

## Excel

## Thermal Performance Report

Date: 12/17/2019  
 Type: Tilt / Turn Window  
 Glass: 42mm Planitherm XN (#2, #5), 4/16/4/14/4

### North American Standard

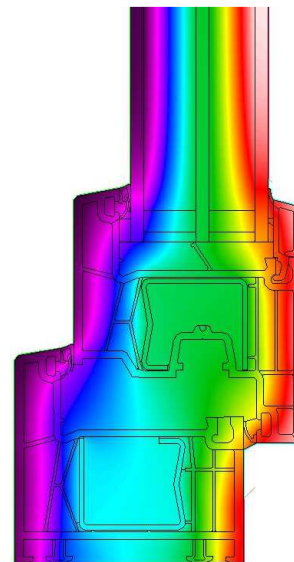
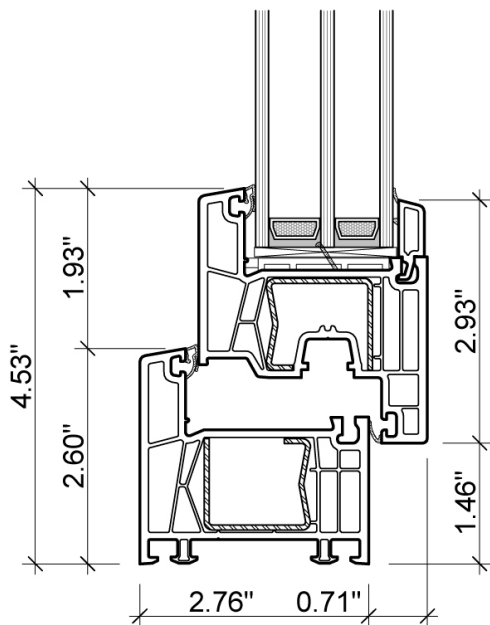
Performance values modeled with LBNL THERM & Window7 per NFRC 100 & 200  
 47" x 59" Window size @ standard 0°F exterior temperature

Glass:	$U_g = .124$ Btu/hr-ft <sup>2</sup> F	SHGC = .51	VLT = .74	
Window:	$U_w = .169$ Btu/hr-ft <sup>2</sup> F	SHGC = .35	VLT = .51	CR = 75

### European Standard

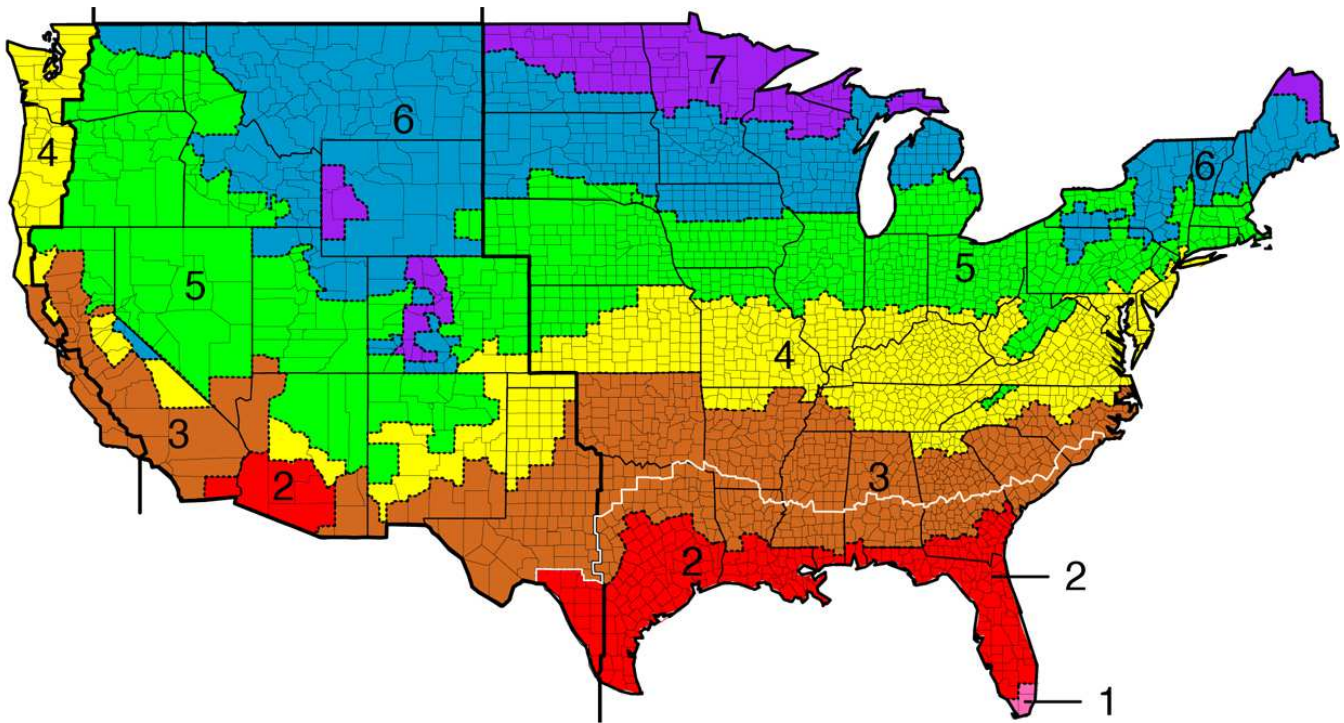
Performance values modeled with LBNL THERM & Window7 per ISO 673 / EN 673  
 48" x 58" Window size @ standard 32°F exterior temperature

Frame:	$U_f = .235$ Btu/hr-ft <sup>2</sup> F
Spacer:	$\Psi = .0157$ Btu/hr-ftF
Glass:	$U_g = .109$ Btu/hr-ft <sup>2</sup> F
Window:	$U_w = .160$ Btu/hr-ft <sup>2</sup> 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:  $U_f = .232$  Btu/hr.ft<sup>2</sup>F

Spacer:  $\Psi = .0158$  Btu/hr.ft.F

Glass: SHGC = .51

Climate Zone	Glass U-Value Btu/hr.ft <sup>2</sup> F	Window U-Value Btu/hr.ft <sup>2</sup> F
Zone 7 (10°F)	.113	.163
Zone 6 (25°F)	.109	.160
Zone 5 (28°F)	.108	.159
Zone 4 (36°F)	.109	.159