor – Wafer Components, Process Tools
- Transparent Conductive Coatings (ITO/IMITO)
- Anti-Reflective, Metallic, Filter & Dichroic Coatings
- Wafers, Coatings, Bus Bars, Dicing
- Protective & Epoxy Compatible Coatings
- Cleanroom Protocol, Ultrasonic Cleaning

Medical/Dental/Bio – 3D Imaging, Surgical, Biosensors
- Bio/Chemical Compatible Components
- Autoclavable Mirrors & Windows
- Heated Biocompatible Sample Windows
- Wavelength Selective Filters
- AR, Filter & Scanner Coatings
Select Markets We Serve

Imaging/Sensors – Security/Threat, Lidar (autonomous), Traffic
- Wide View 0-52° Sensor Windows
- Broad Spectrum Windows UV/VIS, VIS/NIR, SWIR
- Damage Resistant HIE™ Glass
- Dead Front Control Panels
- Oleo/Hydrophobic Solutions Cleanable Solutions

Industrial - 3D Printing, Machine Vision, Process Control
- Laser Scan Mirrors & Windows
- Bandpass & Contrast Enhancement Filters
- Low Expansion ED Printing Build Platforms
- UV Transmissive Coatings for Curing
- Ultra-Thin Touch Panel Glass

Defense/Avionics – Controls, Targeting, Threat Detection, Simulation
- EMI Shielded ITO Enhancement Glass
- SWP, Covert, Blackout, Signal Selective Filters
- Non-Glare (NG) Glass & Damage Resistant HIE™ Glass
- HUD/HMD Beam Splitters, Scanning Mirrors
- Anti-Fog (ITO) Heated Transparencies
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