

7 - HVAC AND ENERGY: Building Envelope

Figure 7–29. Whole Window Properties

Frame Material:	Aluminum	Aluminum with Thermal Break	Wood	Wood Clad	Vinyl	Hybrid Composite	Insulated Vinyl
Whole Window Properties – Single-Glazed with Clear Glass							
U-Factor	1.16	1	0.84	0.84	0.84	0.84	N/A
SHGC	0.76	0.7	0.64	0.64	0.64	0.64	N/A
VT	0.75	0.7	0.65	0.65	0.65	0.65	N/A
Whole Window Properties – Double-Glazed with Clear Glass							
U-Factor	0.76	0.63	0.49	0.49	0.49	0.49	0.44
SHGC	0.68	0.62	0.56	0.56	0.56	0.56	0.6
VT	0.68	0.63	0.59	0.59	0.59	0.59	0.63
Whole Window Properties – Double-Glazed with High-Solar-Gain Low-E Glass, Argon Gas							
U-Factor	0.61	0.5	0.37	0.37	0.37	0.37	0.29
SHGC	0.64	0.58	0.53	0.53	0.53	0.53	0.56
VT	0.62	0.58	0.54	0.54	0.54	0.54	0.58
Whole Window Properties – Double-Glazed with Low-Solar-Gain Low-E Glass, Argon Gas							
U-Factor	0.59	0.47	0.34	0.34	0.34	0.34	0.26
SHGC	0.37	0.33	0.3	0.3	0.3	0.3	0.31
VT	0.59	0.55	0.51	0.51	0.51	0.51	0.55

For more information: “Choosing Energy-Efficient Windows,” JLC 1/99

“Choosing Vinyl Windows,” JLC 8/02

The thermal performance properties of specific glazing and frames can vary depending on product design and materials. The results presented here are averages. Consult specific manufacturers for NFRC-rated U-factors and SHGCs for products of interest.