

NGA GLASS CONFERENCE™ MILWAUKEE

AUGUST 6-8, 2024

NGA

NATIONAL GLASS ASSOCIATION with GANA



Laminated Glass Designation

Product Classification

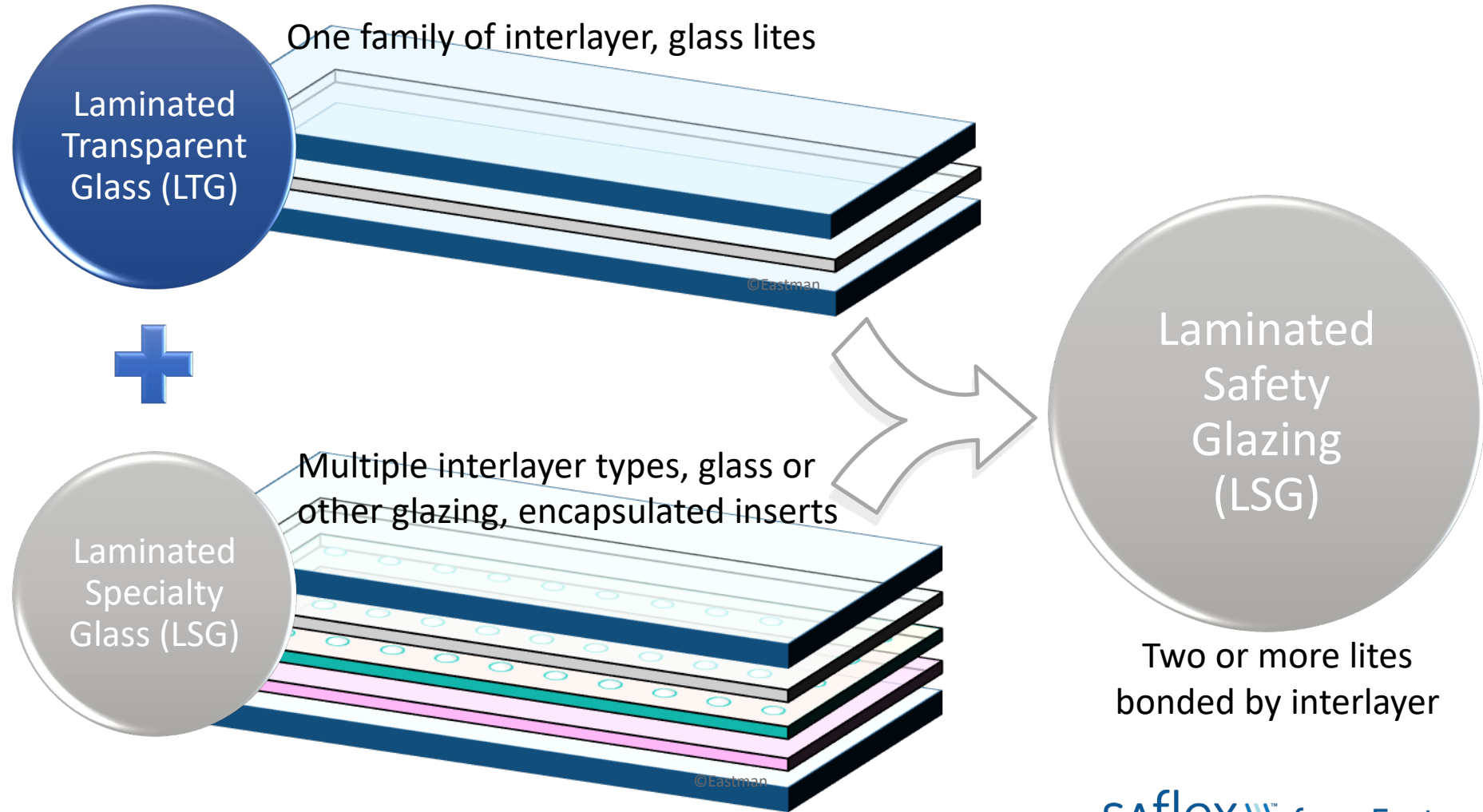
ANSI Z97.1

General:

One sheet of glass bonded to another glazing material with organic interlayer

Further defined:

- 2-ply glass
- Multiply glass
- Glass/Plastic



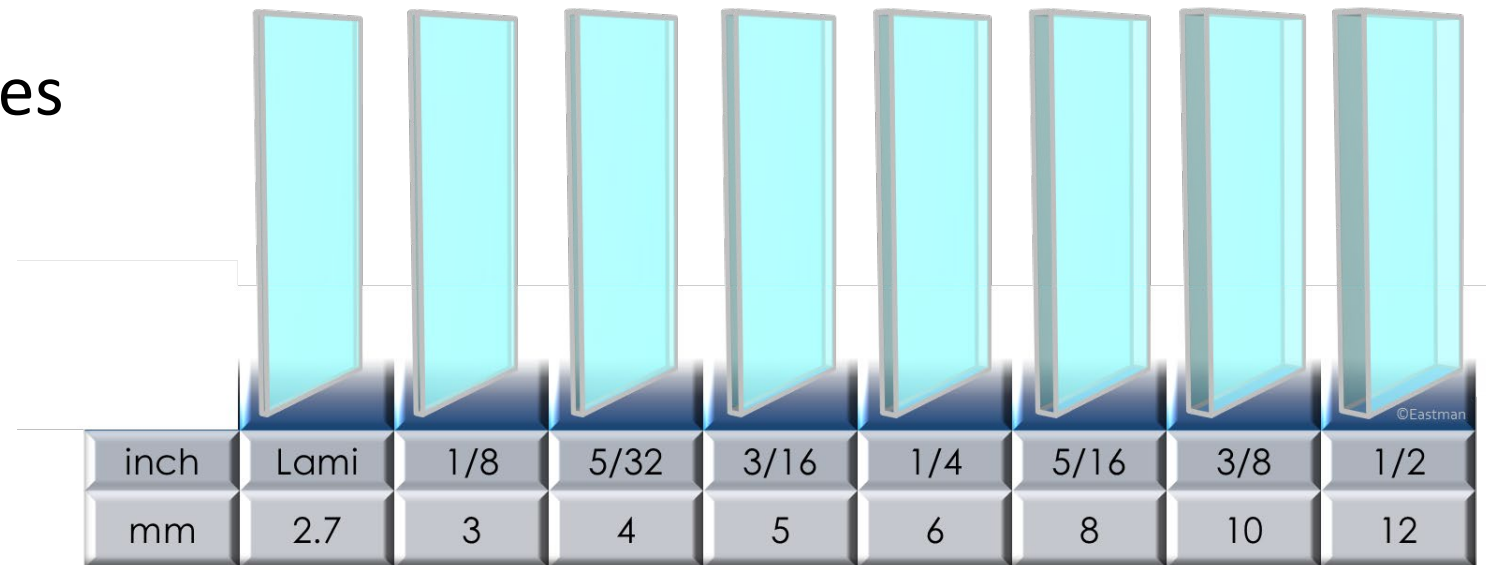
Laminated Glass Description

- Summary nomenclature changes

Laminated Glass – Summary Nomenclature




- Glass Ply
- Based on ASTM C1036
- Use NOMINAL thickness
- Use METRIC values



Laminated Glass – Summary Nomenclature



- Interlayers
- Production thicknesses



inch	0.015	0.020	0.025	0.030	0.035	0.045	0.050	0.060	0.075	0.090	0.120
mm	0.38	0.51	0.64	0.76	0.89	1.14	1.27	1.52	1.91	2.29	3.05

•Not all thicknesses or layered options shown

Laminated Glass – Summary Nomenclature

Generic Code	Description
(b)	Polyvinyl Butyral (PVB)
(ip)	Ionoplast
(lc)	Liquid resin – multi component
(lu)	Liquid resin – UV cure
(p)	Polyethylene Terephthalate (PET)
(f)	Fluorinated Ethylene Propylene
(u)	Polyurethane (PU/TPU)
(el)	Epoxy-Liquid crystal polymer
(ev)	Ethylene Vinyl Acetate (EVA)
(su)	Solid Resin UV cure

Interlayer



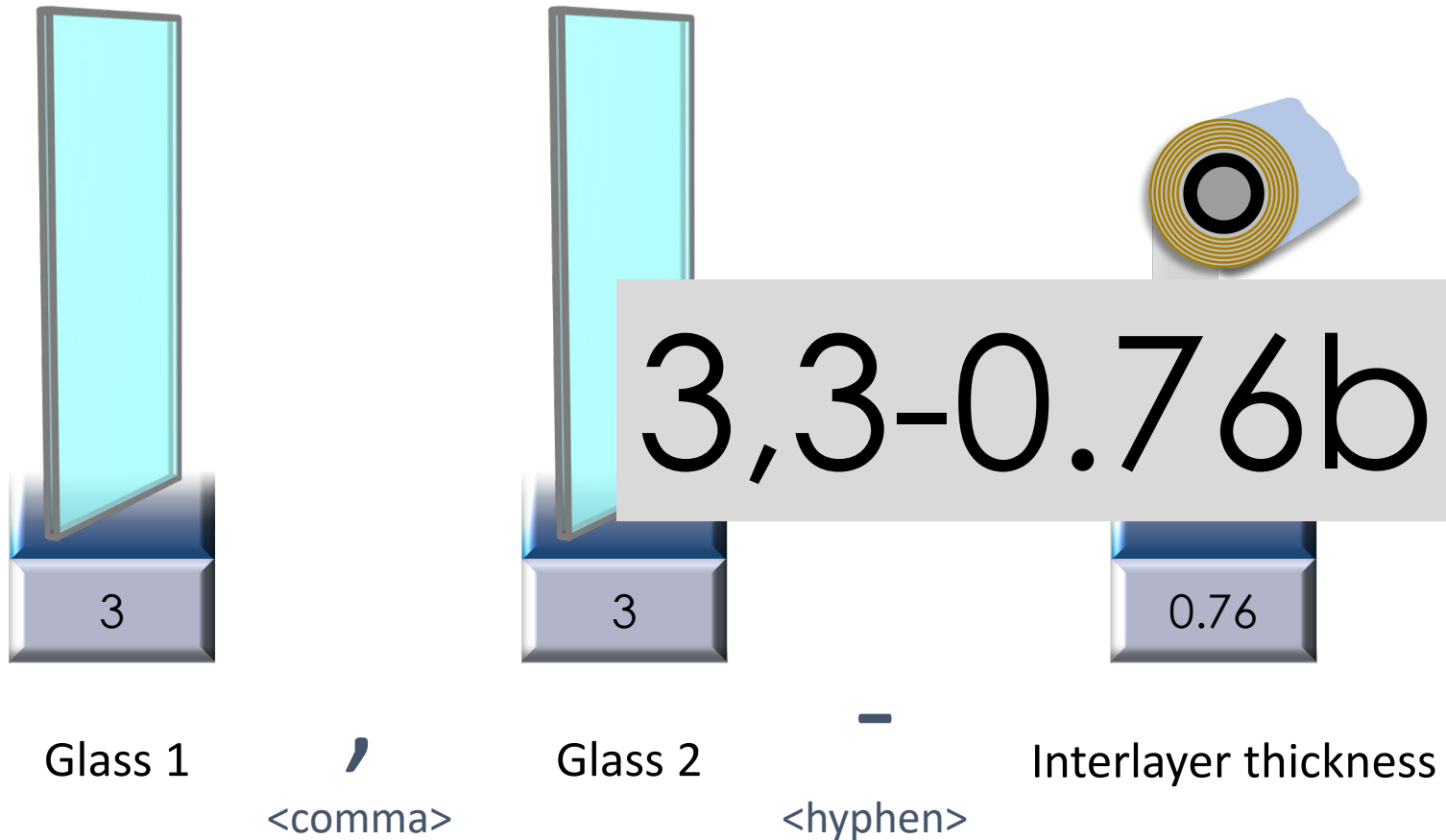
- Accepted Interlayer Generic Codes
- Interlayer nominal thickness
- Use METRIC values

Metric (mm)	IP System* (inch)
0.38	0.015
0.51	0.020
0.64	0.025
0.76	0.030
0.89	0.035

Metric (mm)	IP System (inch)
1.14	0.045
1.27	0.050
1.52	0.060
1.91	0.075
2.29	0.090

*IP System = inch-pound system a.k.a. imperial system

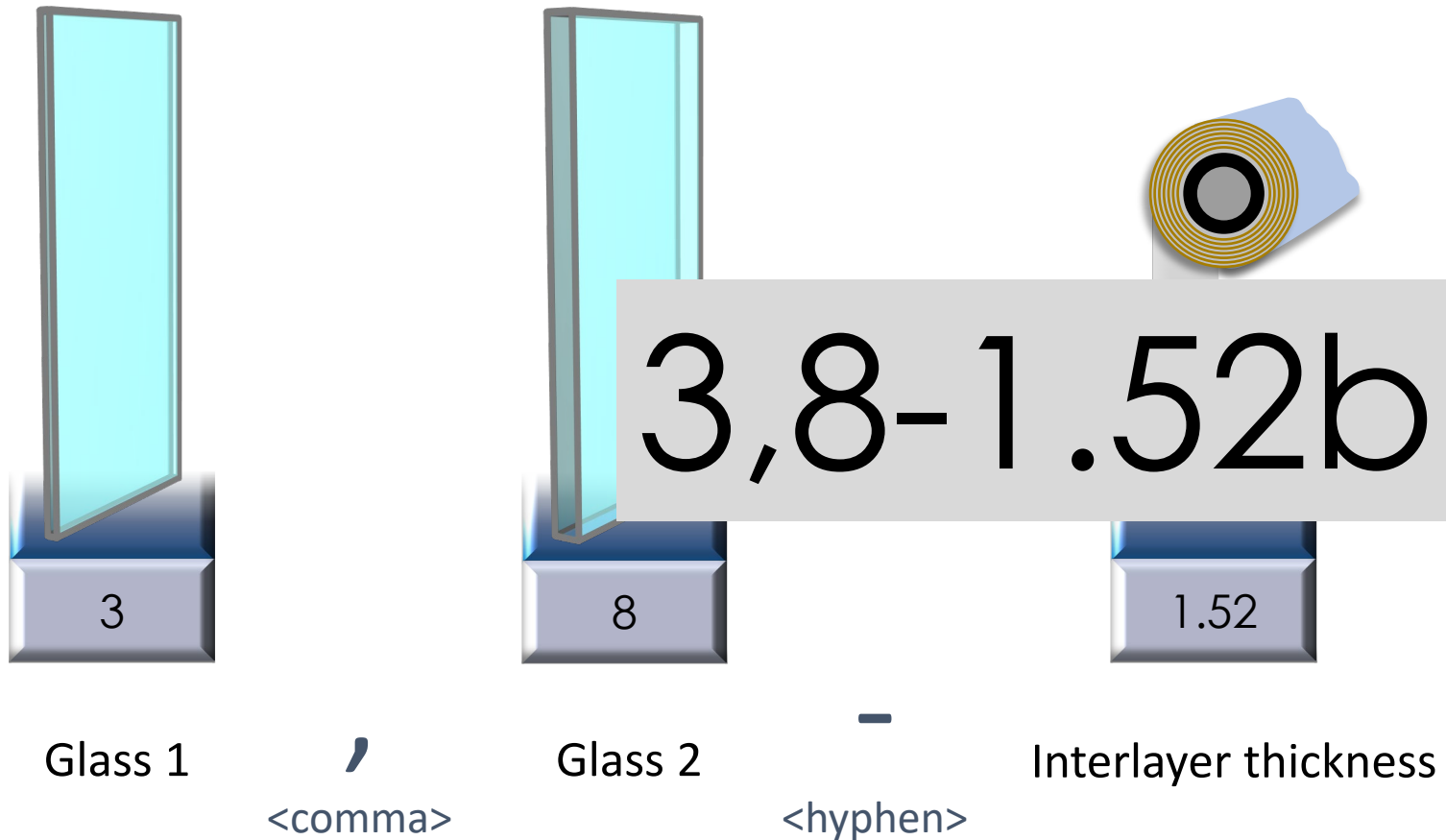
Laminated Glass – Summary assembly



Generic Code	Description
(b)	Polyvinyl Butyral (PVB)
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Interlayer Code

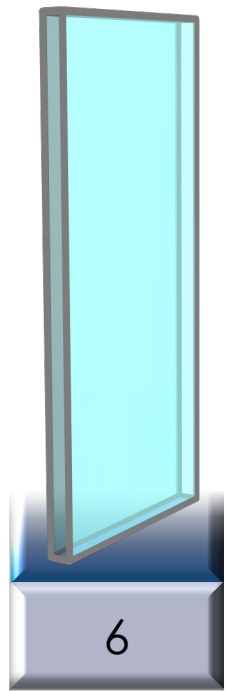
Laminated Glass – Summary assembly



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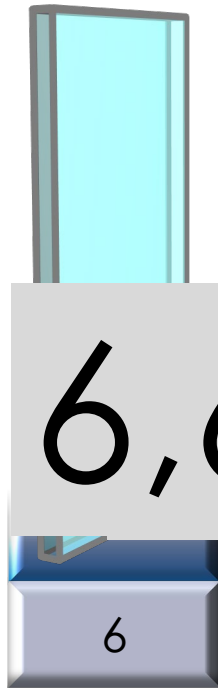
Interlayer Code

Laminated Glass – Summary assembly



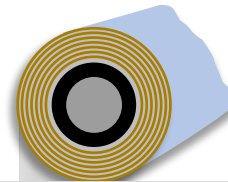
Glazing 1
Glass

,
<comma>



Glazing 2
Polycarb

-
<hyphen>



6,6pc-1.27u

Interlayer thickness

Generic Code	Description
(b)	Polyvinyl Butyral (PVB)
(ip)	Ionoplast
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(lu)	Liquid resin – UV cure
(p)	Polyethylene Terephthalate (PET)
(f)	Fluorinated Ethylene Propylene
(u)	Polyurethane (PU/TPU)
(el)	Epoxy-Liquid crystal polymer
(ev)	Ethylene Vinyl Acetate (EVA)
(su)	Solid Resin UV cure

Interlayer Code

Laminated glass/plastic

“Shorthand” Considerations

- Currently applicable to laminated safety glazing only for SGCC
- Does not exclude detailed configurations
 - Modifications may be needed
 - Type of glass is registered in CPD
 - Adoption into the LGRM (with much more details/discussion)

Detailed Configuration	Summary Nomenclature mm
3 mm (1/8 inch) glass 0.76 mm (0.030 inch) PVB interlayer 3 mm (1/8 inch) glass	3,3-076b
6 mm (1/4 inch) glass 1.52 mm (0.060 inch) TPU interlayer 6 mm (1/4 inch) polycarbonate	6,6-1.52u
4 mm (5/32 inch) glass 2.29 mm (0.090 inch) EVA interlayer 4 mm (5/32 inch) glass	4,4-2.29ev
3 mm (1/8 inch) glass 1.52 mm (0.060 inch) ionoplast interlayer 8 mm (5/16 inch) glass	3,8-1.52ip