LX-57B X-RAY SHIELDING LEAD GLASS TECHNICAL DATA SHEET

Materials

LX-57B is a lead barium type glass of high optical grade with over 60 percent heavy metal oxide, including at least 55 percent PbO. It offers high light transmission and does not discolor due to radiation.

We stock the industry's largest sizes - up to 48”x102”.

Properties of 9mm, 14mm, 17mm LX-57B

- Minimum density: 4.36 (g/cm^3)
- Refractive index (Nd): 1.71
- Thermal expansion coefficient: 80 x $10^{-7}/^0C$ ($30\text{-}380^0$)
- Knoop hardness: 370

Thickness and Lead Equivalent

Thickness (mm)	9 mm	14 mm	17 mm
Lead Equivalent (in)	5/64"	7/64"	1/8"
Lead Equivalent (mmPb)	2.0	3.0	3.3
X-Ray Tube Peak Voltage (kV)	150	200	200
Lead Equivalent (lbs/ft^2)	4.5	7.1	8.0
Weight (lbs/ft^2)	8.1	13.1	14.8
Laminated	No	No	Yes

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LX-57B Lead Glass vs. Acrylic/Plastic

Relative Thickness

For the same lead equivalent, acrylic/plastic has to be approximately five times thicker than LX-57B lead glass - significantly reducing observation capabilities. For example, at 1.8mm-2.0 mm Pb, lead glass would be 5/16" thick. Acrylic/plastic would be approximately 1-1/2" thick for the same protection. The extra thickness of acrylic/plastic may require special framing. LX-57B fits standard sized frames.

Resistance to Discoloration

Acrylic/plastic discolors when exposed to ultraviolet rays. Acrylic/plastic is also susceptible to discoloration from chemicals in everyday use, such as cleaning materials...or even smoke. LX-57B glass suffers no discoloration due to radiation and has a high chemical resistance as well. The durable LX-57B glass retains its appealing visual clarity.

Weight Factor

For the same size requirement and lead equivalent, acrylic/plastic has nearly twice the weight of glass (1.8 times).

Light Transmittance

For the same lead equivalent, glass transmits more light than acrylic/plastic.

Combustibility

LX-57B is an incombustible material because it's glass. Acrylic/plastic is combustible. When acrylic/plastic burns, it emits toxic fumes. When acrylic/plastic is cut, it may emit toxic fumes. This does not happen with LX-57B lead glass.

Surface Hardness

Both surfaces of LX-57B glass are polished. Using Mohs' hardness scale, LX-57B tests at level 6 (compatible to feldspar, a constituent of granite). Acrylic/plastic test at level 3 (equivalent to calcite, a constituent of limestone and chalk).

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Abrasive Resistance

LX-57B has greater resistance to scratches because of its hard surface. Unlike glass, acrylic/plastic can be easily scratched in cleaning because of its softer surface, reducing its light transmittance and clarity.

Saf-T-Lite Shielded Lead Glass

Saf-T-Lite Radiation Protector Glass — a laminated, safety, radiation shielding lead glass - the best protection you can buy for your medical testing and diagnostic facility installations.

Reasons for Using Saf-T-Lite Radiation Protector Glass

- Safety - Shatter Resistant Glass Meet Requirements of ANSI Z97.1-1984 & 16 CFR 1201 Cat.II
- Safety - 1.6 mm Lead Equivalency in all Shields
- Superb Visual Clarity
- Opaque Panels in a variety of Colors
- Available in any Size

Better than Acrylic/Plastic

- Much lighter than acrylic/plastic screens
- Transmits more light than acrylic/plastic
- Will not discolor due to ultraviolet rays as will acrylic/plastic
- Greater resistance to scratching than acrylic plastic.

Saf-T-Lite Radiation Protector products consist of LX-57B Lead Glass, Interlayer and Float Glass in a laminated sandwich. Required thickness of material types to achieve 1.6 mm Pb at 150kV are shown below.

Saf-T-Lite Radiation Protector Glass		Lead Acrylic Sheets
Light Transmission (1.6 mm Lead Equiv @ 150kV)	87.8%	63.5%
Thickness (1.6 mm Lead Equiv @ 150kV)	11mm	35mm
Weight	8 lbs. per sq. ft.	11 lbs. per sq. ft.

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Saf –T- Lite Radiation Protector Portable Shields					
Model	100	101	102	110	111
Overall Size (w x h)	**39" x 78"**	**39" x 78"**	**51" x 78"**	**63" x 78"**	**75" x 78"**
Window Size (w x h)	36" x 48"	36" x 68"	48" x 48"	60" x 48"	72" x 48"
Opaque Panel (w x h)	36" x 26"	36" x 6"	48" x 26"	60" x 26"	72" x 26"
Lead Equivalency	1.6mm 1/16"	1.6mm 1/16"	1.6mm 1/16"	1.6mm 1/16"	1.6mm 1/16"

Saf - T Lite Radiation Protector Fixed Shields						
Model	200	201	202	210	211	212
Overall Size (w x h)	39" x 84"	51" x 84"	63" x 84"	75" x 84"	87" x 84"	99" x 84"
Window Size (w x h)	36" x 48"	48" x 48"	60" x 48"	72" x 48"	84" x 48"	96" x 48"
Opaque Panel (w x h)	36" x 32"	48" x 32"	60" x 32"	72" x 32"	84" x 32"	96" x 32"
Lead Equivalency	1.6mm 1/16"	1.6mm 1/16"	1.6mm 1/16"	1.6mm 1/16"	1.6mm 1/16"	1.6mm 1/16"

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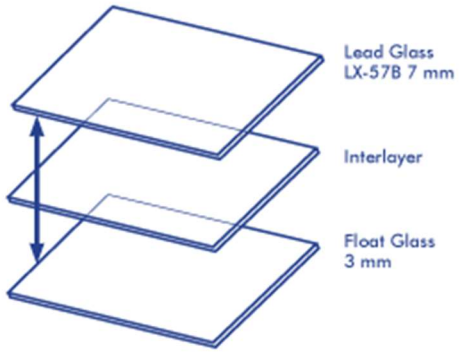
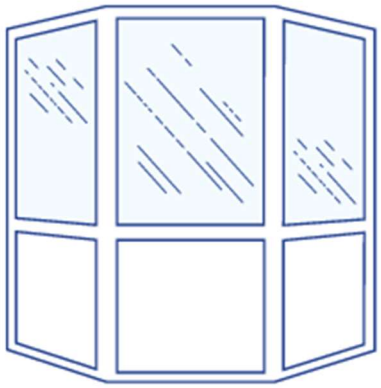
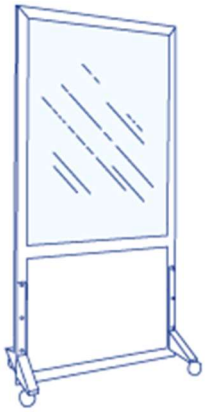
PITTS LITTLE
RADIATION SHIELDING

Saf-T-Lite Radiation Protector™ Glass



Saf-T-Lite Radiation Protector™ Glass for Viewing Windows Where Safety is a Requirement.





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Window Frame Mounting Instructions

TELESCOPIC WALL VIEW FRAME

1) Set non-leaded ('A') side of frame into rough opening on operator's side of partition

2) Level frame with blocking and secure with screws (provided, see Diagram 1).

3) Slide leaded ('B') side of frame tightly against wall on X Ray side and into 'A'. Secure with screws provided as per diagram.

4) Set glass into frame. Use glazier's setting blocks along bottom (glass should NOT rest directly on frame).

5) Set removable stops with screws (provided). Use care and protective devices to prevent scratching glass.

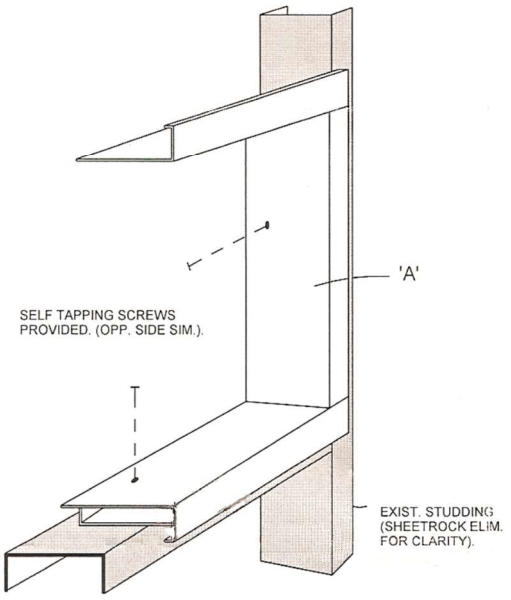

DIAGRAM 1

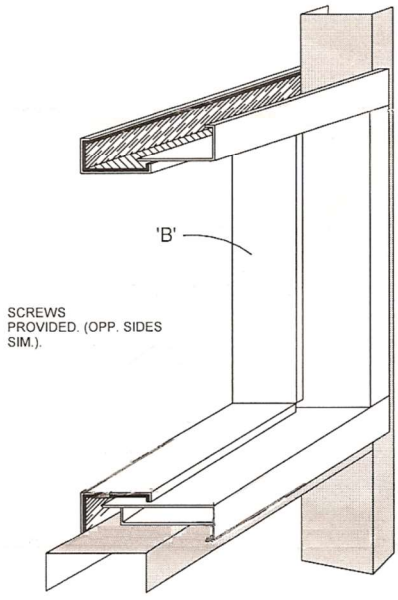

DIAGRAM 2

Notes:
ROUGH OPENING IS 1-1/2" LARGER THAN GLASS SIZE
(i.e. 24" x 36" GLASS SIZE = 25-1/2" x 37-1/2" ROUGH OPENING).

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Rough Opening:

- Glass Width + 1 ½”
- Glass Height + 1 ½”

Wall Thickness:

- Minimum + 4 ¼”
- Maximum 6”

Overall Dimensions:

- Glass Width + 4 ½”
- Glass Height + 4 ½”

NOTES:

(A) Unless otherwise stated, leaded view windows are measured by glass size.
(B) Place leaded side of frame on leaded side of wall.
(C) Fasten frame through jamb into studs.

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