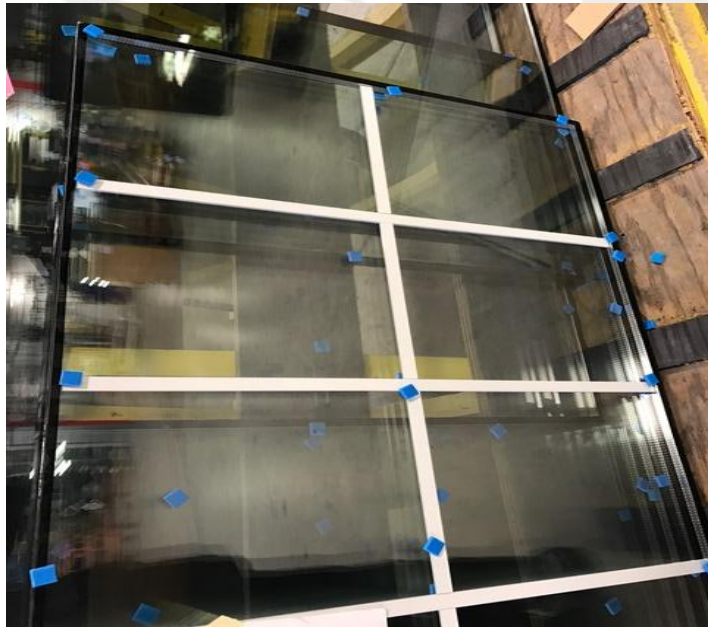


# Insulated Glass Units



# What Is Insulated Glass?

Standard IG  
“Dual-Pane”



Custom IG  
“Triple-Pane”

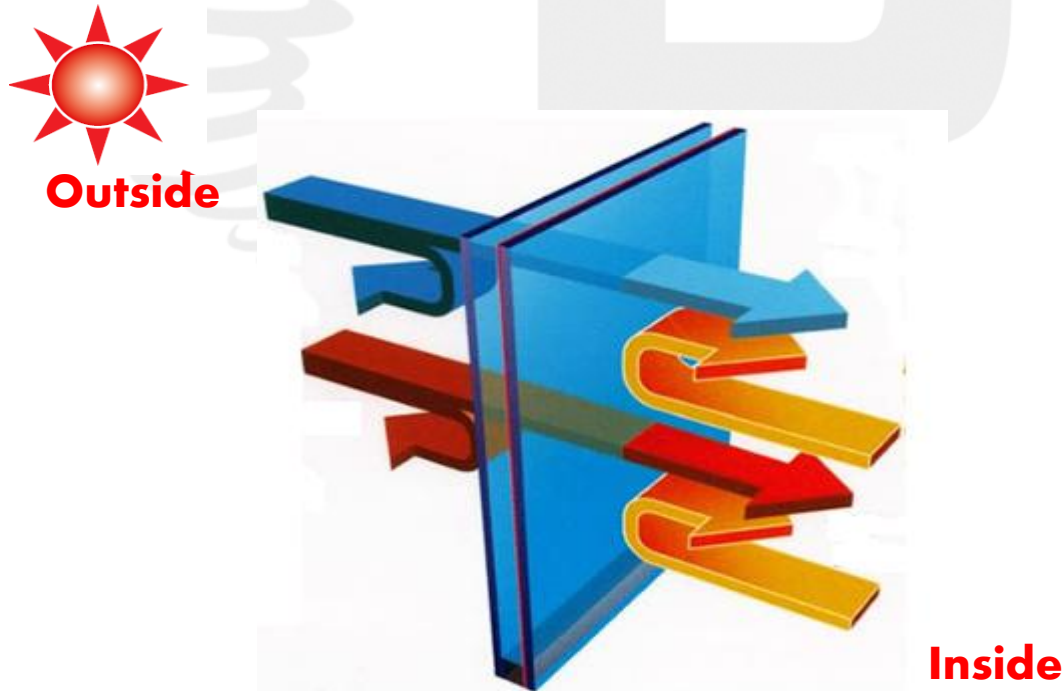


- Insulated Glass (IG) Units are hermetically sealed combinations of two or more lites of glass separated by a dry air spacer.



# Why use Insulated Units ?

- Improves thermal performance by providing a thermal break between the glasses



## Commercial and Residential applications



- IG units will keep heat in during cold weather and will retain heat out during the hot weather

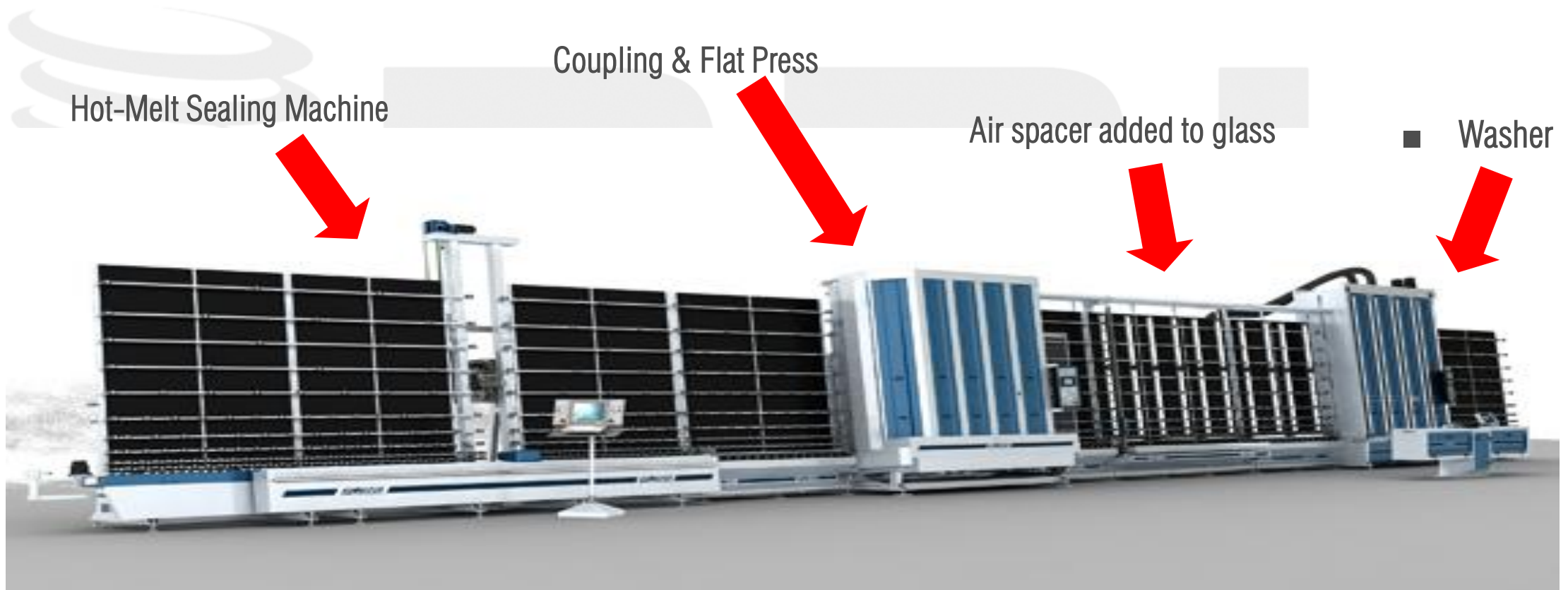
# Insulated Glass Unit Limitations

- Max size: 137" x 87"
- Minimum size:
  - *Annealed: 6" x 6"*
  - *Tempered: 12" x 12"*
- Thickness: 7/16" to 1-1/2" over all
- Units over 50 square feet must be tempered
- Limited Warranty
  - *Standard Seal – 5 years*
  - *Silicone Seal – 10 years*
- Certified by the Insulated Glass Certification Council (IGCC)

- To have warranty units must follow the below guidelines:

<b>INSULATED SIZE GUIDELINES</b>		
<b>GLASS THICKNESS</b>	<b>AIR SPACER</b>	<b>MAX SQ FT</b>
<b>1/8 (DSB)</b>	<b>3/16"</b>	<b>9</b>
	<b>1/4"</b>	<b>14</b>
	<b>3/8" &amp; UP</b>	<b>18</b>
<b>3/16"</b>	<b>1/4"</b>	<b>25</b>
	<b>3/8" &amp; UP</b>	<b>30</b>
<b>1/4"</b>	<b>1/4"</b>	<b>30</b>
	<b>3/8"</b>	<b>35</b>
	<b>1/2"</b>	<b>50</b>
	<b>5/8"</b>	<b>60</b>
	<b>3/4"</b>	<b>65</b>

# INSULATED GLASS LINE



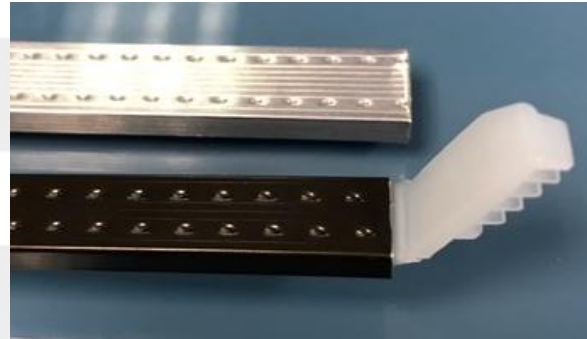
# INSULATED GLASS LINE



# INSULATED GLASS UNIT PROCESS

## Air spacer:

- Comes in 3/16" to 3/4"
- Low profile only (1/4" Tall)
- Available in two colors
  - Clear or Dark Bronze

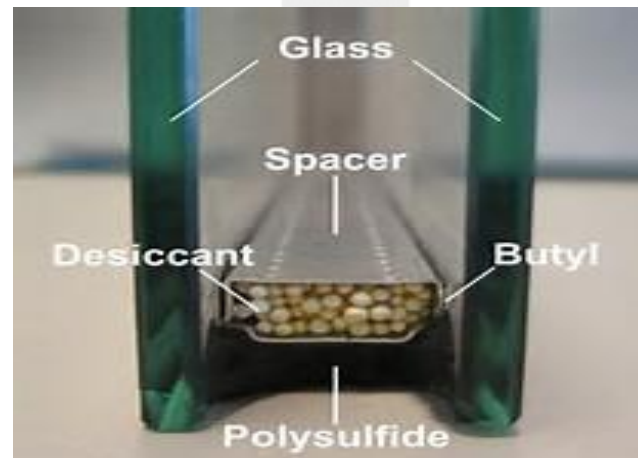


## Desiccant:

- Absorbs the moisture gathered inside unit
- Applied on 2 sides

## Primary Seal

- Polyisobutylene (P.I.B / Butyl)
- Minimizes moisture
- UV resistant
- Allows secondary seal to be secure of any failures



## Secondary Seal:

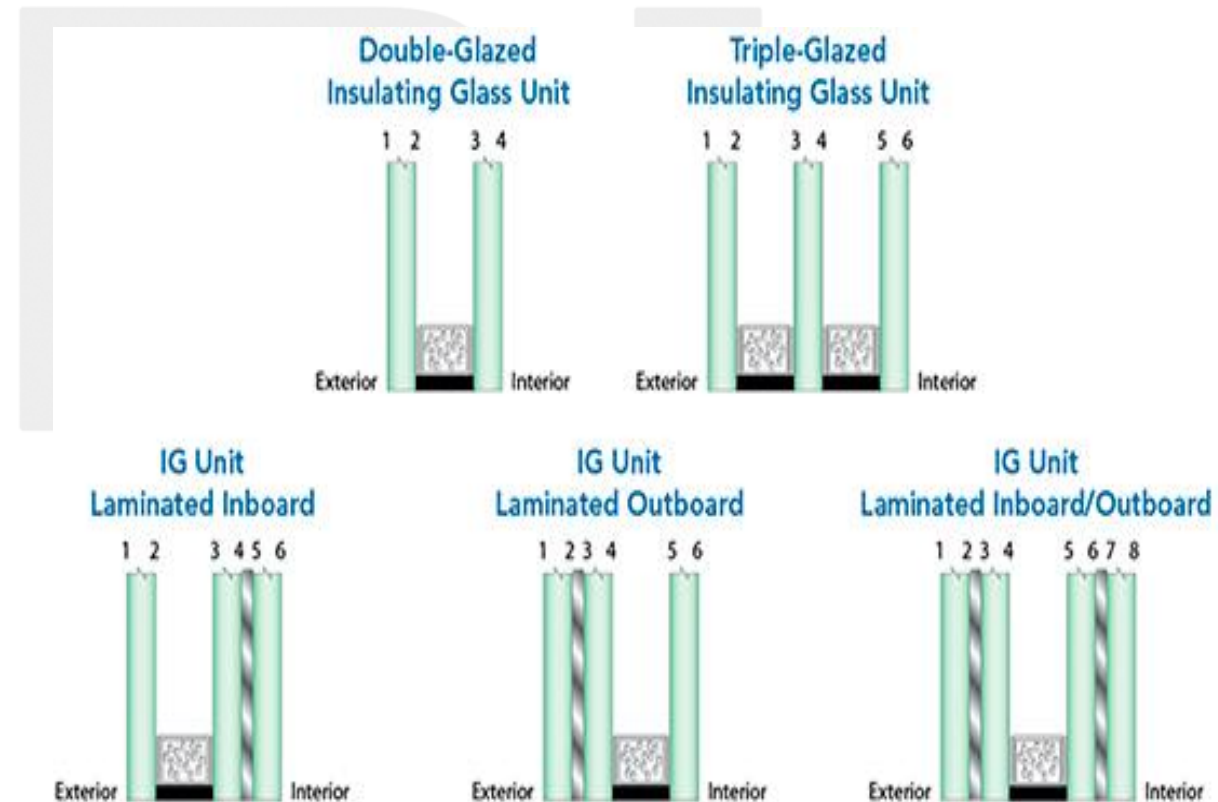
- Two Options
  - Polysulfide (Standard Seal for 5 year warranty)
  - Silicone (As requested for a 10 year warranty)

# INSULATED GLASS INFORMATION

The following glass can be use:

- *Clear*
- *Texture*
- *Tinted*
- *Reflective*
- *Low E*
- *Laminated*

- When using glass other than clear you must indicate what surface is needed for that glass to be placed in the unit.
- All glass is measured and ordered from outside looking in. First glass noted is on the face of the unit, Exterior side.
- Can not do colored glass over colored glass – unit will fail





# LOW E OPTIONS

Adding a Low E glass to your insulated make-up will improve the overall performance.

- For a standard hard coat Low E PRL offers:
  - Energy Advantage from Pilkington
    - Available in 1/8" , 3/16" and 1/4"



- Performance Specs available upon request

For better performing Low E, PRL is a Guardian Soft Coat Low E supplier.

We offer the following products, in 1/4" only:

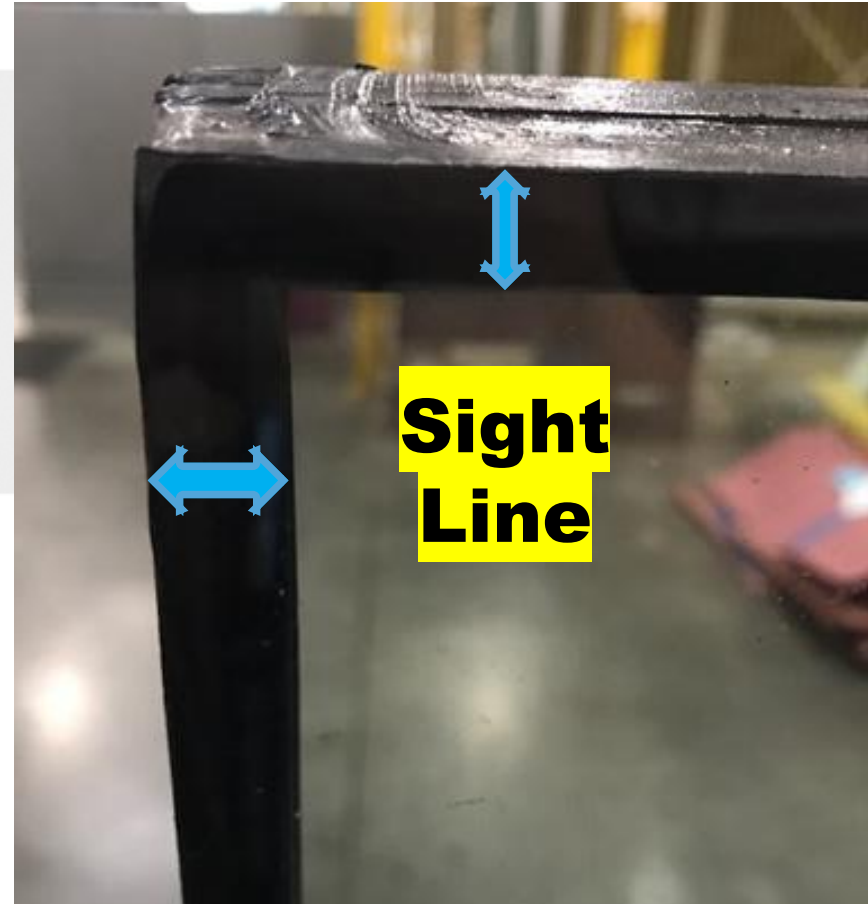
- SN68 (comparable to PPG's-SB60)
- SNX 62/27
  - (comparable to PPG's -SB70)
- SNX 51/23
  - (comparable to PPG's- SB90 or R100)
- SN68 on Ultra White (low iron option)
- SN43
- SN54
- SN54 on Crystal Grey
- AG50



GLASS ANALYTICS  
SOFTWARE TOOLS

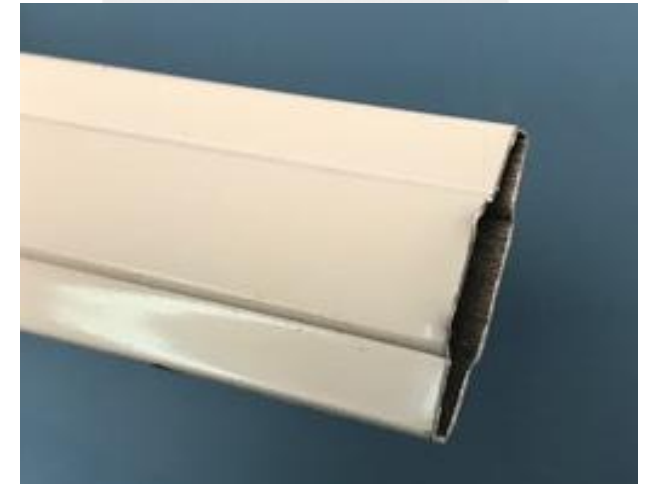
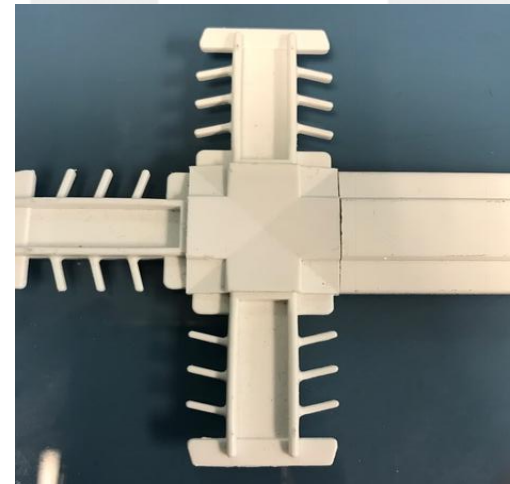
# INSULATED UNIT SIGHTLINE

- The Sightline is the measurement between the edge of glass to the inside of the air spacer, once insulated.
  - *This is usually hidden in the glass stop*
- For proper infill this is a minimum of 1/2"
- When using soft coat Low E glass the edge deletion will be hidden in the Sight Line



# INSULATED UNIT GRIDS

- For a decorative look PRL offers 3 types of grids that can be added.
  - Flat Grids
    - 3/16" x 5/8" or 3/4"
    - White or Dark Bronze
    - Grids cut to overlap each other
  - Sculptured Grids
    - 5/16" x 1"
    - White
    - Grids connected by a four way connector



# INSULATED UNIT OPTIONS

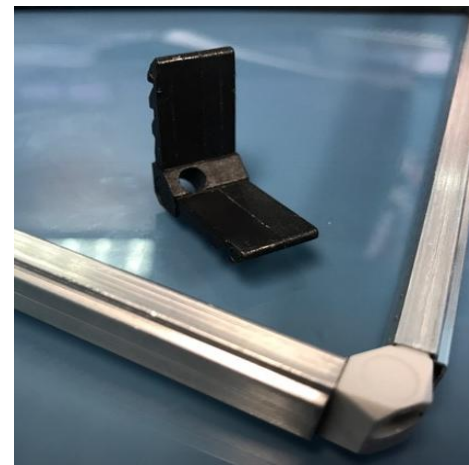
## ■ Breather Tubes

- *To be added when units will travel over altitudes of 4,000 feet*
- *Allow air pressure inside unit to equalize*
- *When installed, breather tube is pinched closed*
- *Can not be used with Argon Gas*



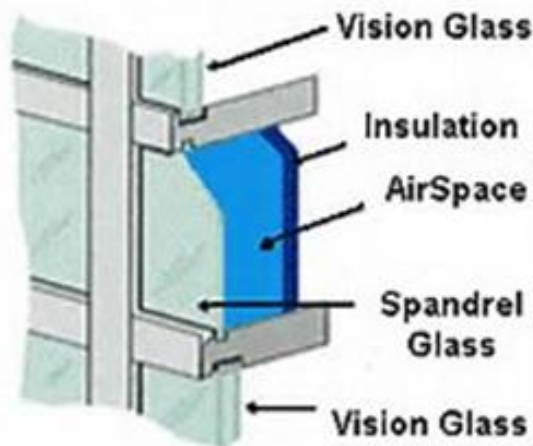
## ■ Argon Gas

- *Added to units with Low e glass*
- *Improves the shading coefficient and UV value by working with the low e coating*
- *Special corner keys added to air spacer when Argon Gas is used so that gas can be inserted inside unit*



















# INSULATED UNITS WITH SPANDREL

- Opaci-Coat 300 is a silicone based paint that can be added to insulated units. Spandrel is added to units to block objects or features that are behind the spandrel glazing, such as between floors of all glass buildings. When spandrel is added, silicone seal should be used.



## Standard Spandrel Colors

	#1-818 Black
	#3-820 Harmony Gray
	#4-822 Harmony Bronze
	#6-0025 Harmony Blue
	#2-743 Harmony Solex *
	#4-975 Lava Bronze
	#2-0225 Evergreen
	#0-0186 Light White
	#0-0020 Snow White *
	#0-1060 Primary White
	#1-0016 Charcoal
	#3-0586 Medium Gray *
	#3-0770 Warm Gray *
	#3-747 Harmony Graylite #14
	#3-967 Black-Gray
	#4-0925 Neutral

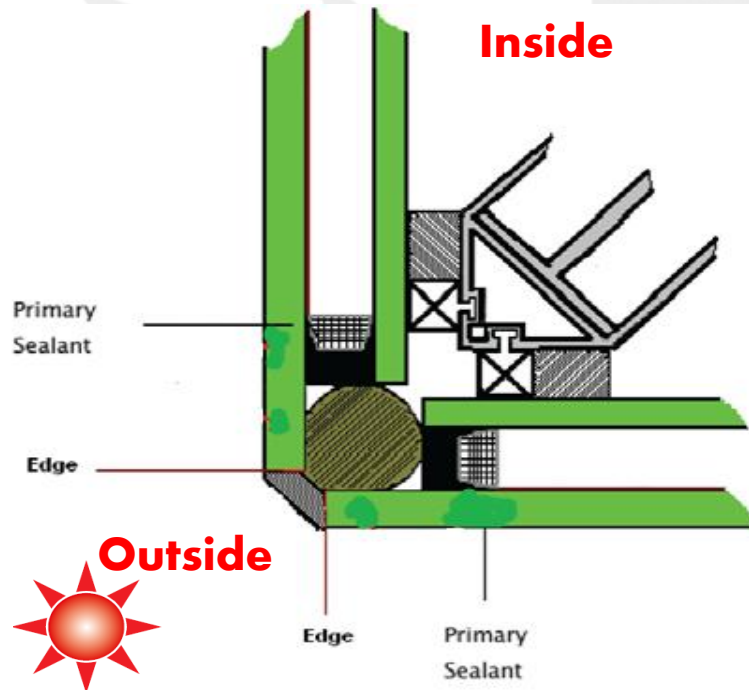
\* Not in Stock at facility. Consult PRL for lead times

# INSULATED UNITS WITH OFFSETS

- Offset units are offsetting the glass when put together so that a corner will be created when installed. You must use silicone seal on all offset units.

- When ordering both glass sizes are required for outside and inside pieces

- Two options for adding the Secondary Seal



Filled in Option



Step Down Option

