

Product Comparison Chart

Customer: TYPICAL LOW-E GLASS

Project: 1" IG & 9/16" LAMINATED

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" Clear AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	79	15	15	50	61	12	0.47	0.50	0.81	0.70	169	1.13
	OB: 1/4" Guardian SunGuard® SuperNeutral® 68 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	67	11	12	30	32	32	0.29	0.27	0.43	0.37	90	1.81
	OB: 1/4" PPG Solarban® 60 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	70	11	12	19	33	29	0.29	0.27	0.44	0.38	92	1.84
	OB: 1/4" Pilkington Energy Advantage™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	73	16	17	38	52	14	0.33	0.33	0.71	0.62	147	1.18
	OB: 1/4" PPG Sungate® 500 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	74	17	17	42	52	14	0.35	0.35	0.71	0.62	147	1.19
	OB: 1/4" Clear AS: 1/2 inch (Air Fill) IB: 5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Clear	1.019	79	15	15	<1	56	11	0.46	0.49	0.79	0.68	165	1.16
	OB: 1/4" Guardian SunGuard® SuperNeutral® 68 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Clear	1.017	67	11	12	<1	31	32	0.29	0.27	0.43	0.37	90	1.81
	OB: 1/4" PPG Solarban® 60 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Clear	1.019	70	11	12	<1	32	29	0.29	0.27	0.44	0.38	91	1.84

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" Pilkington Energy Advantage™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8"	1.019	73	16	16	<1	50	13	0.32	0.32	0.71	0.61	146	1.20
	OB: 1/4" PPG Sungate® 500 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Clear	1.019	73	16	17	<1	49	13	0.34	0.34	0.70	0.61	145	1.20
	9/16" Laminate - 1/4" Clear - 0.060" Clear PVB - 1/4" Clear	0.532	86	8	8	<1	65	6	0.94	0.86	0.85	0.74	183	1.16
	9/16" Laminate - 1/4" Guardian SunGuard® SuperNeutral® 68 on Clear Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.502	67	11	11	<1	29	33	0.95	0.87	0.48	0.41	107	1.63
	9/16" Laminate - 1/4" PPG Solarban® 60 on Clear Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.500	72	9	10	<1	33	28	0.95	0.87	0.52	0.45	116	1.60
	9/16" Laminate - 1/4" Clear - 0.060" Clear PVB - 1/4" Pilkington Energy Advantage™ Low-E #4	0.507	79	10	11	<1	54	7	0.61	0.47	0.71	0.61	148	1.30
	9/16" Laminate - 1/4" Clear - 0.060" Clear PVB - 1/4" PPG Sungate® 500 on Clear Low-E #4	0.508	79	10	11	<1	54	8	0.64	0.51	0.71	0.61	149	1.30

NOTES:

GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 5.2 program (version 5.2.17) with Environmental Conditions set at NFRC 100-2001. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 27.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 27.0; 2. LBNL Optics 5 (version 5.1 Maintenance Pack 2); 3. Vendor supplied spectral data files; 4. Vendor supplied data.

Glass colors represented herein are included only for the general purpose of glass selection. Accurate representation of optical properties, including color and reflectivity, can only be achieved by viewing glass mock-ups in conditions that are similar to the actual job. User assumes all responsibility and liability for glass color selection. Thermal values are in Imperial units.

Product Comparison Chart

Customer: IG GLASS CLEAR LOW-E

Project: LOW-E COMPARISON CHART

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" PPG Solarban® 60 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	70	11	12	19	33	29	0.29	0.27	0.44	0.38	92	1.84
	OB: 1/4" PPG Solarban® 67 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	54	19	16	11	24	34	0.29	0.27	0.34	0.29	71	1.86
	OB: 1/4" PPG Solarban® 70XL Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	64	12	13	6	25	52	0.28	0.26	0.32	0.27	67	2.37
	OB: 1/4" PPG Solarban® R100 on Clear Neutral Reflective Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	42	32	14	12	19	41	0.29	0.27	0.27	0.23	57	1.83
	OB: 1/4" PPG Solarban® z50 Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	51	8	11	14	26	23	0.29	0.27	0.36	0.31	76	1.65
	OB: 1/4" PPG Sungate® 500 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	74	17	17	42	52	14	0.35	0.35	0.71	0.62	147	1.19
	OB: 1/4" Guardian SunGuard® AG 43 on Clear Radiant Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	40	30	15	23	23	33	0.31	0.29	0.33	0.29	71	1.38
	OB: 1/4" Guardian SunGuard® AG 50 on Clear Radiant Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	50	28	19	26	27	36	0.30	0.28	0.38	0.33	80	1.52

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" Guardian SunGuard® Light Blue 63 on Clear Low-E #2 AS: 1/2 inch (Air Fill)	0.944	61	15	13	40	42	15	0.34	0.35	0.59	0.51	122	1.20
	OB: 1/4" Guardian SunGuard® Neutral 40 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	40	20	12	27	24	22	0.33	0.32	0.36	0.32	78	1.25
	OB: 1/4" Guardian SunGuard® Neutral 50 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	49	16	11	31	31	19	0.33	0.32	0.44	0.39	93	1.26
	OB: 1/4" Guardian SunGuard® Neutral 61 on Clear Radiant Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	60	20	15	27	33	31	0.30	0.29	0.45	0.39	95	1.54
	OB: 1/4" Guardian SunGuard® SNR 43 on Clear Radiant Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	43	27	14	17	18	42	0.29	0.27	0.26	0.23	56	1.87
	OB: 1/4" Guardian SunGuard® SNX 62/27 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	61	11	12	6	23	39	0.29	0.27	0.31	0.27	65	2.26
	OB: 1/4" Guardian SunGuard® SuperNeutral® 54 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	53	13	18	15	23	33	0.29	0.27	0.32	0.28	68	1.89
	OB: 1/4" Guardian SunGuard® SuperNeutral® 62 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	62	11	14	14	26	33	0.29	0.27	0.36	0.31	75	2.00

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" Guardian SunGuard® SuperNeutral® 68 on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.944	67	11	12	30	32	32	0.29	0.27	0.43	0.37	90	1.81
	OB: 1/4" Pilkington Clear Eclipse Advantage™ Radiant Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.956	60	29	32	25	46	21	0.35	0.35	0.63	0.55	132	1.09
	OB: 1/4" Pilkington Energy Advantage™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.946	73	16	17	38	52	14	0.33	0.33	0.71	0.62	147	1.18
	OB: 1/4" Pilkington Solar E™ on Clear Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Clear	0.956	54	11	16	35	35	9	0.33	0.33	0.52	0.45	108	1.20

NOTES:

GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 5.2 program (version 5.2.17) with Environmental Conditions set at NFRC 100-2001. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 27.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 27.0; 2. LBNL Optics 5 (version 5.1 Maintenance Pack 2); 3. Vendor supplied spectral data files; 4. Vendor supplied data.

Glass colors represented herein are included only for the general purpose of glass selection. Accurate representation of optical properties, including color and reflectivity, can only be achieved by viewing glass mock-ups in conditions that are similar to the actual job. User assumes all responsibility and liability for glass color selection. Thermal values are in Imperial units.

Product Comparison Chart

Customer: LOW IRON-LOW E IG UNITS

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" PPG Solarban® 60 on Starphire® Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" PPG Starphire®	0.946	74	11	12	20	38	43	0.29	0.27	0.46	0.40	96	1.85
	OB: 1/4" PPG Solarban® 72 on Starphire® Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" PPG Starphire®	0.946	71	13	13	9	28	53	0.29	0.27	0.34	0.30	73	2.37
	OB: 1/4" PPG Solarban® R100 on Starphire® Neutral Reflective Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" PPG Starphire®	0.946	44	33	14	16	21	57	0.29	0.27	0.27	0.23	58	1.91
	OB: 1/4" Guardian SunGuard® SNR 43 on UltraWhite™ Radiant Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Guardian UltraWhite™	0.960	44	28	14	18	20	50	0.29	0.27	0.26	0.23	56	1.91
	OB: 1/4" Guardian SunGuard® SNX 62/27 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Guardian UltraWhite™	0.960	63	11	12	7	24	48	0.29	0.27	0.31	0.27	65	2.33
	OB: 1/4" Guardian SunGuard® SuperNeutral® 54 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Guardian UltraWhite™	0.960	55	13	18	17	25	40	0.29	0.27	0.33	0.28	69	1.96
	OB: 1/4" Guardian SunGuard® SuperNeutral® 62 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Guardian UltraWhite™	0.960	64	11	14	15	28	40	0.29	0.27	0.36	0.32	77	2.00

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" Guardian SunGuard® SuperNeutral® 68 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 1/4" Guardian UltraWhite™	0.960	69	11	12	32	36	39	0.29	0.27	0.44	0.39	93	1.77

NOTES:

GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 5.2 program (version 5.2.17) with Environmental Conditions set at NFRC 100-2001. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 24.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 24.0; 2. LBNL Optics 5 (version 5.1 Maintenance Pack 2); 3. Vendor supplied spectral data files; 4. Vendor supplied data.

Glass colors represented herein are included only for the general purpose of glass selection. Accurate representation of optical properties, including color and reflectivity, can only be achieved by viewing glass mock-ups in conditions that are similar to the actual job. User assumes all responsibility and liability for glass color selection. Thermal values are in Imperial units.

Product Comparison Chart

Customer: LOW IRON-LOW-E TEMP-LAMI IG UNITS

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" PPG Solarban® 60 on Starphire® Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.229	74	11	12	<1	36	43	0.28	0.27	0.46	0.40	95	1.85
	OB: 1/4" PPG Solarban® 72 on Starphire® Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.229	71	13	13	<1	27	53	0.28	0.26	0.34	0.30	72	2.37
	OB: 1/4" PPG Solarban® R100 on Starphire® Neutral Reflective Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.229	43	33	14	<1	21	57	0.28	0.27	0.27	0.23	57	1.87
	OB: 1/4" Guardian SunGuard® SNR 43 on UltraWhite™ Radiant Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.236	44	28	14	<1	19	50	0.28	0.26	0.26	0.23	56	1.91
	OB: 1/4" Guardian SunGuard® SNX 62/27 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.236	63	11	12	<1	24	48	0.28	0.26	0.30	0.26	65	2.42
	OB: 1/4" Guardian SunGuard® SuperNeutral® 54 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.236	55	13	18	<1	24	40	0.28	0.27	0.32	0.28	69	1.96

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	OB: 1/4" Guardian SunGuard® SuperNeutral® 62 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.236	64	11	14	<1	28	40	0.28	0.26	0.36	0.31	76	2.06
	OB: 1/4" Guardian SunGuard® SuperNeutral® 68 on UltraWhite™ Low-E #2 AS: 1/2 inch (Air Fill) IB: 9/16" Laminate - 1/4" PPG Starphire® - 0.060" Clear PVB - 1/4" PPG Starphire®	1.236	70	11	12	<1	34	39	0.28	0.27	0.44	0.38	92	1.84

NOTES:

GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 5.2 program (version 5.2.17) with Environmental Conditions set at NFRC 100-2001. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 24.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 24.0; 2. LBNL Optics 5 (version 5.1 Maintenance Pack 2); 3. Vendor supplied spectral data files; 4. Vendor supplied data.

Glass colors represented herein are included only for the general purpose of glass selection. Accurate representation of optical properties, including color and reflectivity, can only be achieved by viewing glass mock-ups in conditions that are similar to the actual job. User assumes all responsibility and liability for glass color selection. Thermal values are in Imperial units.

Product Comparison Chart

Customer: LAMINATED GLASS- CLEAR

Project: LOW-E & UNCOATED

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	9/16" Laminate - 1/4" Oldcastle BuildingEnvelope™ SunGlass® Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.506	47	10	16	<1	18	30	0.95	0.86	0.40	0.35	93	1.34
	9/16" Laminate - 1/4" PPG Solarban® 60 on Clear Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.500	72	9	10	<1	33	28	0.95	0.87	0.52	0.45	116	1.60
	9/16" Laminate - 1/4" PPG Solarban® 70XL Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.503	61	14	16	<1	23	50	0.95	0.87	0.36	0.31	84	1.97
	9/16" Laminate - 1/4" PPG Solarban® R100 on Clear Neutral Reflective Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.506	42	28	11	<1	17	42	0.95	0.86	0.35	0.30	82	1.40
	9/16" Laminate - 1/4" PPG Sungate® 500 on Clear Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.508	81	8	8	<1	53	9	0.95	0.87	0.75	0.65	162	1.25
	9/16" Laminate - 1/4" Guardian SunGuard® Light Blue 63 on Clear Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.502	65	10	6	<1	43	14	0.95	0.87	0.64	0.56	140	1.16
	9/16" Laminate - 1/4" Guardian SunGuard® SuperNeutral® 62 on Clear Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.502	62	12	13	<1	25	34	0.95	0.86	0.42	0.36	96	1.72
	9/16" Laminate - 1/4" Guardian SunGuard® SuperNeutral® 68 on Clear Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.502	67	11	11	<1	29	33	0.95	0.87	0.48	0.41	107	1.63
	9/16" Laminate - 1/4" Pilkington Energy Advantage™ Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.507	81	10	9	<1	55	10	0.95	0.87	0.76	0.66	164	1.23
	9/16" Laminate - 1/4" Pilkington Solar E™ Low-E #2 - 0.060" Clear PVB - 1/4" Clear	0.518	65	8	8	<1	41	8	0.95	0.86	0.66	0.57	145	1.14
	9/16" Laminate - 1/4" Clear - 0.060" Clear PVB - 1/4" PPG Sungate® 500 on Clear Low-E #4	0.508	79	10	11	<1	54	8	0.64	0.51	0.71	0.61	149	1.30
	9/16" Laminate - 1/4" Clear - 0.060" Clear PVB - 1/4" Pilkington Energy Advantage™ Low-E #4	0.507	79	10	11	<1	54	7	0.61	0.47	0.71	0.61	148	1.30
	9/16" Laminate - 1/4" Clear - 0.060" Clear PVB - 1/4" Pilkington Solar E™ Low-E #4	0.518	58	7	9	<1	36	6	0.61	0.48	0.55	0.47	117	1.23

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	7/16" Laminate - 3/16" PPG Solarban® 60 on Clear Low-E #2 - 0.060" Clear PVB - 3/16" Clear	0.428	73	9	10	<1	34	30	0.96	0.87	0.52	0.45	116	1.62
	7/16" Laminate - 3/16" PPG Solarban® 70XL Low-E #2 - 0.060" Clear PVB - 3/16" Clear	0.428	60	14	16	<1	22	37	0.96	0.87	0.41	0.35	93	1.71
	7/16" Laminate - 3/16" PPG Sungate® 500 on Clear Low-E #2 - 0.060" Clear PVB - 3/16" Clear	0.428	83	9	9	<1	56	9	0.96	0.87	0.77	0.67	166	1.24
	7/16" Laminate - 3/16" Guardian SunGuard® SuperNeutral® 68 on Clear Low-E #2 - 0.060" Clear PVB - 3/16" Clear	0.424	68	11	11	<1	30	35	0.96	0.87	0.47	0.41	107	1.66
	7/16" Laminate - 3/16" Pilkington Energy Advantage™ Low-E #2 - 0.060" Clear PVB - 3/16" Clear	0.430	83	10	10	<1	58	10	0.96	0.87	0.78	0.67	168	1.24
	7/16" Laminate - 3/16" Pilkington Solar E™ Low-E #2 - 0.060" Clear PVB - 3/16" Clear	0.429	66	8	8	<1	44	8	0.96	0.87	0.68	0.59	148	1.12
	7/16" Laminate - 3/16" Clear - 0.060" Clear PVB - 3/16" PPG Sungate® 500 on Clear Low-E #4	0.428	81	11	11	<1	56	8	0.65	0.52	0.73	0.63	154	1.29
	7/16" Laminate - 3/16" Clear - 0.060" Clear PVB - 3/16" Pilkington Energy Advantage™ Low-E #4	0.430	81	11	12	<1	57	8	0.62	0.48	0.73	0.63	153	1.29
	7/16" Laminate - 3/16" Clear - 0.060" Clear PVB - 3/16" Pilkington Solar E™ Low-E #4	0.429	58	8	9	<1	38	6	0.62	0.48	0.56	0.48	119	1.21
	5/16" Laminate - 1/8" PPG Solarban® 60 on Clear Low-E #2 - 0.060" Clear PVB - 1/8" Clear	0.309	74	9	10	<1	35	34	0.98	0.89	0.52	0.45	116	1.64
	5/16" Laminate - 1/8" PPG Solarban® 70XL Low-E #2 - 0.060" Clear PVB - 1/8" Clear	0.305	60	13	15	<1	23	42	0.98	0.89	0.39	0.33	90	1.82
	5/16" Laminate - 1/8" PPG Sungate® 500 on Clear Low-E #2 - 0.060" Clear PVB - 1/8" Clear	0.309	84	9	9	<1	61	10	0.98	0.89	0.80	0.70	173	1.20
	5/16" Laminate - 1/8" Guardian SunGuard® SuperNeutral® 68 on Clear Low-E #2 - 0.060" Clear PVB - 1/8" Clear	0.294	69	11	11	<1	31	38	0.98	0.89	0.47	0.40	106	1.73
	5/16" Laminate - 1/8" Pilkington Energy Advantage™ Low-E #2 - 0.060" Clear PVB - 1/8" Clear	0.299	84	10	10	<1	63	11	0.98	0.89	0.82	0.71	176	1.18
	5/16" Laminate - 1/8" Pilkington Solar E™ Low-E #2 - 0.060" Clear PVB - 1/8" Clear	0.306	67	8	8	<1	47	8	0.98	0.89	0.71	0.61	154	1.10

Color	Product Description - Performance Characteristics	Thickness (inches)	Visible Trans. (%)	Visible Refl. Out (%)	Visible Refl. In (%)	UV Trans. (%)	Solar Trans. (%)	Solar Refl. Out (%)	Winter U-factor	Summer U-factor	Shading Coeff.	Solar Heat Gain Coeff.	Relative Heat Gain	Light to Solar Gain
	5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" PPG Sungate® 500 on Clear Low-E #4	0.309	82	11	11	<1	61	9	0.66	0.52	0.77	0.67	162	1.22
	5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Pilkington Energy Advantage™ Low-E #4	0.299	81	11	11	<1	61	9	0.62	0.48	0.76	0.66	159	1.23
	5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Pilkington Solar E™ Low-E #4	0.306	59	7	9	<1	40	6	0.63	0.49	0.58	0.50	124	1.18
	9/16" Laminate - 1/4" Clear - 0.060" Clear PVB - 1/4" Clear	0.532	86	8	8	<1	65	6	0.94	0.86	0.85	0.74	183	1.16
	7/16" Laminate - 3/16" Clear - 0.060" Clear PVB - 3/16" Clear	0.428	87	8	8	<1	64	7	0.96	0.87	0.84	0.73	181	1.19
	5/16" Laminate - 1/8" Clear - 0.060" Clear PVB - 1/8" Clear	0.296	88	8	8	<1	71	7	0.98	0.89	0.89	0.77	191	1.14

NOTES:

GlasSelect® calculates center of glass performance data using the Lawrence Berkeley National Laboratory (LBNL) Window 5.2 program (version 5.2.17) with Environmental Conditions set at NFRC 100-2001. Gas Library ID#1 (Air) is used for Insulating Glass units with air. Gas Library ID#9 (10% Air/90% Argon) is used for Insulating Glass units with argon. Monolithic glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 27.0; 2. Vendor supplied spectral data files. Laminated glass data is from the following sources: 1. LBNL International Glazing Database (IGDB) version 27.0; 2. LBNL Optics 5 (version 5.1 Maintenance Pack 2); 3. Vendor supplied spectral data files; 4. Vendor supplied data.

Glass colors represented herein are included only for the general purpose of glass selection. Accurate representation of optical properties, including color and reflectivity, can only be achieved by viewing glass mock-ups in conditions that are similar to the actual job. User assumes all responsibility and liability for glass color selection. Thermal values are in Imperial units.