

THERMAL PERFORMANCE

Product	NFRC CPD #	U-Factor	SHGC	VT	ENERGY STAR
100 Wood Direct Set					
71/38 LowE IG	BNB-N-1-00054-00001	0.27	0.35	0.63	N, NC
366 LowE IG	BNB-N-1-00058-00006	0.27	0.24	0.58	N, NC, SC, S
300 Aluminum Clad Wood Direct Set					
71/38 LowE IG	BNB-N-3-00092-00001	0.29	0.35	0.63	N, NC
366 LowE IG	BNB-N-3-00096-00006	0.29	0.25	0.58	N, NC, SC, S
400 Aluminum Clad Wood Casement Picture					
71/38 LowE IG	BNB-N-4-00004-00011	0.29	0.31	0.56	N, NC
366 LowE IG	BNB-N-4-00010-00001	0.28	0.22	0.51	N, NC, SC, S
500 Aluminum Clad Wood Outswing Door-Full Lite					
71/38 LowE IG	BNB-N-5-00023-00011	0.33	0.20	0.35	-
366 LowE IG	BNB-N-5-00030-00001	0.31	0.15	0.32	-

Conditions:

- 71/38 LowE = Guardian RLE 71-38 w/ Argon
- 366 LowE = Cardinal 366 w/ Argon
- 1/8" Glass
- 1/2" Aluminum Glass Spacer for 71-38 LowE and 1/2" Stainless Steel for 366 LowE
- 3/4" Jamb for Direct Sets
- No Grilles

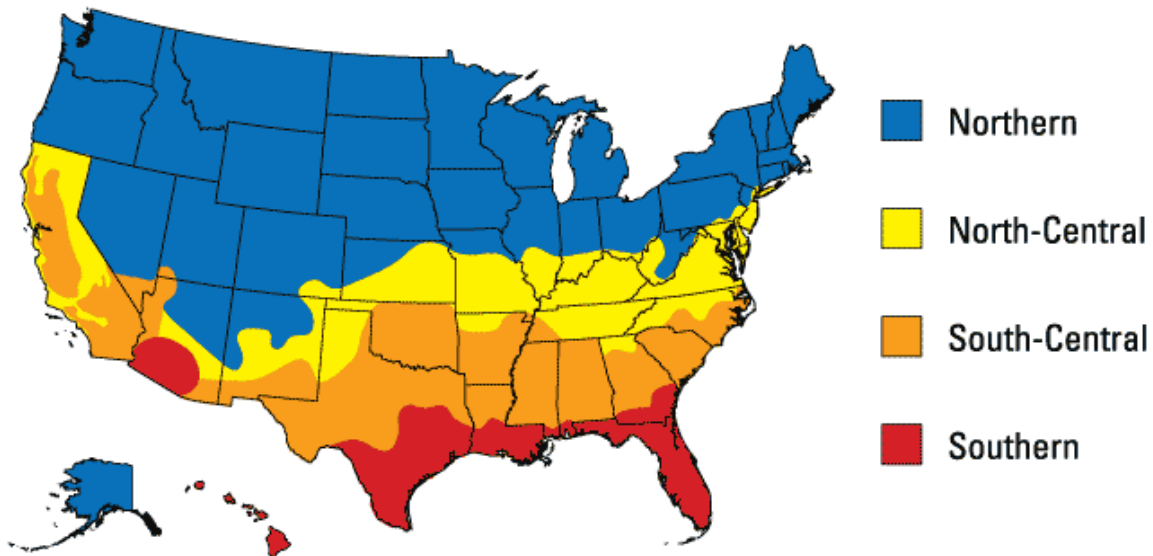
Abbreviations:

- SHGC = Solar Heat Gain Coefficient
- VT = Visual Light Transmittance
- ENERGY STAR Zones: N=Northern, NC=North Central, SC=South Central, S=Southern.

Thermal performance values for all options are in NFRC's Certified Products Directory,
<http://search.nfrc.org/Search/SearchDefault.aspx>

ENERGY STAR Version 6.0, Version 5.0 for Northern Zone

ENERGY STAR VERSION 6.0



Windows

Climate Zone	U-Factor ¹	SHGC ²	
Northern*	≤ 0.27	Any	Prescriptive
	= 0.28	≥ 0.32	Equivalent Energy Performance
	= 0.29	≥ 0.37	
	= 0.30	≥ 0.42	
North-Central	≤ 0.30	≤ 0.40	
South-Central	≤ 0.30	≤ 0.25	
Southern	≤ 0.40	≤ 0.25	

Air Leakage ≤ 0.3 cfm/ft²

¹ Btu/h ft²·°F

² Solar Heat Gain Coefficient

* The effective date for the Northern Zone prescriptive and equivalent energy performance criteria for windows is January 1, 2016.

Doors

Glazing Level	U-Factor ¹	SHGC ²	
Opaque	≤ 0.17	No Rating	
≤ ½-Lite	≤ 0.25	≤ 0.25	
> ½-Lite	≤ 0.30	Northern North-Central	≤ 0.40
		Southern South-Central	≤ 0.25

Air Leakage for Sliding Doors ≤ 0.3 cfm/ft²

Air Leakage for Swinging Doors ≤ 0.5 cfm/ft²

STRUCTURAL PERFORMANCE

Direct Set Windows (not listed)

Product	WDMA Hallmark CCL #	Rating	Size	Standard
100 Wood Direct Set	-	PG50	72x72in	101/I.S.2/A440-05
200 Cellular PVC Exterior / Wood Interior Direct Set	-	PG90	72x72in	101/I.S.2/A440-05
300 Aluminum Clad Wood Direct Set	-	PG65	72x72in	101/I.S.2/A440-05
300 Aluminum Clad Wood with Sash Set	-	PG60	72x72in	101/I.S.2/A440-05

400 Series Aluminum Clad Wood Casement Picture

Hallmark CCL

Product	WDMA Hallmark CCL #	Rating	Size	Standard
400 Aluminum Clad Wood Casement Picture	0830-H-001.00	CW-PG35	72x72in	101/I.S.2/A440-11
400 Aluminum Clad Wood Casement Picture-HP	0830-H-001.01	CW-PG50	72x72in	101/I.S.2/A440-11
400 Aluminum Clad Wood Casement Picture-Impact	0830-H-001.02	CW-PG80	48x72in	101/I.S.2/A440-11
400 Aluminum Clad Wood Casement Picture-Impact	0830-H-001.03	DP80 Missile D Wind Zone 4	48x72in	ASTM E-1996-12 ASTM E-1886-05
400 Aluminum Clad Wood Casement Picture-Impact	0830-H-001.04	DP80	48x72in	TAS 201/202/203-94

*Hallmark listing can be verified in WDMA's Hallmark Certified Products list, <http://www.wdma.amscert.com/>

Florida Product Approval

Product	FL #	Rating	Size	Standard
400 Aluminum Clad Wood Casement Picture-Impact	16796.1	DP80, HVHZ	48x72in	101/I.S.2/A440-08 ASTM E-1886-05 ASTM E-1996-09 TAS 201/202/203-94
400 Aluminum Clad Wood Casement Picture	16796.2	DP80	72x72in	101/I.S.2/A440-08 TAS 201-94

*Florida approval number can be verified on Florida Building Code Online, <http://www.floridabuilding.org/>

STRUCTURAL PERFORMANCE

500 Series Aluminum Clad Commercial Outswing Door

Hallmark CCL

Product	WDMA Hallmark CCL #	Rating	Size	Standard
500 Aluminum Clad Wood Outswing Door-Fixed	0830-H-002.00	LC-PG50	37x96in	101/I.S.2/A440-11
500 Aluminum Clad Wood Outswing Door-Side Hinged	0830-H-002.01	LC-PG50	74x96in	101/I.S.2/A440-11
500 Aluminum Clad Wood Outswing Door-Mull	0830-H-002.02	LC-PG50	96in	101/I.S.2/A440-11
500 Aluminum Clad Wood Outswing Door-Impact-Fixed	0830-H-002.04	LC-PG50	37x96in	101/I.S.2/A440-11
500 Aluminum Clad Wood Outswing Door-Impact-Side Hinged	0830-H-002.03	LC-PG50	74x96in	101/I.S.2/A440-11
500 Aluminum Clad Wood Outswing Door-Impact-Mull	0830-H-002.05	LC-PG50	96in	101/I.S.2/A440-11
500 Aluminum Clad Wood Outswing Door-Impact-Fixed	0830-H-002.06	DP50 Missile D Wind Zone 4	37x96in	ASTM E-1996-12 ASTM E-1886-05
500 Aluminum Clad Wood Outswing Door-Impact-Side Hinged	0830-H-002.07	DP50 Missile D Wind Zone 4	74x96in	ASTM E-1996-12 ASTM E-1886-05
500 Aluminum Clad Wood Outswing Door-Impact-Mull	0830-H-002.08	DP50 Missile D Wind Zone 4	96in	ASTM E-1996-12 ASTM E-1886-05
500 Aluminum Clad Wood Outswing Door-Impact	0830-H-002.09	DP50 Missile D Wind Zone 4	111X96in	TAS 201/202/203-94
500 Aluminum Clad Wood Outswing Door-Impact, Rim Device and ADA Sill	0830-H-002.10	DP50 Missile D Wind Zone 4	74X96in	TAS 201/202/203-94

*Hallmark listing can be verified on WDMA's Hallmark Certified Products list, <http://www.wdma.amscert.com/>

Florida Product Approval

Product	FL #	Rating	Size	Standard
500 Aluminum Clad Wood Outswing Door	16795.1	DP50	111X96in	101/I.S.2/A440-08 TAS 201-94
500 Aluminum Clad Wood Outswing Door-Impact	16795.2	DP50, HVHZ	111X96in	101/I.S.2/A440-08 ASTM E-1886-05 ASTM E-1996-09 TAS 201/202/203-94

*Florida approval number can be verified at Florida Building Code Online, <http://www.floridabuilding.org/>