

Optimum

Thermal Performance Report

Date: 12/17/2019
 Type: Tilt / Turn Window
 Glass: 48mm Planitherm XN (#2, #5), 4/18/4/18/4

North American Standard

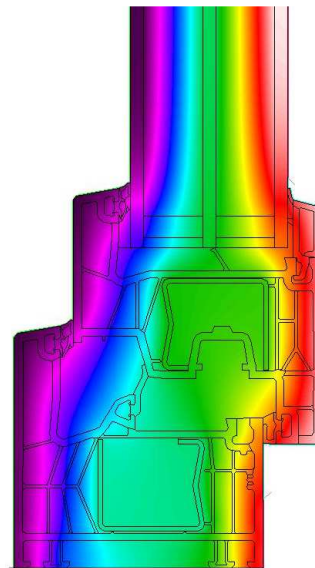
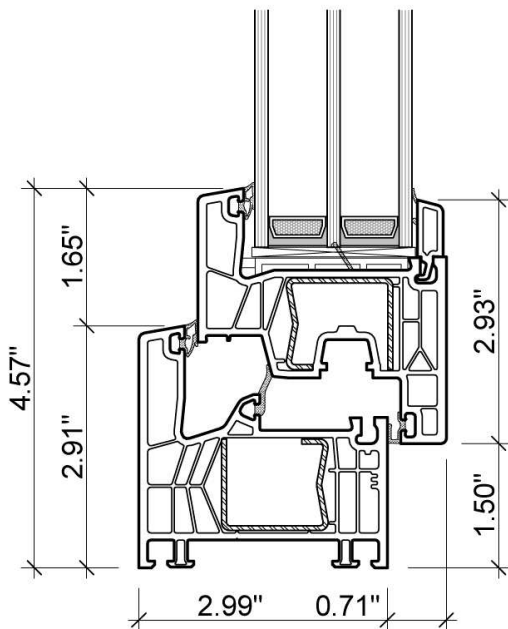
Performance values modeled with LBNL THERM & Window7 per NFRC 100 & 200
 47" x 59" Window size @ standard 0°F exterior temperature

Glass:	$U_g = .126$ Btu/hr-ft ² F	SHGC = .51	VLT = .74	
Window:	$U_w = .163$ Btu/hr-ft ² F	SHGC = .35	VLT = .51	CR = 77

European Standard

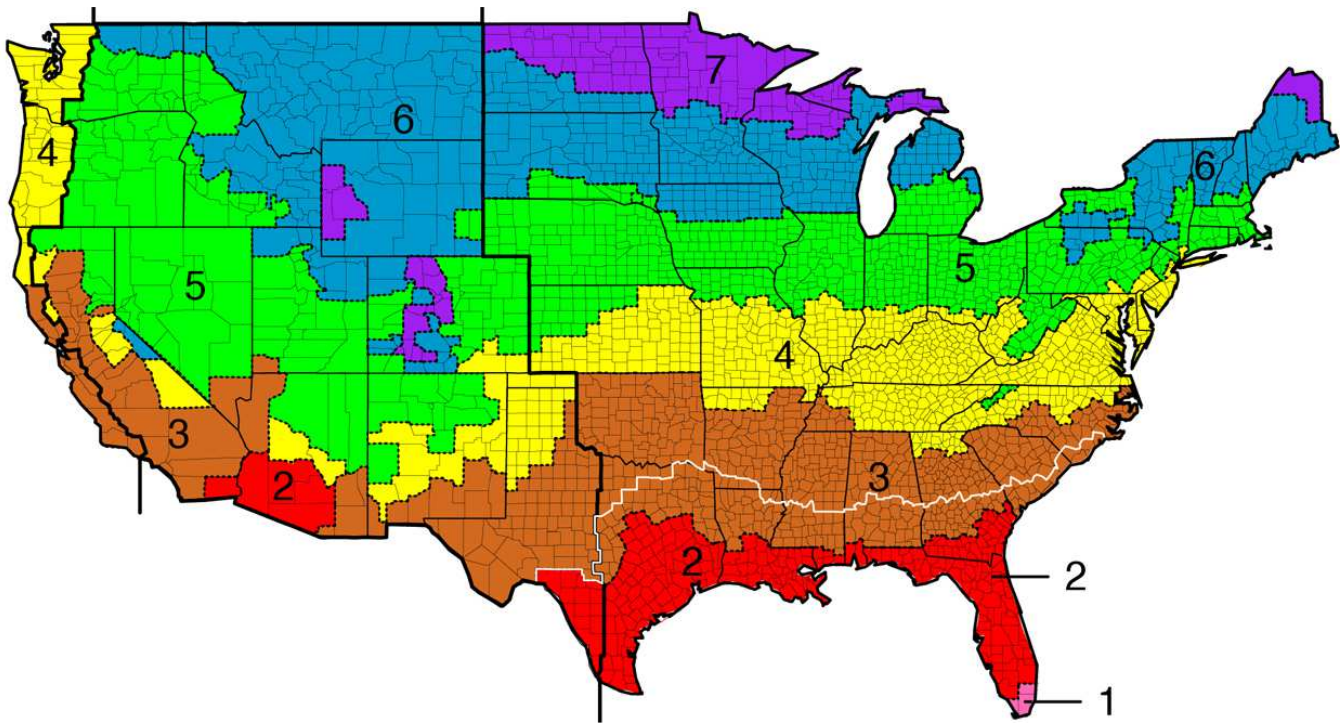
Performance values modeled with LBNL THERM & Window7 per ISO 673 / EN 673
 48" x 58" Window size @ standard 32°F exterior temperature

Frame:	$U_f = .207$ Btu/hr-ft ² F
Spacer:	$\Psi = .0148$ Btu/hr-ft-F
Glass:	$U_g = .097$ Btu/hr-ft ² F
Window:	$U_w = .143$ Btu/hr-ft ² F



Climate Specific Performance

Performance values modeled with LBNL THERM & Window7 per ISO 673 / EN 673
48" x 58" Window size @ climate specific winter exterior temperatures



Frame: $U_f = .206$ Btu/hr·ft²·F

Spacer: $\Psi = .0147$ Btu/hr·ft·F

Glass: SHGC = .51

Climate Zone	Glass U-Value Btu/hr·ft ² ·F	Window U-Value Btu/hr·ft ² ·F
Zone 7 (10°F)	.112	.153
Zone 6 (25°F)	.103	.146
Zone 5 (28°F)	.100	.145
Zone 4 (36°F)	.096	.141