

## Insulating Glass U-values In Sloped Glazing Applications

In most manufacturers' literature, U-values are listed for vertical installations only, where the glass is rotated up 90° from horizontal.

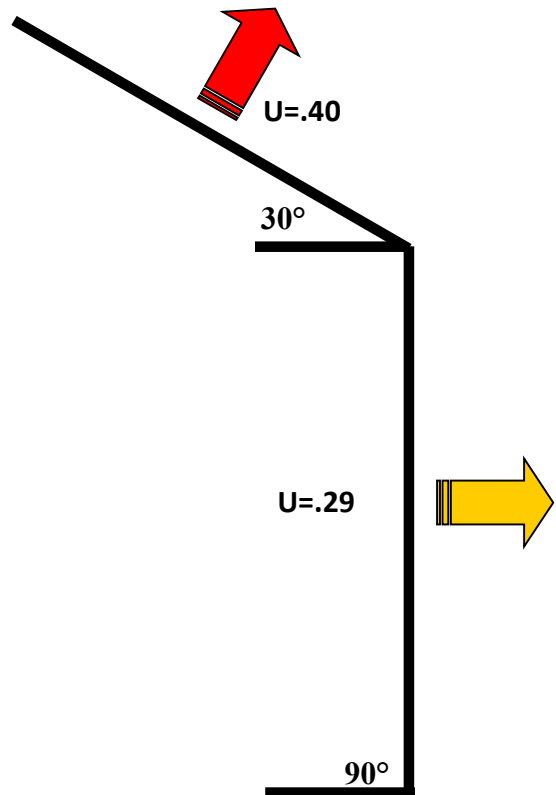
slowly in winter than in a sloped glazed application.

The LBNL WINDOW computer program allows you to change the angle of slope of the IG unit. As the angle of slope changes, so does the U-value of the IG unit. With Vitro's (formerly PPG) Solarban® 60 low-e glass, Solarban® 70 low-e glass and Solarban® 90 low-e glass, the winter nighttime U-values at different slope angles are as follows, according to the WINDOW 7.4 computer program.

Angle	Winter Nighttime U-value		
	SB60	SB70	SB90
Vertical 90°	0.29	0.29	0.29
75°	0.31	0.31	0.31
60°	0.33	0.33	0.33
45°	0.37	0.37	0.37
30°	0.40	0.40	0.40
15°	0.42	0.42	0.42
Horizontal 0°	0.44	0.43	0.43

*Data is for 1" IG units, with a 1/2" airspace, coated on the #2 surface.*

The data shows that heat transfer occurs more slowly in vertical glazing compared to sloped glazing. In skylights, as the slope becomes flatter or more horizontal, the rate of heat transfer through the glazing increases. In other words, the same glass used in a vertically glazed application will lose heat more



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HISTORY TABLE		
ITEM	DATE	DESCRIPTION
Original Publication	6/8/2002	TD-130
Revision #1	10/04/2016	Updated to Vitro Logo and format
Revision #2	1/25/2019	Updated the Vitro Logo and format
Revision #3	8/14/2024	Update WINDOW version, change coatings to SB60, SB70, and SB90

*This document is intended to inform and assist the reader in the application, use, and maintenance of Vitro Flat Glass products. Actual performance and results can vary depending on the circumstances. Vitro makes no warranty or guarantee as to the results to be obtained from the use of all or any portion of the information provided herein, and hereby disclaims any liability for personal injury, property damage, product insufficiency, or any other damages of any kind or nature arising from the reader's use of the information contained herein.*

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