

Specifications for LiteMirror Panels

Made from a metallized, polyester film, LiteMirror will not shatter or break into dangerous shards of glass. Along with its' high reflectivity, lightweight and acoustic qualities, LiteMirror provides endless design opportunities. The mirrors safely install on ceilings, walls, and portable stands, making them the most diverse and useful design element to any project.

LiteMirror Panels are used instead of glass mirrors because they are functionally equivalent to optical glass, very lightweight, rigid, self-supporting with built-in mounting facilities, safe and easy to work with and are relatively inexpensive compared to the total cost of a glass mirror installation.

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 reflecting surface - there is no distortion.

Each LiteMirror is hand made in our Irvington NY factory.

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1.0 PHYSICAL CHARACTERISTICS OF THE LITEMIRROR PANEL

LiteMirror panels function as "front or first surface" mirrors. The panel is made with the unplated side of the film facing out and the metalized or reflecting side, on the back. The film is 1.42 mil thick.

1.2 Reflectivity

Silver Film: The LiteMirror Type "Standard" mirrors shall have a minimum average reflectance of 92% .

See Through Film (scrim): 36% light transmission (for two way mirror effects)

1.3 Film Surface Flatness

Film surface flatness is approximately equal to that of first surface glass mirrors which, when read with an interferometer, would be 15 fringes per 2 inch (50mm) diameter.

1.4 Panel Flatness

Panel flatness will vary in accordance with the size of the LiteMirror panel. As a general example, a LiteMirror panel 20" x 24" (50cm x 60cm) would have a coplanar of flatness of +/- 1/16" (1.5mm) and edge bow flatness of +/- 3/64" (1mm). Mirror size tolerance is +/- 1/8".

1.5 Acoustic Value

LiteMirror panels include acoustical and thermal properties. Because of its' structural nature, a LiteMirror mirror panel will absorb sound rather than reflect it the way a hard-polished surface material (such as glass) will. The mirror has sound-absorbing properties which become stronger as the frequency (Hz) range grows higher, making the mirror panel particularly effective for heavily populated areas with high noise levels.

1.6 Thermal Insulator

The natural construction of the panel includes a polyurethane foam, making the mirror panel a thermal insulator.

2.0 PANEL CONSTRUCTION

2.1 Silver/Color film panels: The fabricated mirror panel consists of a rigid foam board whose perimeter is framed with an aluminum extrusion over which the film is tensioned. Foam thickness and extrusion thickness may vary according to mirror size.

The major advantage of the fabricated panel construction is that it permits the production of a large size mirror that is lightweight, flat, self-supporting and dimensionally stable.

See - Through (scrim) film panels: The fabricated mirror panel consists of a heavier 1 ¼" aluminum tube extrusion with no foam board.

2.2 Panel Shape

Panel Shapes can be simple squares, rectangles, ovals, arches, circles or trapezoids for greatest efficiency of function and cost. Traditionally, glass mirrors were cut as close to the shape of the projected image as possible to save weight. With LiteMirror panels, this is neither required nor desired.

2.3 Panel Sizes

The largest panel produced with silver film is 9' x 20' however shipping may be a challenge. We recommend the largest panel to be 6' x 20' which weighs 35 lbs.

There are multiple color options, each with its' own mirror width restrictions, however all can be as long as 20':

Silver & Antique (any desired patina) - max mirror width - 108"

Bronze - max mirror width 72"

Black - max mirror width 60"

Gold, Blue, Green, Ocean Blue, Charcoal, Copper - 58" max mirror size

Color Shift Blue and Color Shift Red - 52" max mirror size

3.0 MOUNTING AND INSTALLATION TECHNIQUES

LiteMirror panels differ from glass mirrors in that they are much lighter. LiteMirror creates mirrors that weigh a fraction of what a plate glass mirror of the same size weighs. Our standard 4' x 6' mirror weighs only 6 pounds and

a 4' x 6' plate glass weighs approximately 72 lbs. Although lightweight, glassless mirror panels are rigid and do not depend on or require an elaborate mounting support structure to hold them flat and in place.

3.1 Various mounting options are available for the fabricated panel construction. Some of these are as follows.

The mirror panel can be supplied with mounting brackets, with predrilled mounting holes for self-threading screws or with threaded inserts. One of these three options, or a combination of several, is most frequently used when the panels are to be mounted.

Additionally, cross bolts, eyebolts, ceiling grids and other various forms of installation techniques are used on a regular basis. Contact us for specific needs.

Cutouts for sprinklers, lighting, HVAC and other necessary fixtures are easily done. Smaller holes can be done onsite of installation, while HVAC units must be done in advance at our factory.

3.2 Because the LiteMirror panels are flat, rigid and lightweight, when attaching them to other surfaces, a simple mounting technique that does not force the panel to warp or twist is most desirable.

3.3 Because the LiteMirror panels are completed parts, secondary processes or extra handling is not needed or desired.

4.0 FLAMMABILITY RATINGS AND CLASSIFICATION

4.1 The "fabricated panel" construction meets Class A (Class 1) - Flame Spread Index, calculate according to ASTM E84 - Flame Spread index 25 or less and Smoke Developed Index 450 or less.

Surface Burning Characteristics:

	<i>Face</i>
Flame Spread	25
Smoke Developed	85

5.0 CARE AND MAINTENANCE

The mass of material composing the film (reflecting surface) is very small, even for a very large mirror; therefore, it tends not to build up any substantial charge of static electricity that would attract particles of dust and dirt. Should the mirror surface become dirty with fingerprints from handling or in the case where there are excessive quantities of airborne fumes from smoking or cooking, it can easily be cleaned by using a mild non-abrasive detergent and a soft non-abrasive cloth.

If the film is punctured or cut, it will not "run" by itself and the damage can be repaired with a clear adhesive tape without affecting the function of the mirror if the damage is not in the image area. Should the film surface be damaged in the projected image area, the entire reflecting surface can be replaced at the factory for a slight charge assuming that the panel and frame are not bent or broken.

Dimples or wrinkles on mirror: A heat gun (approx. 300°F temperature) can be used to remove "dimples" or wrinkles from the mirror. Hold the heat gun more than 2" away from the mirror. Keep the heat gun moving in a circular fashion working towards outside edge to avoid burning the mirror film.

View our <https://www.litemirror.com/faqs> for additional facts, questions and videos.

6.0 QUALITY ASSURANCE

LiteMirror panels are made to the highest possible standards. We suggest the following incoming inspection criteria.

6.1 INSPECTION

In accordance with common good shop practice, all incoming packaging cartons should be visually examined upon receipt for any evidence of shipping damages. View our information:

<https://www.litemirror.com/delivery-instructions> for additional information