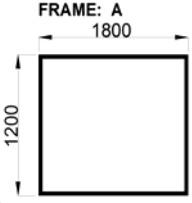
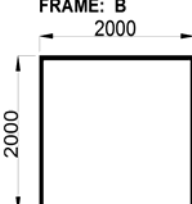
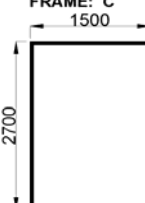
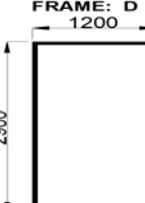
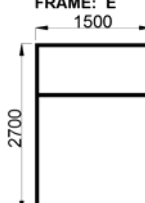
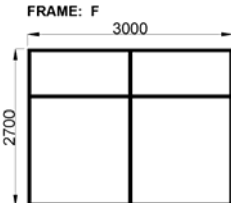
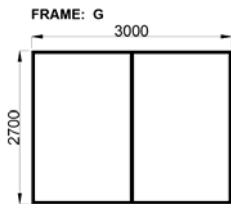
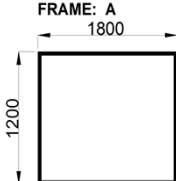
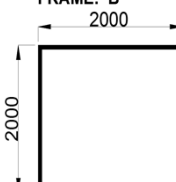
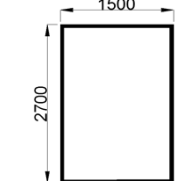
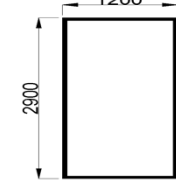
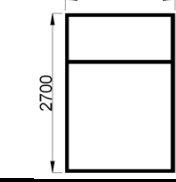
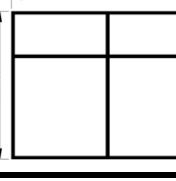
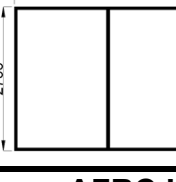


PERFORMANCE TEST SPECIFICATIONS

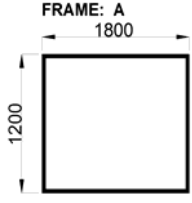
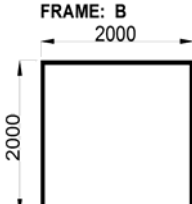
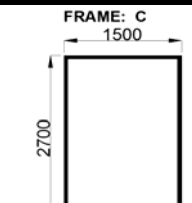
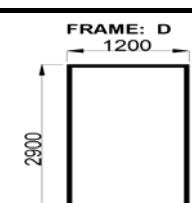
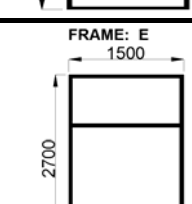
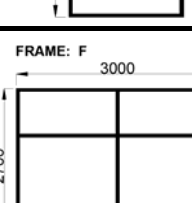
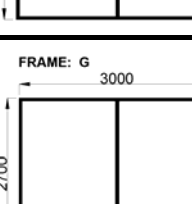
THERMAL ASSESSMENT

PATH Thermal Break		GLASS SELECTION CHART - B15								
		6mm Clear 12mm Air 6mm Clear	10mm Clear 12mm Air 6mm Clear	6mm Grey 12mm Air 6mm Clear	10mm Grey 12mm Air 6mm Clear	6mm Evantage Clear 12mm Air 6mm Clear	6mm Evantage Grey 12mm Air 6mm Clear	6mm Evantage S/Green 12mm Air 6mm Clear	6mm Evantage S/Blue 12mm Air 6mm Clear	
Fixed Light 100 x 55 Frame Double Glazing All Fixed Panels	 <p>FRAME: A 1800 1200</p>	UW	2.960	2.956	2.960	2.956	2.354	2.354	2.362	2.354
		SHGC	0.625	0.563	0.404	0.321	0.494	0.300	0.267	0.260
		TVW	0.682	0.660	0.321	0.215	0.534	0.251	0.386	0.304
 <p>FRAME: B 2000 2000</p>	UW	2.912	2.905	2.912	2.905	2.286	2.285	2.294	2.285	
	SHGC	0.640	0.576	0.414	0.328	0.506	0.307	0.273	0.265	
	TVW	0.700	0.677	0.330	0.220	0.548	0.258	0.396	0.313	
 <p>FRAME: C 1500 2700</p>	UW	2.917	2.910	2.917	2.910	2.294	2.294	2.303	2.294	
	SHGC	0.637	0.574	0.412	0.327	0.504	0.305	0.272	0.264	
	TVW	0.697	0.674	0.328	0.219	0.546	0.257	0.394	0.311	
 <p>FRAME: D 1200 2900</p>	UW	2.944	2.940	2.944	2.940	2.336	2.336	2.344	2.336	
	SHGC	0.627	0.565	0.406	0.322	0.496	0.301	0.268	0.261	
	TVW	0.685	0.663	0.323	0.216	0.537	0.252	0.387	0.306	
 <p>FRAME: E 1500 2700</p>	UW	2.990	2.991	2.990	2.991	2.387	2.387	2.396	2.387	
	SHGC	0.625	0.562	0.404	0.321	0.494	0.300	0.267	0.260	
	TVW	0.682	0.659	0.321	0.215	0.534	0.251	0.386	0.304	
 <p>FRAME: F 3000 2700</p>	UW	2.994	2.997	2.994	2.997	2.382	2.382	2.391	2.382	
	SHGC	0.633	0.570	0.409	0.325	0.500	0.304	0.270	0.263	
	TVW	0.692	0.669	0.326	0.218	0.542	0.255	0.391	0.309	
 <p>FRAME: G 3000 2700</p>	UW	2.920	2.915	2.920	2.915	2.288	2.287	2.296	2.287	
	SHGC	0.646	0.581	0.417	0.331	0.510	0.309	0.275	0.268	
	TVW	0.707	0.684	0.333	0.223	0.554	0.261	0.400	0.316	
AFRC Lab Fenestration Performance Report						1/02/2018		B-15		

PATH Thermal Break Fixed Light 100 x 55 Frame Double Glazing All Fixed Panels	GLASS SELECTION CHART - B16								
		6mm Energy Tech Clear 12mm Air 6mm Clear	6mm SolTech (#2) Neutral 12mm Air 6mm Clear PerformatechE	6mm SolTech Grey 12mm Air 6mm Clear PerformatechE	8.76mm Clear Laminated 12mm Argon 6mm Clear PerformatechE	8.76mm Grey Laminated 12mm Argon 6mm Clear PerformatechE	8.38mm Comfort+ Neutral 59 12mm Argon 6mm Clear	8.38mm Comfort+ Blue 44 12mm Argon 6mm Clear	
FRAME: A 	UW	2.275	1.840	1.837	2.089	2.087	2.284	2.281	
	SHGC	0.542	0.397	0.286	0.313	0.234	0.372	0.275	
	TVW	0.631	0.577	0.359	0.420	0.316	0.452	0.368	
FRAME: B 	UW	2.204	1.753	1.751	2.011	2.006	2.213	2.207	
	SHGC	0.555	0.406	0.292	0.319	0.239	0.381	0.281	
	TVW	0.648	0.593	0.368	0.431	0.324	0.464	0.377	
FRAME: C 	UW	2.213	1.765	1.762	2.022	2.017	2.222	2.217	
	SHGC	0.553	0.404	0.291	0.318	0.238	0.379	0.279	
	TVW	0.645	0.590	0.366	0.429	0.323	0.462	0.376	
FRAME: D 	UW	2.256	1.819	1.815	2.070	2.067	2.266	2.262	
	SHGC	0.544	0.398	0.287	0.314	0.235	0.454	0.276	
	TVW	0.634	0.580	0.360	0.422	0.317	0.000	0.369	
FRAME: E 	UW	2.309	1.879	1.876	2.124	2.126	2.321	2.319	
	SHGC	0.542	0.397	0.286	0.312	0.234	0.372	0.275	
	TVW	0.631	0.577	0.358	0.420	0.316	0.451	0.367	
FRAME: F 	UW	2.302	1.876	1.868	2.115	2.120	2.316	2.315	
	SHGC	0.549	0.402	0.289	0.316	0.237	0.377	0.278	
	TVW	0.640	0.585	0.363	0.426	0.320	0.458	0.373	
FRAME: G 	UW	2.205	1.760	1.752	2.011	2.009	2.216	2.212	
	SHGC	0.560	0.410	0.295	0.322	0.241	0.384	0.283	
	TVW	0.654	0.598	0.372	0.435	0.327	0.468	0.381	
AFRC Lab Fenestration Performance Report						1/02/2018	B-16		

PERFORMANCE TEST SPECIFICATIONS


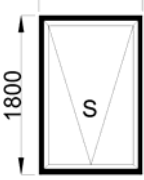
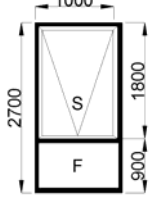
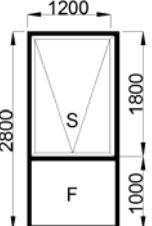
THERMAL ASSESSMENT

PATH Thermal Break		GLASS SELECTION CHART - B17								
		6mm Clear 12mm Air 6mm Clear	10mm Clear 12mm Air 6mm Clear	6mm Grey 12mm Air 6mm Clear	10mm Grey 12mm Air 6mm Clear	6mm Evantage Clear 12mm Air 6mm Clear	6mm Evantage Grey 12mm Air 6mm Clear	6mm Evantage S/Green 12mm Air 6mm Clear	6mm Evantage S/Blue 12mm Air 6mm Clear	
Fixed Light 150 x 55 Frame Double Glazing All Fixed Panels		UW	3.0	3.0	3.0	3.0	2.4	2.4	2.4	2.4
		SHGC	0.61	0.55	0.40	0.32	0.48	0.29	0.26	0.26
		TVW	0.67	0.65	0.31	0.21	0.52	0.25	0.38	0.30
	UW	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	
	SHGC	0.64	0.57	0.41	0.33	0.50	0.31	0.27	0.26	
	TVW	0.70	0.68	0.33	0.22	0.55	0.26	0.40	0.31	
	UW	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	
	SHGC	0.63	0.57	0.41	0.32	0.50	0.30	0.27	0.26	
	TVW	0.70	0.67	0.33	0.22	0.55	0.26	0.39	0.31	
	UW	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	
	SHGC	0.62	0.56	0.40	0.32	0.49	0.30	0.27	0.26	
	TVW	0.68	0.66	0.32	0.22	0.54	0.25	0.39	0.31	
	UW	2.9	2.9	2.9	2.9	2.3	2.3	2.3	2.3	
	SHGC	0.62	0.56	0.40	0.32	0.49	0.30	0.26	0.26	
	TVW	0.68	0.66	0.32	0.21	0.53	0.25	0.39	0.30	
	UW	2.9	2.9	2.9	2.9	2.3	2.3	2.3	2.3	
	SHGC	0.63	0.57	0.41	0.32	0.50	0.30	0.27	0.26	
	TVW	0.69	0.67	0.33	0.22	0.54	0.26	0.39	0.31	
	UW	2.8	2.8	2.8	2.8	2.2	2.2	2.2	2.2	
	SHGC	0.65	0.58	0.42	0.33	0.51	0.31	0.27	0.27	
	TVW	0.71	0.69	0.33	0.22	0.56	0.26	0.40	0.32	
AFRC Lab Fenestration Performance Report						20/05/2020	B-17			

PATH Thermal Break Fixed Light 150 x 55 Frame Double Glazing All Fixed Panels		GLASS SELECTION CHART - B18							
		6mm Energy Tech Clear 12mm Air 6mm Clear	6mm SolTech (#2) Neutral 12mm Air 6mm Clear PerformatechE	6mm SolTech Grey 12mm Air 6mm Clear PerformatechE	8.76mm Clear Laminated 12mm Argon 6mm Clear PerformatechE	8.76mm Grey Laminated 12mm Argon 6mm Clear PerformatechE	8.38mm Comfort+ Neutral 59 12mm Argon 6mm Clear	8.38mm Comfort+ Blue 44 12mm Argon 6mm Clear	6mm LoE 366-6 CIG 12mm Argon 6mm Clear
<p>FRAME: A 1800 1200</p>	UW	2.3	1.9	1.9	2.1	2.1	2.3	2.3	1.9
	SHGC	0.53	0.39	0.28	0.31	0.23	0.37	0.27	0.24
	TVW	0.61	0.57	0.35	0.41	0.31	0.44	0.36	0.53
<p>FRAME: B 2000 2000</p>	UW	2.2	1.7	1.7	2.0	2.0	2.2	2.1	1.7
	SHGC	0.55	0.40	0.29	0.32	0.24	0.38	0.28	0.25
	TVW	0.65	0.59	0.37	0.43	0.32	0.46	0.38	0.56
<p>FRAME: C 1500 2700</p>	UW	2.1	1.7	1.7	1.9	1.9	2.1	2.1	1.7
	SHGC	0.55	0.40	0.29	0.32	0.24	0.38	0.28	0.25
	TVW	0.64	0.59	0.37	0.43	0.32	0.46	0.38	0.55
<p>FRAME: D 1200 2900</p>	UW	2.2	1.7	1.7	2.0	2.0	2.2	2.2	1.7
	SHGC	0.54	0.40	0.29	0.31	0.23	0.37	0.27	0.24
	TVW	0.63	0.58	0.36	0.42	0.32	0.45	0.37	0.54
<p>FRAME: E 1500 2700</p>	UW	2.2	1.8	1.8	2.1	2.1	2.2	2.2	1.8
	SHGC	0.54	0.39	0.28	0.31	0.23	0.37	0.27	0.24
	TVW	0.63	0.58	0.36	0.42	0.32	0.45	0.37	0.54
<p>FRAME: F 3000 2700</p>	UW	2.3	1.8	1.8	2.1	2.1	2.3	2.3	1.8
	SHGC	0.55	0.40	0.29	0.32	0.24	0.38	0.28	0.25
	TVW	0.64	0.59	0.37	0.43	0.32	0.46	0.37	0.55
<p>FRAME: G 3000 2700</p>	UW	2.2	1.7	1.7	2.0	2.0	2.2	2.2	1.7
	SHGC	0.56	0.41	0.29	0.32	0.24	0.38	0.28	0.25
	TVW	0.66	0.60	0.37	0.44	0.33	0.47	0.38	0.56
AFRC Lab Fenestration Performance Report						20/05/2020		B-18	

PERFORMANCE TEST SPECIFICATIONS

THERMAL ASSESSMENT

PATH Thermal Break Awning Sash 100 x 55 Frame Double Glazing 50mm Sash	GLASS SELECTION CHART - B19								
		6mm Clear 12mm Air 6mm Clear	10mm Clear 12mm Air 6mm Clear	6mm Grey 12mm Air 6mm Clear	10mm Grey 12mm Air 6mm Clear	6mm Evantage Clear 12mm Air 6mm Clear	6mm Evantage Grey 12mm Air 6mm Clear	6mm Evantage S/Green 12mm Air 6mm Clear	6mm Evantage S/Blue 12mm Air 6mm Clear
FRAME: H 	UW	3.425	3.421	3.425	3.421	3.094	3.093	3.098	3.093
	SHGC	0.391	0.354	0.261	0.212	0.314	0.199	0.180	0.176
	TVW	0.401	0.388	0.189	0.126	0.314	0.148	0.227	0.179
FRAME: I 	UW	3.279	3.270	3.279	3.270	2.859	2.859	2.865	2.859
	SHGC	0.463	0.419	0.305	0.246	0.370	0.231	0.207	0.202
	TVW	0.487	0.471	0.230	0.153	0.382	0.180	0.276	0.218
FRAME: J 	UW	3.175	3.175	3.175	3.175	2.678	2.678	2.685	2.678
	SHGC	0.535	0.482	0.349	0.279	0.425	0.261	0.234	0.228
	TVW	0.574	0.555	0.270	0.181	0.449	0.211	0.324	0.256
FRAME: K 	UW	3.126	3.122	3.126	3.122	2.603	2.603	2.610	2.603
	SHGC	0.555	0.500	0.361	0.289	0.440	0.270	0.241	0.235
	TVW	0.597	0.578	0.281	0.188	0.468	0.220	0.338	0.267
AFRC Lab Fenestration Performance Report						1/02/2018	B-19		

Windows are assessed for performance in four different ways.

U - value , Solar Heat Gain Coefficient , Visible Transmittance , Air Infiltration

Uw U-value measures how well a product prevents heat from escaping the building in winter and entering the building in summer. The lower the U-value (Uw), the better the thermal efficiency.


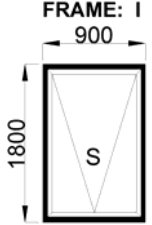
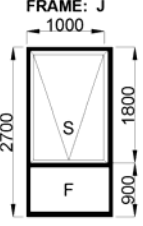
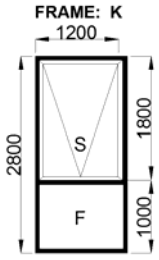
SHGC Solar Heat Gain Coefficient, measures how well a product blocks heat from the sun's rays. SHGC is expressed as a number between 0 and 1. The lower the SHGC, the better a product is at blocking unwanted heat gain.

Twv Visible Transmittance (Twv) measures how much light comes through a window. Twv is expressed as a number between 0 and 1. The higher the number the more daylight will enter a room.

AI Air Infiltration (AI) measures how much outside air leaks into the building through the window. The Lower the AI the better. An AI of 0 is only possible with fixed windows.

PERFORMANCE TEST SPECIFICATIONS

THERMAL ASSESSMENT

PATH Thermal Break	GLASS SELECTION CHART - B20									
		6mm Energy Tech Clear 12mm Air 6mm Clear	6mm SolTech (#2) Neutral 12mm Air 6mm Clear PerformanceE	6mm SolTech Grey 12mm Air 6mm Clear PerformanceE	8.76mm Clear Laminated 12mm Argon 6mm Clear Performance	8.76mm Grey Laminated 12mm Argon 6mm Clear Performance	8.38mm Comfort+ Neutral 59 12mm Argon 6mm Clear	8.38mm Comfort+ Blue 44 12mm Argon 6mm Clear		
Awning Sash										
100 x 55 Frame Double Glazing										
50mm Sash										
FRAME: H 	UW	3.051	2.950	2.941	2.803	2.803	3.051	3.047		
	SHGC	0.342	0.207	0.160	0.257	0.191	0.242	0.184		
	TVW	0.371	0.247	0.186	0.340	0.211	0.266	0.216		
FRAME: I 	UW	2.804	2.676	2.665	2.495	2.495	2.807	2.799		
	SHGC	0.404	0.240	0.183	0.300	0.221	0.282	0.213		
	TVW	0.451	0.300	0.226	0.412	0.256	0.323	0.263		
FRAME: J 	UW	2.614	2.462	1.459	2.253	2.251	2.620	2.618		
	SHGC	0.465	0.272	0.206	0.343	0.250	0.322	0.240		
	TVW	0.530	0.353	0.266	0.485	0.301	0.380	0.309		
FRAME: K 	UW	2.535	2.375	2.371	2.157	2.155	2.542	2.538		
	SHGC	0.482	0.281	0.212	0.355	0.258	0.333	0.248		
	TVW	0.553	0.368	0.277	0.506	0.314	0.396	0.322		
AFRC Lab Fenestration Performance Report						1/02/2018		B-20		

Windows are assessed for performance in four different ways.

U - value , Solar Heat Gain Coefficient , Visible Transmittance , Air Infiltration

Uw U-value measures how well a product prevents heat from escaping the building in winter and entering the building in summer. The lower the U-value (Uw), the better the thermal efficiency.

SHGC Solar Heat Gain Coefficient, measures how well a product blocks heat from the sun's rays. SHGC is expressed as a number between 0 and 1. The lower the SHGC, the better a product is at blocking unwanted heat gain.

TVw Visible Transmittance (Tvw) measures how much light comes through a window. Tvw is expressed as a number between 0 and 1. The higher the number the more daylight will enter a room.

AI Air Infiltration (AI) measures how much outside air leaks into the building through the window. The Lower the AI the better. An AI of 0 is only possible with fixed windows.

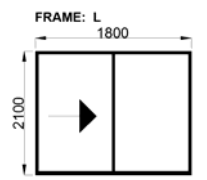
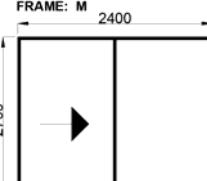
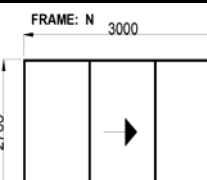
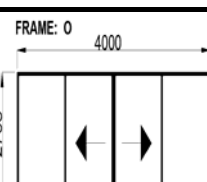
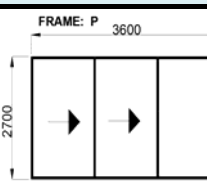
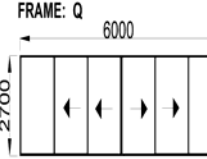
PERFORMANCE TEST SPECIFICATIONS

THERMAL ASSESSMENT

PATH Thermal Break		GLASS SELECTION CHART - B21								
		6mm Clear 12mm Air 6mm Clear	10mm Clear 12mm Air 6mm Clear	6mm Grey 12mm Air 6mm Clear	10mm Grey 12mm Air 6mm Clear	6mm Evantage Clear 12mm Air 6mm Clear	6mm Evantage Grey 12mm Air 6mm Clear	6mm Evantage S/Green 12mm Air 6mm Clear	6mm Evantage S/Blue 12mm Air 6mm Clear	
Sliding Door 100 x 55 Frame Double Glazing 2 Track		UW	3.265	3.241	3.265	3.241	2.762	2.762	2.769	2.762
		SHGC	0.531	0.478	0.345	0.274	0.420	0.257	0.229	0.223
		TVW	0.575	0.556	0.271	0.181	0.450	0.212	0.325	0.257
	UW	3.140	3.115	3.140	3.115	2.587	2.586	2.594	2.586	
	SHGC	0.572	0.514	0.370	0.294	0.452	0.275	0.245	0.239	
	TVW	0.623	0.602	0.293	0.196	0.488	0.229	0.352	0.278	
	UW	3.207	3.181	3.207	3.181	2.659	2.659	2.667	2.659	
	SHGC	0.570	0.513	0.370	0.294	0.451	0.275	0.245	0.238	
	TVW	0.620	0.600	0.292	0.195	0.486	0.229	0.351	0.277	
	UW	3.170	3.145	3.170	3.145	2.627	2.627	2.635	2.627	
	SHGC	0.564	0.507	0.365	0.290	0.446	0.272	0.242	0.236	
	TVW	0.614	0.593	0.289	0.193	0.481	0.226	0.347	0.274	
PATH Thermal Break		GLASS SELECTION CHART - B23								
Sliding Door 150 x 55 Frame Double Glazing 3 Track		UW	3.257	3.232	3.257	3.232	2.715	2.714	2.722	2.714
		SHGC	0.568	0.511	0.369	0.294	0.450	0.275	0.245	0.239
		TVW	0.616	0.595	0.290	0.194	0.482	0.227	0.348	0.275
	UW	3.303	3.275	3.303	3.275	2.753	2.752	2.760	2.752	
	SHGC	0.577	0.520	0.375	0.298	0.457	0.279	0.249	0.243	
	TVW	0.625	0.605	0.294	0.197	0.490	0.230	0.354	0.279	
AFRC Lab Fenestration Performance Report						1/02/2018		B-21-23		

PERFORMANCE TEST SPECIFICATIONS

THERMAL ASSESSMENT

PATH Thermal Break Sliding Door 100 x 55 Frame Double Glazing 2 Track		GLASS SELECTION CHART - B22							
		6mm Energy Tech Clear 12mm Air 6mm Clear	6mm SolTech (#2) Neutral 12mm Air 6mm Clear PerformatechE	6mm SolTech Grey 12mm Air 6mm Clear PerformatechE	8.76mm Clear Laminated 12mm Argon 6mm Clear Performance	8.76mm Grey Laminated 12mm Argon 6mm Clear Performance	8.38mm Comfort+ Neutral 59 12mm Argon 6mm Clear	8.38mm Comfort+ Blue 44 12mm Argon 6mm Clear	
	UW	2.697	2.542	2.520	2.322	2.322	2.694	2.680	
	SHGC	0.461	0.267	0.201	0.338	0.245	0.318	0.235	
	TVW	0.532	0.354	0.266	0.487	0.302	0.381	0.310	
	UW	2.514	2.344	2.323	2.107	2.107	2.515	2.500	
	SHGC	0.496	0.287	0.214	0.363	0.262	0.341	0.252	
	TVW	0.576	0.333	0.288	0.527	0.327	0.412	0.336	
	UW	2.587	2.419	2.397	2.182	2.182	2.587	2.572	
	SHGC	0.495	0.286	0.214	0.363	0.262	0.340	0.251	
	TVW	0.574	0.382	0.287	0.525	0.326	0.411	0.334	
	UW	2.556	2.390	2.368	2.155	2.155	2.556	2.542	
	SHGC	0.489	0.283	0.212	0.359	0.259	0.337	0.249	
	TVW	0.568	0.378	0.284	0.519	0.322	0.406	0.331	
PATH Thermal Break Sliding Door 150 x 55 Frame Double Glazing 3 Track		GLASS SELECTION CHART - B24							
		6mm Energy Tech Clear 12mm Air 6mm Clear	6mm SolTech (#2) Neutral 12mm Air 6mm Clear PerformatechE	6mm SolTech Grey 12mm Air 6mm Clear PerformatechE	8.76mm Clear Laminated 12mm Argon 6mm Clear Performance	8.76mm Grey Laminated 12mm Argon 6mm Clear Performance	8.38mm Comfort+ Neutral 59 12mm Argon 6mm Clear	8.38mm Comfort+ Blue 44 12mm Argon 6mm Clear	
	UW	2.501	2.477	2.455	2.243	2.243	2.639	2.629	
	SHGC	0.286	0.286	0.215	0.362	0.262	0.340	0.252	
	TVW	0.379	0.379	0.285	0.521	0.324	0.408	0.332	
	UW	2.681	2.512	2.487	2.272	2.272	2.671	2.663	
	SHGC	0.501	0.291	0.218	0.368	0.266	0.346	0.256	
	TVW	0.578	0.385	0.289	0.529	0.329	0.414	0.337	
AFRC Lab Fenestration Performance Report						1/02/2018	B-22-24		