



Thermal Simulation Report

Simulation Date: 02/20/2014

Client: Panda Windows and Doors

Contact: Alex Teran

Product Type: Sliding Glass Door

Model ID: TS 19 - Testing

The Following NFRC Procedures were Followed:

NFRC-100-2010
NFRC-200-2010
NFRC-300-2010
NFRC-500-2010

Simulated by:

Derek Meline
NFRC Certified Simulator
Technoform Bautec North
America
330-487-6628
dmeline@technoform.us

Bart Hensley
NFRC Certified Simulator
Technoform Bautec North
America
330-487-6619
bhensley@technoform.us

Stephen Aki
NFRC Certified Simulator
Technoform Bautec North
America
971-832-0502
saki@technoform.us



Note: This report is based on approved practices, methods and values which are established by National Fenestration Rating Council (NFRC). The results shown are for informational purposes only and not to be used for product certification or labeling. Actual product testing results may vary from the values shown in the simulation.



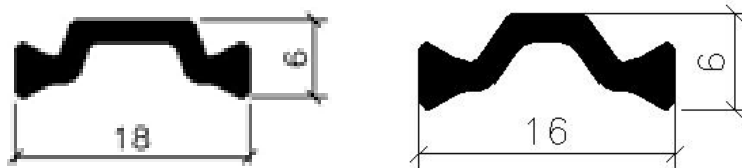
Summary Report Panda Windows and Doors

Simulator:	Stephen Aki	
Date:	2/20/2014	
System:	#1	Sliding Door Simulation 2 m x 2 m
	#2	Sliding Door Simulation 2 m x 2 m with PA Interlock
IG #	Glazing Matrix	
IG-1	Solarban 70 XL Starphire / 100% Air 12.7 mm / Clear - 6 mm	
		5439 / 1 / 103
IG-2	Guardian Laminate 6 mm +.090 PVB + 6 mm clear (13.5 mm) / 100% Air 12.7 mm / SB70XL Starphire - 6mm	
		3082 / 1 / 5439
IG-3	Guardian Laminate 6 mm +.090 PVB + 6 mm clear (13.5 mm) / 5% Air - 95% Argon 12.7 mm / SB70XL Starphire - 6mm	
		3082 / 6 / 5439
IG-4	Guardian Laminate 6 mm +.090 PVB + 6 mm clear (13.5 mm) / 100% Air 19.0 mm / SB70XL Starphire - 6mm	
		3082 / 1 / 5439
IG-5	Guardian Laminate 6 mm +.090 PVB + 6 mm clear (13.5 mm) / 5% Air - 95% Argon 19.0 mm / SB70XL Starphire - 6mm	
		3082 / 6 / 5439
IG-6	VUE140 6 mm / 90% Argon / Custom Laminate 5 mm VE-85 / 90% Argon / Clear 5mm	
		6362 / 9 / 30030 / 9 / 5011

#1	System Description				Sliding Door Simulation 2 m x 2 m					Spacer Height
IG #	Spacer Type	Spacer Size	Primary Seal	Secondary Seal	U-Factor	U-Factor	SHGC	CR Value	Sightline Temp.	Top of Spacer to Edge of Glass (inch)
				*	BTU/hr.ft2.°F	W/m2-K			°F	
IG-1	TGI Rigid 1/2"	0.5000	PIB	Silicone	0.448	2.543	0.205	40	39.6	0.4252
IG-2	TGI Rigid 1/2"	0.5000	PIB	Silicone	0.435	2.472	0.263	39.2	40.2	0.4252
IG-3	TGI Rigid 1/2"	0.5000	PIB	Silicone	0.400	2.269	0.263	40.7	41.0	0.4252
IG-4	TGI Rigid 3/4"	0.7500	PIB	Silicone	0.438	2.489	0.261	38.9	40.7	0.4252
IG-5	TGI Rigid 3/4"	0.7500	PIB	Silicone	0.409	2.321	0.258	40.3	41.6	0.4252
IG-6	TGI Rigid 1/2"	0.5000	PIB	Silicone	0.327	1.857	0.137	39.9	44.1	0.4252

#2	System Description				Sliding Door Simulation 2 m x 2 m with PA Interlock					Spacer Height
IG #	Spacer Type	Spacer Size	Primary Seal	Secondary Seal	U-Factor	U-Factor	SHGC	CR Value	Sightline Temp.	Top of Spacer to Edge of Glass (inch)
				*	BTU/hr.ft2.°F	W/m2-K			°F	
IG-1	TGI Rigid 1/2"	0.5000	PIB	Silicone	0.442	2.507	0.205	40.7	39.6	0.4252
IG-2	TGI Rigid 1/2"	0.5000	PIB	Silicone	0.429	2.436	0.263	40	40.2	0.4252
IG-3	TGI Rigid 1/2"	0.5000	PIB	Silicone	0.393	2.233	0.261	41.5	41.0	0.4252
IG-4	TGI Rigid 3/4"	0.7500	PIB	Silicone	0.432	2.453	0.260	39.7	40.7	0.4252
IG-5	TGI Rigid 3/4"	0.7500	PIB	Silicone	0.403	2.286	0.257	41.1	41.6	0.4252

955000 & 270000



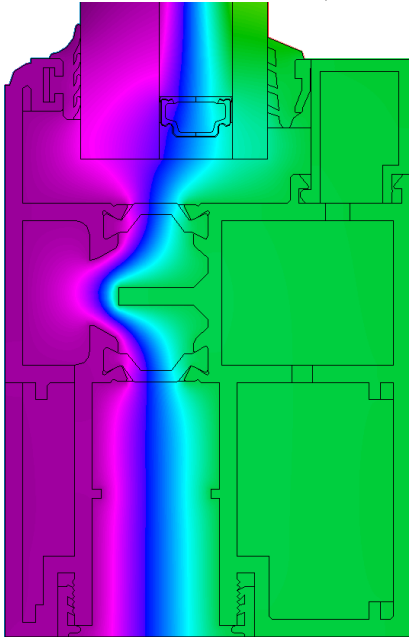
Notes:

- System performance with new glass type increased to a .327 u- value.

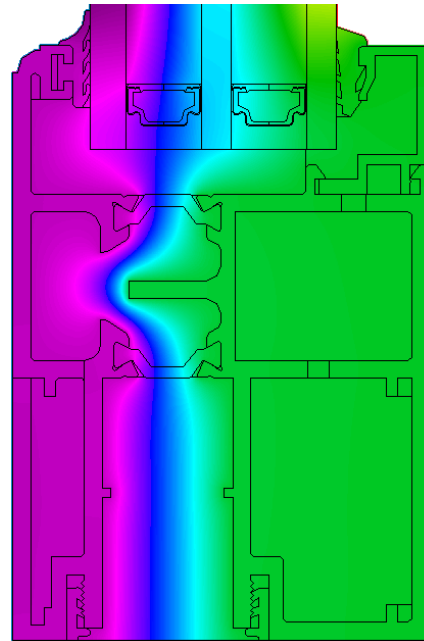


- System: 1

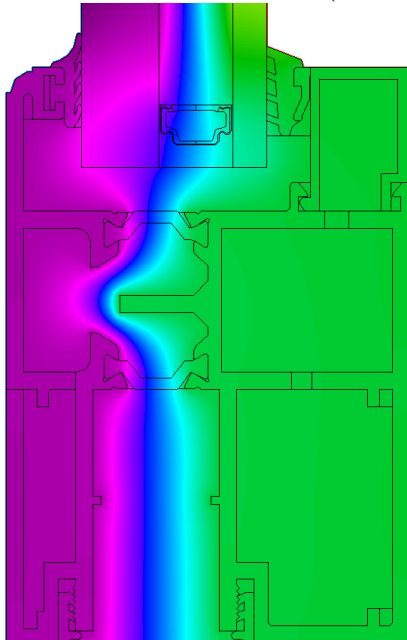
Interior Sill 3082 / 1 / 5439 (With 100% Air)



Interior Sill 6362 / 9 / 30030 / 9 / 5011

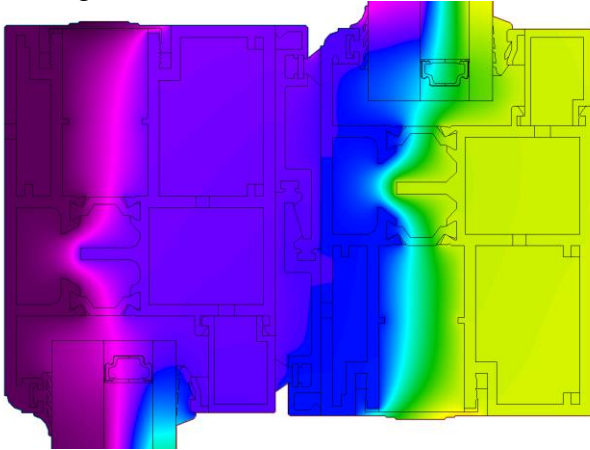


Interior Sill 30820/ 6 / 5439 (With 95% Argon)

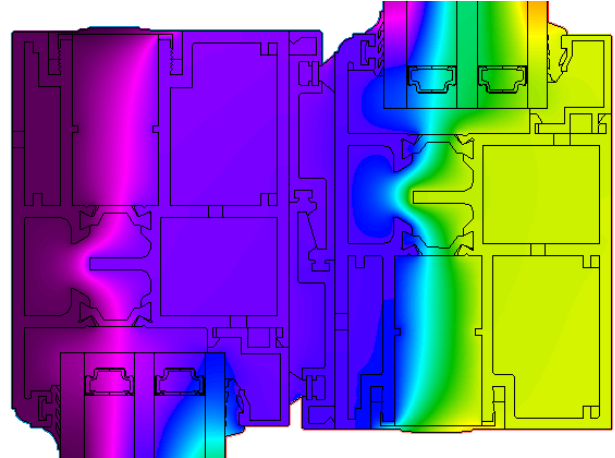




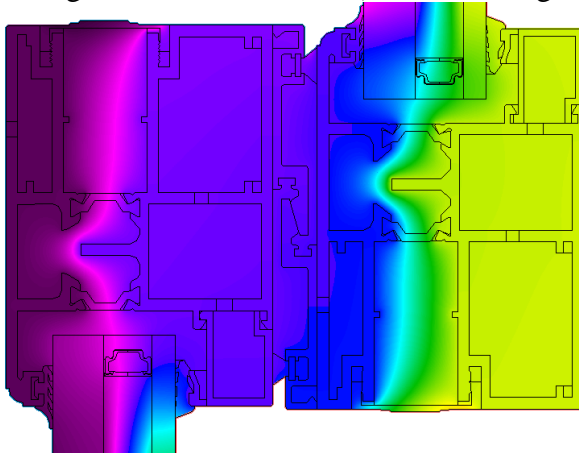
Meeting Rail 3082 / 1 / 5439 (With 100% Air)



Interior Sill 6362 / 9 / 30030 / 9 / 5011



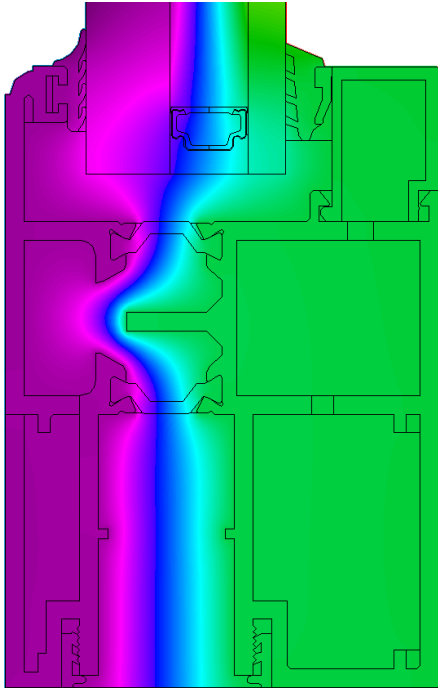
Meeting Rail 3082 / 6 / 5439 (With 95% Argon)



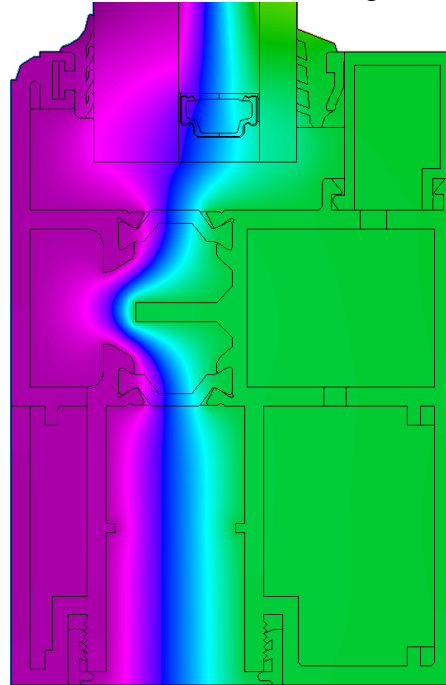


System 2

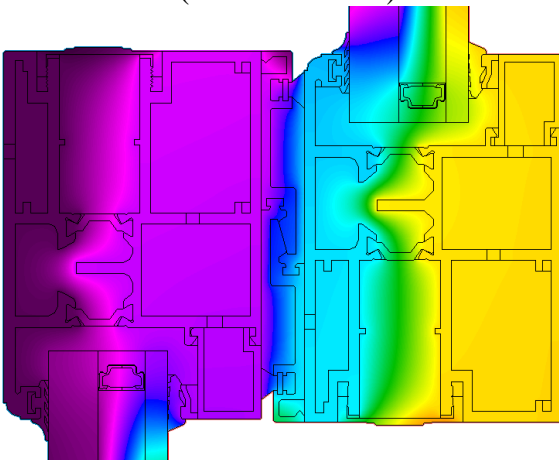
Interior Sill with PA Interlock
3082 / 1 / 5439 (With 100% Air)



Interior Sill with PA Interlock
30820/ 6 / 5439 (With 95% Argon)



Meeting Rail with PA Interlock
3082 / 1 / 5439 (With 100% Air)



Meeting Rail with PA Interlock
30820/ 6 / 5439 (With 95% Argon)

