

MIRRORLITE[®]

GLASSLESS
MIRRORS

MIRRORLITE[®] PROJECTION GRADE GLASSLESS MIRRORS TYPE HDR, PDC, XLX AND PGX FOR USE IN VIDEO AND/OR FILM REAR PROJECTION SYSTEMS

MIRRORLITE Glassless Projection Grade Mirror Panels (Type HDR, PDC, XLX and PGX) are used in rear projection systems in preference to glass mirrors because they are optically equivalent to, or better than, glass while being functionally superior. They are very lightweight, rigid, self-supporting and have built-in mounting devices. Further, they are safe, easy to work with and are inexpensive compared to the total cost of a glass mirror installation.

MIRRORLITE Type HDR, PDC, XLX and PGX optical mirror panels are available in many standard sizes, from 24" x 24" to 68" x 144". Larger panels can be ordered in sizes up to 68" x 200". Because Mirrorlite is lightweight and shatterproof, large optical mirrors are easy to handle and install.

MIRRORLITE Glassless Mirrors can be described as very tough, thin, transparent plastic film, coated with a reflecting surface and tensioned on a rigid, stable and supporting structure. Because the film is inert and always in tension, its nature is such that it will distribute these forces evenly, wanting to form a flat rejecting surface.

PHYSICAL CHARACTERISTICS: MIRRORLITE mirror panels function as "front-surface" mirrors. PGX type panels are made with the unplated side of the film facing out and the plated, or reflecting, side of the film on the inside facing the structure. HDR panels are made as a film sandwich with the reflective surface between the layers of film. This ensures the highest level of environmental protection. PDC type panels are plated on both film surfaces and are true first surface mirrors. XLX type panels are made with the plated or reflecting side towards the light source. Therefore, XLX mirrors are true first surface mirrors. Because of the flat uniform nature of the film being used in XLX mirrors, the reflections are free of optical anomalies. The film is .001" (approximately 25 microns) thick. The projected light rays, passing through the film to the reflecting surface, will not form ghost images on the screen.

REFLECTIVITY: MIRRORLITE Type "XLX", "HDR" and "PDC" mirrors have a minimum average direct reflectivity of 86% and Type "PGX" 94% for light in the visible wavelength region (400 to 700nm). Direct reflectivity measurements are made in accordance with ASTM Spec. No. F768-82 and SAE Standard J9642 or superior.

SURFACE FLATNESS: MIRRORLITE film surface flatness is equal to that of first surface glass mirrors.

PANEL FLATNESS: Flatness will vary in accordance with size of the MIRRORLITE panel. As an example: a MIRRORLITE panel 20" x 24" would have a coplaner flatness of $\pm 1/16$ ", edge bow flatness of $\pm 3/64$ "; panels 48" x 72" and larger have a coplaner flatness of $\pm 1/8$ ", edge bow of $\pm 3/632$ ".

DIMENSIONAL TOLERANCES: For smaller (20"x 24" to 48"x 72") panels: length and width $\pm 1/8$ "; diagonals $\pm 3/16$ "., and for 48"x 72" and larger panels: length and width $\pm 3/16$ " and diagonals $\pm 1/4$ ".

THERMAL RESISTANCE: Image area and panel shall show no deterioration after -20°C (-4°F) for a period of 1 1/2 hours, transition period 1-1 1/2 hours, and +50°C (+10°F) for a period 1 1/2 hour. Repeat cycle 10 times and return to normal room temperature 20°C (70°F).

HUMIDITY RESISTANCE: Image area and panel shall show no deterioration after: 24 hours at 49°C (120°F) and 95% relative humidity or 120 hours at 40°C (104°F) and 90% relative humidity.

CORROSION RESISTANCE. Image area and panel shall show no deterioration after: 100 hours exposure to salt fog (2% salt solution) at 40°C (95°F) (ASTM Spec. B1 17-90).

PANEL CONSTRUCTION: MIRRORLITE mirror panels are made of a rigid foam board framed with an aluminum extrusion over which the MIRRORLITE mirror film is tensioned. There are several panel thicknesses. See size and price list for details.