

# FILTERS and DIFFUSERS

For All Flat Panel Displays + Light Guides & Front/Rear Projection Screens



**MORE INFORMATION - SPECIFICATIONS - OPTICAL DATA**  
**[www.AstraProducts.com](http://www.AstraProducts.com)**

- Precision Thin Sheet
- Precision Sheet Colors
- Precision Grey Smoke Filters
- Precision High Temp Sheet
- Laser Scanner Filters
- Hard Coat Sheet
- Super Hardcoat Sheet
- Nonglare Filters
- Anti-Reflection Filters
- NIR Filters
- Anti-Bacteria Filters
- UV Cut Filters
- UV Transmission Filters
- IR Cut Filters
- Low Moisture Absorbing Acrylic Sheet
- Light Guide Reflector Sheet
- Light Guide Panels
- DR-IA Diffusion Reflector
- DR-IIA Transmissive Diffusing Reflector
- DR-IIICX Light Diffusing Filters
- DR-IIISX Light Shielding Diffusion Filters
- DR-IV Light Scattering Panels and Shapes

**CLAREX® Blue Ocean™ Front and Rear Projection Screens**

*Exclusive North American Distributor* **OPTICAL GRADE**  
**CLAREX® CELL-CAST ACRYLIC**



**Astra Products**

**ISO 9001:2008**

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# Concise Guide to CLAREX® Flat Panel Components

**Precision Thin Cast Acrylic Sheet (PMMA)** affords unsurpassed optical properties, surface smoothness, high transmission (clear = 93%). Available from 0.2mm (.008") to 5mm (.197"). No birefringence / retardation. Many surface options, coatings, color / transmission available.

**Precision Cast Acrylic Sheet Colors** — Virtually any color/transmission available from 0.5mm (.020") thickness.

**Precision Grey Smoke Filters** are available in a range of transmissions. Dead front appearance when backlight is not active; contrast enhancement when display is illuminated.

**Precision High Temp Cast Acrylic Sheet** — Continuous working temp 95°C.

**Low Moisture Absorbing Cast Acrylic Sheet** — 30% less absorption than our standard cast acrylic. Reduces outgassing and improves dimensional stability.

**Hard Coat Sheet** — Weatherable hardcoat one or both sides. Pencil Hardness 6-8H. Good chemical resistance. Smooth or textured surfaces.

**Super Hardcoat Sheet** — 9H

**Low Friction Hardcoat Sheet** — Scratch resistant coating with low friction resists fingerprinting/smudging and facilitates cleaning.

**Nonglare Filter Sheet** optimizes display characteristics by eliminating unwanted reflections. There are five non-glare surface finishes. Available in scratch-resistant and a variety of colors and coatings.

**Antireflection (AR) Filters** multi-layer coatings reduce reflection/increase transmission. Additional coatings prevent surface scratching and smudging. AR Coat Filters may be combined with non-glare surfacing to improve anti-reflection. Any color.

**NIR (Infra-Red) Filters** transmit NIR and absorb visible rays. There are five types available, with cut off from 700nm to 820nm. Excellent optical characteristics without double refraction. Smooth or nonglare, scratch resistant.

**UV Cut Filters** protect displays from ultraviolet. Five types of ultra-violet absorption filters, cutoffs from 370nm - 480nm. Available smooth or non-glare surface and/or scratch-resistant option.

**UV Transmission Filters** transmit ultra-violet (80% at 300nm) and offer excellent optical characteristics without double refraction. Available smooth, non-glare, scratch resistant.

**IR Cut Filters** are available in polycarbonate and acrylic, 1mm (.040") thick. Useful in NVIS applications to eliminate NIR emissions.

**Laser Scanner Filters** maximize transmission of 630 - 670nm laser for scanner applications. The surface may be treated with anti-reflection (AR) coating to reduce reflection. Available hardcoated one or both sides. Optional coatings prevent surface scratching and smudging.

**Anti-Bacteria Filters** are hygienic window filters. Specialized coatings prevent reproduction of bacteria. Optically excellent with scratch resistant coating - ideal choice for touch screens.

**Light Guide Reflector Sheets** developed for side lamp LCD units of PMMA acrylic. Excellent conductor of light with diffusion reflection.

**Light Guide Panels** for side lamp LCD units — an excellent conductor of light. These panels optimize uniformity and brightness of backlights.

**DR-IA Diffusion Reflector** — DR-IA Diffusion Reflectors uniformly reflect external light. Wide palette of colors available

**DR-IIA Transmissive Diffusing Reflectors** for light reflection and rear light diffusion. Wide palette of colors available.

**DR-IIICX Light Diffusing Filters** are excellent white diffusers for light transmissions from 45% - 93%. Custom colors, transmissions available.

**DR-IIISX Light Shielding Diffusion Filters** for LCD backlights are specially formulated for direct backlight applications incorporating high bright light sources, particularly LED's. Available with light transmission ranging from 5% to 40% in 5% increments.

**DR-IV HSOT Light Scattering Panels & Shapes** are polymerized and provide optimal inside scattering and illumination for the top surface from an edge light source. Effective illumination demonstrates a +30% improvement over conventional light guide panels.

**CLAREX® Blue Ocean™ Front and Rear Projection Screens and Clear Projection Screens** are structured and non-structured acrylic panels that maximize brightness and contrast, accurate reproduction. Panels can be bent or formed and are available in a wide variety of thicknesses, sizes and coatings.

*More Info* 

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