

# SPECIFICATIONS FOR X-RAY SHIELDING LEAD GLASS

## LX- 57B

X-ray shielding lead glass ( LX-57B ) is a lead-barium glass with more than 60% heavy metal oxide, including at least 55% lead oxide. Both glass surfaces are mirror polished. All edges are beveled. This high optical grade glass meets the standards of safety regulations established for the medical, scientific and nuclear fields. Manufactured by automatic continuous process, this glass is able to maintain a rigidly controlled level of physical properties. It offers high light transmission and does not discolor due to radiation. Its physical properties are not affected by exposure to sunlight or water absorption.

### PHYSICAL PROPERTIES

Minimum Density	4.36 gm/ cm <sup>3</sup>
Refractive Index ( Nd )	1.71
Light Transmission	87.3%
Moh's Hardness	6
Combustibility	None
Thermal Expansion Coefficient	80 x 10 <sup>-7</sup> / C <sup>0</sup> ( 30 <sup>0</sup> - 380 <sup>0</sup> )

Thickness	Min./ Max Pb Equiv.	X-ray Peak Voltage	Weight per sq. ft.
8.0	1.8/ 2.0    4.2/ 4.6	150	7.1
11.0	2.5/ 2.7    5.8/ 6.2	150	9.8
14.0	3.0/ 3.2    6.9/ 7.4	200	12.5

Glass is available any size up to and including 48" x 96". Standard stock sizes are offered as listed. Stock sizes listed in inches. Custom sizes cut from appropriate stock sizes.

8x10*	12x18	16x24*	24x30*	30x36	36x72	42x72	48x72*
10x10*	12x20	18x24*	24x36*	32x40	36x84	42x84	48x84*
10x12*	12x24	18x26*	24x48	36x36*	36x96	42x96	48x96*
12x12*	14x18*	20x24	30x30	36x48*	42x48	48x48*	
12x16*	16x20*	24x24*	32x40	36x60	42x60	48x60*	

Stock sizes shown are for 8.0mm glass. Sizes for 11.0mm and 14.0mm, marked with an asterisk (\*), are available in limited quantities. If out of stock, 10- 12 weeks may be required for delivery.

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### Comparing LX Lead Glass to Acrylic Plastic

Thickness of material: To achieve a lead shielding equivalency of 1.8- 2.0 mm, LX-57B lead glass would be 5/16" thick. Acrylic / plastic would be approximately 1-1/2" thick for the same protection. This is a factor of approximately five times the thickness. The extra thickness of the acrylic/ plastic may require special framing. LX glass fits standard size frames.

Weight of material: Acrylic / plastic weighs 1.8 times more than LX glass.

Surface hardness: The mirror polished surface of LX-57B glass tests at Level 6 on the Mohs' hardness scale. Acrylic / plastic tests at Level 3.

Combustibility: LX-57B is an incombustible material because it is glass. Acrylic / plastic is combustible and emits toxic fumes when it burns.

Abrasive Resistance: Because of its hard surface LX-57B has a greater resistance to scratches. Acrylic / plastic can be easily scratched, reducing its light transmission and clarity.

Resistance to Discoloration: Acrylic / plastic discolors when exposed to ultraviolet light. Acrylic / plastic is also affected by chemicals in everyday use, such as cleaning solutions. LX-57B glass is not discolored from exposure to radiation and is highly resistant to chemicals.

## Saf- T - Lite<sup>tm</sup> Glass

Laminated safety radiation shielding glass is also available. This glass consists of a 3mm layer of LX- 57B lead glass, an interlayer of polyvinyl/ tri-ethylene, and a layer of 3mm float glass in a laminated sandwich. Sizes up to 48" x 96" are available. Laminated safety glass weighs 8 pounds per square foot and has an overall thickness of 7/16". Shatter resistant glass meets requirements of ANSI Z97.1 & 16 CFR 1201 Cat.II.

### Comparison of Saf- T- Lite<sup>tm</sup> to Lead Acrylic Sheet

<b>Saf-T-Lite<sup>tm</sup></b>	<b>Lead Acrylic Sheet</b>
Light Transmission ( 1.59 mm lead equiv. @ 150kv ) 87.8%	63.5%
Thickness ( 1.59mm lead equiv. @ 150kv ) 11mm	35mm
Weight	8 lbs. per sq.ft
	11 lbs. per sq. ft.

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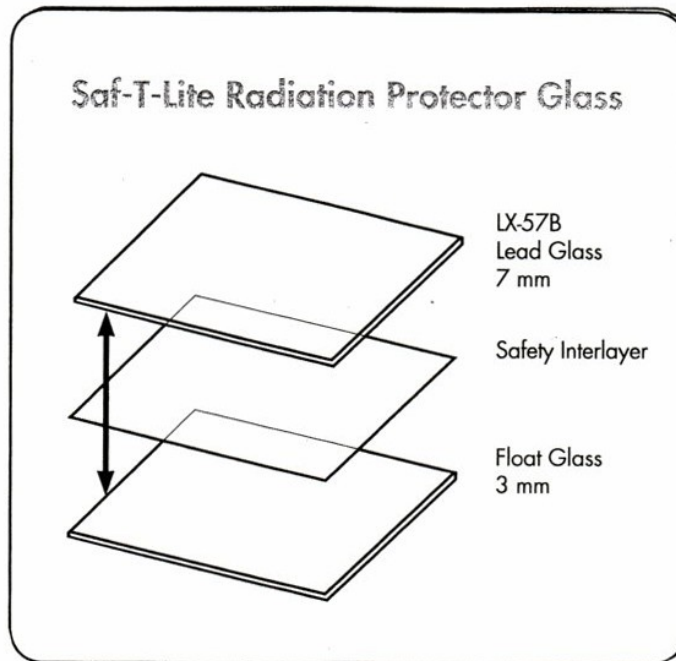
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## Construction of Saf-T-Lite Protector Glass



# SPECIFICATIONS FOR X-RAY SHIELDING LEAD GLASS

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DATE:

CUSTOMER:

PROJECT NAME:

OPENING/ FRAME NO.:

LEAD EQUIVALENCY:

SIZE:

NOTES:

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## L.E.E.D. (Leadership in Energy and Environmental Design) PROJECTS

The manufacturer of LX X-ray Shielding Glass is Nippon Electric Glass Co., Ltd.

Country of origin is Japan.

LX is 0% for Post/Pre consumer.

Post consumer rate is 0% for LX.

Post industrial is approximately 30% for LX.