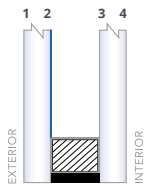


Center-of-glass Thermal improvement guide

This guide is designed to quickly demonstrate optimized thermal performance progression and invite further consultation as overall glass aesthetic, visible light transmission and solar performance are also impacted.

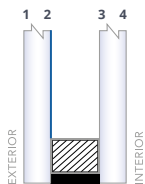
The following scenarios offer general guidance on thermal improvement options relative to center-of-glass performance. Thermal performance for total fenestration is further improved by overall framing/metal systems, spacer type and gas-fill in addition to the SunGuard® low-E coating.

Thermal stress analysis is recommended for atypical scenarios including triple-glazed applications where two or more low-E coatings are considered.



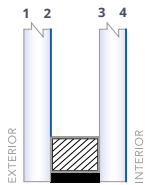
1 low-E coating
1 air-filled cavity
U-Value: 0.29

SunGuard double- OR
triple-silver low-E on surface 2



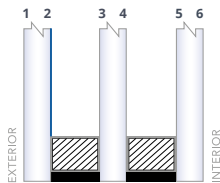
1 low-E coating
1 argon-filled cavity
U-Value: 0.24

SunGuard double- OR
triple-silver low-E on surface 2



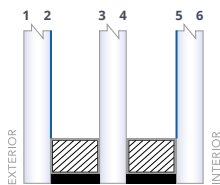
2 low-E coatings
1 argon-filled cavity
U-Value: 0.20

SunGuard double- OR triple-silver
low-E on surface 2 + IS 20 on surface 4



1 low-E coating
2 argon-filled cavities
U-Value: 0.18

SunGuard double- OR
triple-silver low-E on surface 2



2 low-E coatings
2 argon-filled cavities
U-Value: 0.12

SunGuard double-silver OR triple-silver low-E on surface 2
+ SuperNeutral® (SN) 68 on surface 5. Neutral (NU) 78/65
may be used on surface 4 in lieu of SN 68 on surface 5 for
0.13 center-of-glass U-Value.

Guardian SunGuard® low-E portfolio

SunGuard Triple Silver

SunGuard SNX 62/27
SunGuard SNX 51/23

SunGuard Double Silver

SunGuard SN 68
SunGuard SN 54
SunGuard SNE 50/25
SunGuard SNR 43
SunGuard SNR 50
SunGuard SNR 35

SunGuard Single Silver

SunGuard NU 78/65

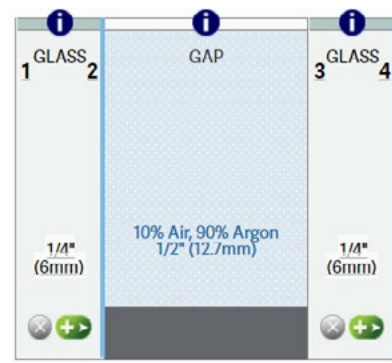
Non-Silver Products

IS 20

Custom configuration

Our [Guardian Glass Analytics Tool](#) simplifies creation of glass make-ups through a simple point-and-click, web-based interface.

You can use the calculator to model the thermal and optical properties for glass make-ups ranging from the monolithic uncoated glass to highly complex combinations of float glass substrates, coatings and interlayers. Then easily create client-ready reports comparing glass options.



Total Nominal Thickness: 1in
Estimated Nominal Glazing Weight: 5.75 lb/ft²

| Make-up Name | Make-up Icon | Visible Light | | | | Solar Energy | | Thermal Properties | | Light to Solar Gain (LSG) |
|--|--------------|---------------|---------------|---------|--------------------------------------|------------------------------------|--------------------------|--------------------|--|---------------------------|
| | | Transmittance | Reflectance | | Color Rendering Index R _a | Solar Heat Gain Coefficient (SHGC) | Relative Heat Gain (RHG) | U-Value | | |
| | | | Visible (τv%) | Pv% out | | | | Pv% in | Winter Night (Btu/hr-ft ² -F) | |
| SuperNeutral 68 2 : AR : IS 20 4 | | 66 | 12 | 13 | 95 | 0.36 | 86 | 0.20 | 0.18 | 1.8 |

Calculation Standard: NFRC 2010

www.guardianglass.com

Phone: 1.866.482.7374

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