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VISTA FILMS ON VARIOUS GLASS TYPES

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CHART 1: Single-Pane, 1/8 Inch (3mm), Clear



	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
														(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	83	8	9	90	8	8	29	1.03	1.00	14	0.86	0.84	1.05	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	30	20	50	33	22	19	99.9	1.02	0.53	54	0.46	0.84	0.72	47%	1%	63%
V45 SR CDF	39	15	46	43	17	14	99.9	1.04	0.62	47	0.53	0.84	0.81	38%	-1%	52%
V58 SR CDF	54	12	34	59	13	9	99.9	1.03	0.75	35	0.65	0.84	0.91	25%	0%	34%
DUAL REFLECTIVES																
V14 SR CDF	8	48	44	11	52	24	99.9	1.00	0.25	79	0.21	0.80	0.52	75%	3%	88%
V18 SR CDF	15	38	47	20	39	20	99.9	0.96	0.34	71	0.29	0.68	0.69	66%	7%	78%
V28 SR CDF (PS8)	19	34	47	26	37	22	99.9	1.00	0.38	68	0.32	0.81	0.81	62%	3%	71%
V28 SR PS8	22	31	47	27	32	22	99.9	1.03	0.42	64	0.36	0.81	0.75	58%	0%	70%
V38 SR CDF	31	24	45	40	23	16	99.9	1.02	0.52	55	0.45	0.78	0.89	48%	1%	56%
V38 SR PS8	30	25	45	38	26	19	99.9	0.99	0.51	56	0.44	0.84	0.86	49%	4%	58%
V48 SR CDF	39	14	47	46	14	10	99.9	1.03	0.62	47	0.53	0.73	0.87	38%	0%	49%
V33 BR SR CDF	23	43	34	36	25	18	99.9	0.98	0.38	68	0.32	0.78	1.13	62%	5%	60%
HARMONY SERIES																
V31 SR CDF	20	19	61	36	7	8	99.9	0.91	0.43	64	0.36	0.60	1.00	57%	12%	60%
V40 SR CDF	35	19	46	44	8	9	99.9	0.94	0.55	53	0.47	0.70	0.94	45%	9%	51%
V41 SR CDF	30	20	50	47	7	7	99.9	0.94	0.50	57	0.43	0.70	1.09	50%	9%	48%
V50 SR CDF	39	19	42	51	8	8	99.9	0.97	0.59	49	0.51	0.70	1.00	41%	6%	43%
V51 SR CDF	34	23	43	54	8	8	99.9	0.91	0.53	54	0.46	0.61	1.17	47%	12%	40%
LOW-E SERIES																
VE35 SR CDF	20	46	34	31	42	39	99.9	0.76	0.32	73	0.27	0.33	1.15	68%	26%	66%
VE50 SR CDF	35	32	33	49	25	23	99.9	0.80	0.49	58	0.42	0.36	1.17	51%	22%	46%
EXTERIOR																
VRE20 ER HPR	10	65	25	14	65	61	99.9	1.04	0.20	83	0.17	0.70	0.82	80%	-1%	84%
VNE35 ER HPR	33	18	49	38	19	15	99.9	1.04	0.56	52	0.48	0.83	0.79	44%	-1%	58%
ENERLOGIC																
VEP35 SR CDF	19	49	32	33	48	30	99	0.60	0.28	76	0.24	0.07	1.38	72%	42%	63%
VEP70 SR CDF	46	21	33	70	8	4	99	0.61	0.59	49	0.51	0.09	1.37	41%	41%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	33	25	42	62	9	9	99.9	0.92	0.52	55	0.45	0.67	1.38	48%	11%	31%
VS61 SR CDF	43	29	28	61	20	20	99.9	0.92	0.58	50	0.50	0.67	1.22	42%	11%	32%
VS70 SR CDF	39	26	35	70	8	8	99.9	0.90	0.56	52	0.48	0.66	1.46	44%	13%	22%
VS80BL SR CDF	40	6	54	76	9	9	99.9	1.03	0.65	44	0.56	0.82	1.36	35%	0%	16%

CHART 2: Single-Pane, 1/4 Inch (6mm), Clear



														Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorptance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	77	7	16	88	8	8	38	1.03	0.94	18	0.82	0.84	1.07	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	27	17	56	33	21	19	99.9	1.02	0.52	56	0.44	0.84	0.75	45%	1%	63%
V45 SR CDF	35	13	52	42	16	14	99.9	1.03	0.60	48	0.52	0.84	0.81	36%	0%	52%
V58 SR CDF	49	10	41	58	12	9	99.9	1.03	0.71	39	0.61	0.84	0.95	24%	0%	34%
DUAL REFLECTIVES																
V14 SR CDF	8	40	52	11	50	24	99.9	1.00	0.28	77	0.23	0.80	0.48	70%	3%	88%
V18 SR CDF	14	31	55	20	37	20	99.9	0.96	0.36	69	0.31	0.68	0.65	62%	7%	77%
V28 SR CDF (PS8)	17	29	54	25	35	22	99.9	0.99	0.39	67	0.33	0.78	0.76	59%	4%	72%
V38 SR CDF (PS8)	29	20	51	39	22	16	99.9	1.02	0.52	56	0.44	0.78	0.89	45%	1%	56%
V48 SR CDF	35	12	53	45	14	10	99.9	1.03	0.60	48	0.52	0.73	0.87	36%	0%	49%
V33 BR SR CDF	21	34	45	35	24	18	99.9	0.98	0.40	66	0.34	0.78	1.03	57%	5%	60%
HARMONY SERIES																
V31 SR CDF	19	15	66	35	7	8	99.9	0.91	0.43	63	0.37	0.60	0.95	54%	12%	60%
V40 SR CDF	31	15	54	43	8	9	99.9	0.94	0.54	54	0.46	0.70	0.93	43%	9%	51%
V41 SR CDF	27	16	57	46	7	7	99.9	0.94	0.50	57	0.43	0.70	1.07	47%	9%	48%
V50 SR CDF	36	15	49	50	8	8	99.9	0.97	0.57	51	0.49	0.70	1.02	39%	6%	43%
V51 SR CDF	32	18	50	53	7	8	99.9	0.91	0.53	55	0.45	0.61	1.18	44%	12%	40%
LOW-E SERIES																
VE35 SR CDF	19	37	44	30	40	39	99.9	0.76	0.33	72	0.28	0.33	1.07	65%	26%	66%
VE50 SR CDF	32	26	42	48	24	23	99.9	0.80	0.49	58	0.42	0.36	1.14	48%	22%	45%
EXTERIOR																
VRE20 ER HPR	9	65	26	13	65	59	99.9	1.02	0.20	83	0.17	0.70	0.76	79%	1%	85%
VNE35 ER HPR	31	18	51	37	19	15	99.9	1.02	0.54	54	0.46	0.83	0.80	43%	1%	58%
ENERGLOGIC																
VEP35 SR CDF	18	42	40	31	46	28	99	0.59	0.28	76	0.24	0.07	1.29	70%	43%	65%
VEP70 SR CDF	43	18	39	68	8	4	99	0.60	0.57	51	0.49	0.09	1.39	39%	42%	23%
SPECTRALLY SELECTIVE																
VS60 SR CDF	31	19	50	60	8	9	99.9	0.92	0.52	55	0.45	0.67	1.33	45%	11%	32%
VS61 SR CDF	43	21	36	62	18	19	99.9	0.92	0.61	47	0.53	0.67	1.17	35%	11%	30%
VS70 SR CDF	36	20	44	69	8	8	99.9	0.90	0.56	52	0.48	0.66	1.44	40%	13%	22%
VS80BL SR CDF	38	6	56	75	8	8	99.9	1.03	0.63	46	0.54	0.82	1.39	33%	0%	15%

**CHART 3: Single-Pane, 1/8
Inch (3mm), Grey**



	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
														(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	58	6	36	60	6	7	63	1.04	0.79	32	0.68	0.84	0.88	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	20	12	68	22	12	19	99.9	1.02	0.49	58	0.42	0.84	0.52	38%	2%	63%
V45 SR CDF	27	9	64	29	10	13	99.9	1.04	0.55	53	0.47	0.84	0.62	30%	0%	52%
V58 SR CDF	37	8	55	40	8	8	99.9	1.03	0.63	46	0.54	0.84	0.74	20%	1%	33%
DUAL REFLECTIVES																
V14 SR CDF	6	25	69	7	26	24	99.9	1.00	0.32	73	0.27	0.80	0.26	59%	4%	88%
V18 SR CDF	10	20	70	13	20	20	99.9	0.96	0.37	68	0.32	0.68	0.41	53%	8%	78%
V28 SR CDF (PS8)	13	18	69	17	19	22	99.9	1.01	0.39	67	0.33	0.78	0.52	51%	3%	72%
V38 SR CDF (PS8)	21	13	66	26	13	16	99.9	1.02	0.48	59	0.41	0.78	0.63	39%	2%	57%
V48 SR CDF	27	9	64	31	9	10	99.9	1.03	0.54	53	0.47	0.73	0.66	32%	1%	48%
V33 BR SR CDF	15	22	63	24	14	18	99.9	0.98	0.39	66	0.34	0.78	0.71	51%	6%	60%
HARMONY SERIES																
V31 SR CDF	14	11	75	24	6	8	99.9	0.91	0.40	66	0.34	0.60	0.71	49%	13%	60%
V40 SR CDF	23	11	66	29	6	8	99.9	0.94	0.48	59	0.41	0.70	0.71	39%	10%	52%
V41 SR CDF	20	12	68	32	6	7	99.9	0.94	0.46	61	0.39	0.70	0.82	42%	10%	47%
V50 SR CDF	27	11	62	34	6	8	99.9	0.97	0.51	56	0.44	0.70	0.77	35%	7%	43%
V51 SR CDF	23	13	64	36	6	7	99.9	0.91	0.48	59	0.41	0.61	0.88	39%	13%	40%
LOW-E SERIES																
VE35 SR CDF	14	24	62	20	21	39	99.9	0.76	0.32	73	0.27	0.33	0.74	59%	27%	67%
VE50 SR CDF	24	17	59	33	14	23	99.9	0.80	0.44	63	0.37	0.36	0.89	44%	23%	45%
EXTERIOR																
VRE20 ER HPR	7	65	28	9	65	30	99.9	1.04	0.18	85	0.15	0.70	0.60	77%	0%	85%
VNE35 ER HPR	23	18	59	25	18	9	99.9	1.04	0.48	59	0.41	0.83	0.61	39%	0%	58%
ENERLOGIC																
VEP35 SR CDF	13	26	61	21	24	28	99	0.60	0.27	77	0.23	0.07	0.91	66%	42%	65%
VEP70 SR CDF	32	13	55	47	6	3	99	0.61	0.48	59	0.41	0.09	1.15	40%	41%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	23	14	63	41	6	8	99.9	0.92	0.47	60	0.40	0.67	1.03	41%	12%	32%
VS61 SR CDF	32	15	53	42	11	18	99.9	0.92	0.54	54	0.46	0.67	0.91	32%	12%	30%
VS70 SR CDF	26	14	60	47	6	7	99.9	0.90	0.49	58	0.42	0.66	1.12	38%	13%	22%
VS80BL SR CDF	28	5	67	51	6	7	99.9	1.03	0.55	53	0.47	0.82	1.09	30%	1%	15%

**CHART 4: Single-Pane, 1/4
Inch (6mm), Grey**



	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorptance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
														(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	42	5	53	44	6	6	76	1.03	0.67	42	0.58	0.84	0.76	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	15	8	77	16	9	18	99.9	1.02	0.46	61	0.39	0.84	0.41	31%	1%	64%
V45 SR CDF	19	7	74	21	8	13	99.9	1.03	0.50	57	0.43	0.84	0.49	25%	0%	52%
V58 SR CDF	27	6	67	29	7	8	99.9	1.03	0.56	52	0.48	0.84	0.60	16%	0%	34%
DUAL REFLECTIVES																
V14 SR CDF	4	15	81	5	16	24	99.9	1.00	0.35	71	0.29	0.80	0.17	48%	3%	89%
V18 SR CDF	7	13	80	10	13	20	99.9	0.96	0.38	68	0.32	0.68	0.31	43%	7%	77%
V28 SR CDF (PS8)	9	12	79	13	12	22	99.9	0.99	0.38	67	0.33	0.78	0.39	43%	4%	70%
V38 SR CDF (PS8)	15	9	76	19	9	15	99.9	1.02	0.45	61	0.39	0.78	0.49	33%	1%	57%
V48 SR CDF	19	7	74	23	7	9	99.9	1.03	0.50	57	0.43	0.73	0.53	25%	0%	48%
V33 BR SR CDF	11	14	75	18	10	18	99.9	0.98	0.39	66	0.34	0.78	0.53	42%	5%	59%
HARMONY SERIES																
V31 SR CDF	10	8	82	18	5	8	99.9	0.91	0.39	67	0.33	0.60	0.55	42%	12%	59%
V40 SR CDF	17	8	75	22	5	8	99.9	0.94	0.45	62	0.38	0.70	0.58	33%	9%	50%
V41 SR CDF	15	8	77	23	5	7	99.9	0.94	0.43	64	0.36	0.70	0.64	36%	9%	48%
V50 SR CDF	19	8	73	25	5	7	99.9	0.97	0.47	60	0.40	0.70	0.63	30%	6%	43%
V51 SR CDF	17	9	74	27	5	7	99.9	0.91	0.44	62	0.38	0.61	0.71	34%	12%	39%
LOW-E SERIES																
VE35 SR CDF	10	15	75	15	14	39	99.9	0.76	0.32	73	0.27	0.33	0.56	52%	26%	66%
VE50 SR CDF	17	11	72	24	10	22	99.9	0.80	0.4	66	0.34	0.36	0.71	40%	22%	45%
EXTERIOR																
VRE20 ER HPR	5	65	30	7	65	18	99.9	1.02	0.16	86	0.14	0.70	0.50	76%	1%	84%
VNE35 ER HPR	17	17	66	19	18	7	99.9	1.02	0.43	63	0.37	0.83	0.51	36%	1%	57%
ENERLOGIC																
VEP35 SR CDF	10	16	74	16	15	28	99	0.59	0.26	78	0.22	0.07	0.73	61%	43%	64%
VEP70 SR CDF	23	9	68	35	5	2	99	0.60	0.41	66	0.34	0.09	1.03	40%	42%	20%
SPECTRALLY SELECTIVE																
VS60 SR CDF	17	9	74	30	6	8	99.9	0.92	0.44	62	0.38	0.67	0.79	34%	11%	32%
VS61 SR CDF	23	10	67	31	8	17	99.9	0.92	0.49	58	0.42	0.67	0.74	27%	11%	30%
VS70 SR CDF	19	9	72	35	6	6	99.9	0.90	0.46	61	0.39	0.66	0.90	31%	13%	20%
VS80BL SR CDF	20	5	75	38	6	6	99.9	1.03	0.5	57	0.43	0.82	0.88	25%	0%	14%

**CHART 5: Single-Pane, 1/8
Inch (3mm), Bronze**



														Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	(15) % Summer Solar Heat Gain Reducior	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	65	6	29	68	7	7	62	1.04	0.84	27	0.73	0.84	0.93	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	23	13	64	25	14	19	99.9	1.02	0.50	57	0.43	0.84	0.58	40%	2%	63%
V45 SR CDF	30	10	60	33	11	13	99.9	1.04	0.56	52	0.48	0.84	0.69	33%	0%	51%
V58 SR CDF	41	9	50	45	9	9	99.9	1.03	0.66	43	0.57	0.84	0.79	21%	1%	34%
DUAL REFLECTIVES																
V14 SR CDF	6	30	64	8	31	24	99.9	1.00	0.30	74	0.26	0.80	0.31	64%	4%	88%
V18 SR CDF	11	24	65	15	24	20	99.9	0.96	0.37	69	0.31	0.68	0.48	56%	8%	78%
V28 SR CDF (PS8)	14	22	64	19	22	22	99.9	1.01	0.38	67	0.33	0.78	0.58	55%	3%	72%
V38 SR CDF (PS8)	24	15	61	30	15	16	99.9	1.02	0.49	58	0.42	0.78	0.71	42%	2%	56%
V48 SR CDF	30	10	60	35	10	10	99.9	1.03	0.56	52	0.48	0.73	0.73	33%	1%	49%
V33 BR SR CDF	17	27	56	27	16	18	99.9	0.98	0.39	67	0.33	0.78	0.82	54%	6%	60%
HARMONY SERIES																
V31 SR CDF	15	13	72	27	6	8	99.9	0.91	0.41	65	0.35	0.60	0.77	51%	13%	60%
V40 SR CDF	26	13	61	33	6	8	99.9	0.94	0.50	57	0.43	0.70	0.77	40%	10%	51%
V41 SR CDF	23	14	63	36	6	7	99.9	0.94	0.47	60	0.40	0.70	0.90	44%	10%	47%
V50 SR CDF	30	13	57	38	6	8	99.9	0.97	0.53	54	0.46	0.70	0.83	37%	7%	44%
V51 SR CDF	26	15	59	41	6	7	99.9	0.91	0.49	58	0.42	0.61	0.98	42%	13%	40%
LOW-E SERIES																
VE35 SR CDF	15	28	57	23	26	39	99.9	0.76	0.32	73	0.27	0.33	0.85	62%	27%	66%
VE50 SR CDF	26	20	54	37	16	23	99.9	0.80	0.45	61	0.39	0.36	0.95	46%	23%	46%
EXTERIOR																
VRE20 ER HPR	7	65	28	10	65	36	99.9	1.04	0.18	84	0.16	0.70	0.63	79%	0%	85%
VNE35 ER HPR	26	18	56	28	18	10	99.9	1.04	0.5	57	0.43	0.83	0.65	40%	0%	59%
ENERLOGIC																
VEP35 SR CDF	15	31	54	24	29	28	99	0.60	0.27	77	0.23	0.07	1.04	68%	42%	65%
VEP70 SR CDF	36	15	49	53	6	3	99	0.61	0.51	57	0.43	0.09	1.23	40%	41%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	25	16	59	46	7	8	99.9	0.92	0.48	59	0.41	0.67	1.12	43%	12%	32%
VS61 SR CDF	35	17	48	47	13	18	99.9	0.92	0.56	52	0.48	0.67	0.98	33%	12%	31%
VS70 SR CDF	29	17	54	53	6	7	99.9	0.90	0.51	56	0.44	0.66	1.20	39%	13%	22%
VS80BL SR CDF	31	5	64	57	7	7	99.9	1.03	0.58	51	0.49	0.82	1.16	31%	1%	16%

CHART 6: Single-Pane, 1/4 Inch (6mm), Bronze



	(1) % Total Solar Transmittance			(2) % Total Solar Reflectance			(3) % Total Solar Absorbance			(4) % Visible Transmittance			(5) % Visible Reflectance (exterior)			(6) % Visible Reflectance (interior)			(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (L-SG)	Compared to window w/o film		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction											
Window without film applied:	49	5	46	53	6	6	76	1.02	0.72	38	0.62	0.84	0.85	-	-	-												
Window with film applied:																												
NEUTRALS																												
V33 SR CDF	13	17	70	21	12	18	99.9	1.02	0.40	66	0.34	0.84	0.62	44%	0%	60%												
V45 SR CDF	22	8	70	25	8	13	99.9	1.02	0.52	55	0.45	0.84	0.56	28%	0%	53%												
V58 SR CDF	31	7	62	35	7	8	99.9	1.02	0.59	49	0.51	0.84	0.69	18%	0%	34%												
DUAL REFLECTIVES																												
V14 SR CDF	5	19	76	6	21	24	99.9	1.00	0.34	72	0.28	0.80	0.21	53%	2%	89%												
V18 SR CDF	9	15	76	12	16	20	99.9	0.96	0.38	68	0.32	0.68	0.38	47%	6%	77%												
V28 SR CDF (PS8)	11	14	75	15	15	22	99.9	0.99	0.39	67	0.33	0.78	0.45	46%	3%	72%												
V38 SR CDF (PS8)	18	11	71	23	11	15	99.9	1.02	0.47	60	0.40	0.78	0.58	35%	0%	57%												
V48 SR CDF	22	7	71	27	8	9	99.9	1.02	0.52	56	0.44	0.73	0.61	28%	0%	49%												
V33 BR SR CDF	13	17	70	21	12	18	99.9	0.98	0.40	66	0.34	0.78	0.62	44%	4%	60%												
HARMONY SERIES																												
V31 SR CDF	12	9	79	21	5	8	99.9	0.91	0.40	66	0.34	0.60	0.62	44%	11%	60%												
V40 SR CDF	19	9	72	26	6	8	99.9	0.94	0.46	61	0.39	0.70	0.67	36%	8%	51%												
V41 SR CDF	17	10	73	28	5	7	99.9	0.94	0.44	62	0.38	0.70	0.74	39%	8%	47%												
V50 SR CDF	22	9	69	30	6	7	99.9	0.97	0.49	58	0.42	0.70	0.71	32%	5%	43%												
V51 SR CDF	20	10	70	32	5	7	99.9	0.91	0.46	61	0.39	0.61	0.82	36%	11%	40%												
LOW-E SERIES																												
VE35 SR CDF	11	18	71	18	17	39	99.9	0.76	0.32	73	0.27	0.33	0.67	56%	25%	66%												
VE50 SR CDF	20	13	67	29	12	23	99.9	0.80	0.42	64	0.36	0.36	0.81	42%	22%	45%												
EXTERIOR																												
VRE20 ER HPR	6	65	29	8	65	24	99.9	1.02	0.17	86	0.14	0.70	0.57	76%	0%	85%												
VNE35 ER HPR	19	17	64	22	18	8	99.9	1.02	0.45	61	0.39	0.83	0.56	38%	0%	58%												
ENERLOGIC																												
VEP35 SR CDF	11	20	69	19	19	28	99	0.59	0.27	78	0.22	0.07	0.86	63%	42%	64%												
VEP70 SR CDF	27	10	63	41	5	2	99	0.60	0.44	63	0.37	0.09	1.11	39%	41%	23%												
SPECTRALLY SELECTIVE																												
VS60 SR CDF	19	11	70	36	6	8	99.9	0.92	0.46	61	0.39	0.67	0.92	36%	10%	32%												
VS61 SR CDF	27	12	61	37	9	17	99.9	0.92	0.51	56	0.44	0.67	0.84	29%	10%	30%												
VS70 SR CDF	22	11	67	41	6	6	99.9	0.90	0.48	59	0.41	0.66	1.00	33%	12%	23%												
VS80BL SR CDF	23	5	72	45	6	7	99.9	1.02	0.53	55	0.45	0.82	1.00	26%	0%	15%												

**CHART 7: Single-Pane, 1/8
Inch (3mm), Green**



													Compared to window w/o film			
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	48	6	46	77	7	7	72	1.04	0.72	38	0.62	0.84	1.24	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	17	10	73	28	17	19	99.9	1.02	0.47	60	0.40	0.84	0.70	35%	2%	64%
V45 SR CDF	22	8	70	37	13	13	99.9	1.04	0.52	56	0.44	0.84	0.84	28%	0%	52%
V58 SR CDF	31	7	62	50	11	9	99.9	1.03	0.59	50	0.50	0.84	1.00	18%	1%	35%
DUAL REFLECTIVES																
V14 SR CDF	5	20	75	9	39	24	99.9	1.00	0.33	72	0.28	0.80	0.32	54%	4%	88%
V18 SR CDF	9	16	75	17	29	20	99.9	0.96	0.38	68	0.32	0.68	0.53	47%	8%	78%
V28 SR CDF (PS8)	11	15	74	22	28	22	99.9	1.01	0.39	67	0.33	0.78	0.67	46%	3%	71%
V38 SR CDF (PS8)	19	11	70	34	18	16	99.9	1.02	0.47	60	0.40	0.78	0.85	35%	2%	56%
V48 SR CDF	23	8	69	39	12	10	99.9	1.03	0.52	56	0.44	0.73	0.89	28%	1%	49%
V33 BR SR CDF	14	15	71	30	19	18	99.9	0.98	0.41	65	0.35	0.78	0.86	43%	6%	61%
HARMONY SERIES																
V31 SR CDF	13	7	80	30	6	8	99.9	0.91	0.41	65	0.35	0.60	0.86	43%	13%	61%
V40 SR CDF	20	8	72	37	7	8	99.9	0.94	0.47	60	0.40	0.70	0.93	35%	10%	52%
V41 SR CDF	19	8	73	40	6	7	99.9	0.94	0.46	61	0.39	0.70	1.03	36%	10%	48%
V50 SR CDF	23	8	69	43	7	8	99.9	0.97	0.50	58	0.42	0.70	1.02	31%	7%	44%
V51 SR CDF	22	8	70	46	7	8	99.9	0.91	0.48	59	0.41	0.61	1.12	33%	13%	40%
LOW-E SERIES																
VE35 SR CDF	13	18	69	26	31	39	99.9	0.76	0.33	72	0.28	0.33	0.93	54%	27%	66%
VE50 SR CDF	21	13	66	42	19	23	99.9	0.80	0.43	63	0.37	0.36	1.14	40%	23%	45%
EXTERIOR																
VRE20 ER HPR	6	65	29	11	65	46	99.9	1.04	0.17	85	0.15	0.70	0.73	76%	0%	86%
VNE35 ER HPR	19	18	63	32	19	12	99.9	1.04	0.45	62	0.38	0.83	0.84	38%	0%	58%
ENERLOGIC																
VEP35 SR CDF	13	20	67	27	36	28	99	0.60	0.27	77	0.23	0.07	1.17	63%	42%	65%
VEP70 SR CDF	29	8	63	59	7	3	99	0.61	0.46	61	0.39	0.09	1.51	36%	41%	23%
SPECTRALLY SELECTIVE																
VS60 SR CDF	23	9	68	52	8	9	99.9	0.92	0.49	58	0.42	0.67	1.24	32%	12%	32%
VS61 SR CDF	28	11	61	53	15	18	99.9	0.92	0.53	55	0.45	0.67	1.18	26%	12%	31%
VS70 SR CDF	26	9	65	60	7	7	99.9	0.90	0.51	56	0.44	0.66	1.36	29%	13%	22%
VS80BL SR CDF	28	5	67	65	8	8	99.9	1.03	0.56	52	0.48	0.82	1.35	22%	1%	16%

**CHART 8: Single-Pane, 1/4
Inch (6mm), Green**



	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)		(6) % Visible Reflectance (interior)		(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window		
																(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	34	5	61	67	7	7	84	1.03	0.61	48	0.52	0.84	1.29	-	-	-		
Window with film applied:																		
NEUTRALS																		
V33 SR CDF	12	8	80	25	14	19	99.9	1.02	0.44	62	0.38	0.84	0.66	28%	1%	63%		
V45 SR CDF	16	7	77	32	11	13	99.9	1.03	0.48	59	0.41	0.84	0.78	21%	0%	52%		
V58 SR CDF	21	6	73	44	9	9	99.9	1.03	0.52	55	0.45	0.84	0.98	15%	0%	34%		
DUAL REFLECTIVES																		
V14 SR CDF	4	14	82	8	31	24	99.9	1.00	0.35	71	0.29	0.80	0.28	43%	3%	88%		
V18 SR CDF	7	11	82	15	24	20	99.9	0.96	0.38	68	0.32	0.68	0.47	38%	7%	78%		
V28 SR CDF (PS8)	8	11	81	19	22	22	99.9	0.99	0.38	68	0.32	0.78	0.59	38%	4%	72%		
V38 SR CDF (PS8)	14	8	78	30	15	16	99.9	1.02	0.44	62	0.38	0.78	0.79	28%	1%	55%		
V48 SR CDF	16	6	78	35	10	10	99.9	1.03	0.48	59	0.41	0.73	0.85	21%	0%	48%		
V33 BR SR CDF	11	10	79	27	16	18	99.9	0.98	0.41	66	0.34	0.78	0.79	33%	5%	60%		
HARMONY SERIES																		
V31 SR CDF	10	6	84	27	6	8	99.9	0.91	0.40	66	0.34	0.60	0.79	34%	12%	60%		
V40 SR CDF	14	6	80	33	7	8	99.9	0.94	0.44	63	0.37	0.70	0.89	28%	9%	51%		
V41 SR CDF	14	6	80	35	6	7	99.9	0.94	0.43	63	0.37	0.70	0.95	30%	9%	48%		
V50 SR CDF	17	6	77	38	7	8	99.9	0.97	0.46	60	0.40	0.70	0.95	25%	6%	43%		
V51 SR CDF	16	6	78	41	6	7	99.9	0.91	0.45	62	0.38	0.61	1.08	26%	12%	39%		
LOW-E SERIES																		
VE35 SR CDF	10	12	78	23	25	39	99.9	0.76	0.33	72	0.28	0.33	0.82	46%	26%	66%		
VE50 SR CDF	16	9	75	37	16	23	99.9	0.80	0.4	66	0.34	0.36	1.09	34%	22%	45%		
EXTERIOR																		
VRE20 ER HPR	5	65	30	10	65	36	99.9	1.02	0.16	86	0.14	0.70	0.71	74%	1%	85%		
VNE35 ER HPR	14	17	69	28	18	11	99.9	1.02	0.41	65	0.35	0.83	0.80	33%	1%	58%		
ENERLOGIC																		
VEP35 SR CDF	10	14	76	24	28	28	99	0.59	0.26	78	0.22	0.07	1.09	57%	43%	64%		
VEP70 SR CDF	22	6	72	52	7	3	99	0.60	0.40	66	0.34	0.09	1.53	34%	42%	22%		
SPECTRALLY SELECTIVE																		
VS60 SR CDF	18	6	76	46	7	8	99.9	0.92	0.46	61	0.39	0.67	1.18	25%	11%	31%		
VS61 SR CDF	21	8	71	47	13	18	99.9	0.92	0.48	59	0.41	0.67	1.15	21%	11%	30%		
VS70 SR CDF	21	6	73	53	7	7	99.9	0.90	0.48	59	0.41	0.66	1.29	21%	13%	21%		
VS80BL SR CDF	22	5	73	57	7	7	99.9	1.03	0.52	56	0.44	0.82	1.30	15%	0%	15%		

CHART 9: Dual-Pane, 1/8 inch (3mm) Panes, Both Panes Clear



														Compared to window w/n film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (L-SG)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	70	13	17	81	15	15	44	0.48	0.88	24	0.76	0.84	1.07	-	-	-
Window with film applied:	NEUTRALS															
V33 SR CDF	25	21	54	31	27	20	99.9	0.47	0.62	47	0.53	0.84	0.58	30%	2%	62%
V45 SR CDF	33	18	49	40	22	15	99.9	0.48	0.69	41	0.59	0.84	0.68	22%	0%	51%
V58 SR CDF	45	15	40	53	18	12	99.9	0.48	0.76	35	0.65	0.84	0.82	14%	0%	35%
DUAL REFLECTIVES																
V14 SR CDF	7	43	50	11	52	24	99.9	0.48	0.38	67	0.33	0.80	0.33	57%	0%	86%
V18 SR CDF	13	35	52	19	41	21	99.9	0.48	0.47	60	0.40	0.68	0.48	47%	0%	77%
V28 SR CDF (PS8)	17	32	51	24	39	23	99.9	0.47	0.50	57	0.43	0.78	0.56	43%	2%	70%
V38 SR CDF (PS8)	27	24	49	36	27	17	99.9	0.48	0.61	47	0.53	0.78	0.68	31%	0%	56%
V48 SR CDF	33	17	50	42	20	12	99.9	0.48	0.69	40	0.60	0.73	0.70	22%	0%	48%
V33 BR SR CDF	20	38	42	33	29	19	99.9	0.47	0.46	60	0.40	0.78	0.83	48%	2%	59%
HARMONY SERIES																
V31 SR CDF	17	21	62	32	14	10	99.9	0.46	0.58	50	0.50	0.60	0.64	34%	4%	60%
V40 SR CDF	29	20	51	40	15	10	99.9	0.46	0.63	45	0.55	0.70	0.73	28%	4%	51%
V41 SR CDF	26	21	53	43	14	9	99.9	0.46	0.61	48	0.52	0.70	0.83	31%	4%	47%
V50 SR CDF	34	22	44	48	16	11	99.9	0.46	0.64	45	0.55	0.70	0.87	27%	4%	41%
V51 SR CDF	29	23	48	49	14	10	99.9	0.46	0.61	47	0.53	0.61	0.92	31%	4%	40%
LOW-E SERIES																
VE35 SR CDF	16	43	41	26	48	36	99.9	0.40	0.37	68	0.32	0.33	0.81	58%	17%	68%
VE50 SR CDF	30	30	40	46	30	28	99.9	0.41	0.54	53	0.47	0.36	0.98	39%	15%	43%
EXTERIOR																
VRE20 ER HPR	9	65	26	13	65	60	99.9	0.48	0.15	87	0.13	0.70	1.00	83%	0%	84%
VNE35 ER HPR	28	19	53	34	20	21	99.9	0.48	0.44	62	0.38	0.83	0.89	50%	0%	58%
ENERLOGIC																
VEP35 SR CDF	17	43	40	30	48	29	99	0.34	0.35	70	0.30	0.07	1.00	60%	29%	63%
VEP70 SR CDF	40	22	38	63	15	8	99	0.34	0.61	48	0.52	0.09	1.21	31%	29%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	29	24	47	56	15	12	99.9	0.46	0.6	48	0.52	0.67	1.08	32%	4%	31%
VS61 SR CDF	40	25	35	57	24	22	99.9	0.46	0.65	44	0.56	0.67	1.02	26%	4%	30%
VS70 SR CDF	34	25	41	64	15	12	99.9	0.45	0.61	47	0.53	0.66	1.21	31%	6%	21%
VS80BL SR CDF	35	12	53	69	15	13	99.9	0.48	0.74	37	0.63	0.82	1.10	16%	0%	15%

**CHART 10: Dual-Pane, 1/4 inch (6mm)
Panels, Both Panels Clear**



	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorptance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
														(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	61	11	28	79	14	14	54	0.47	0.81	30	0.70	0.84	1.13	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	22	18	60	29	25	20	99.9	0.47	0.60	48	0.52	0.84	0.56	26%	0%	63%
V45 SR CDF	28	15	57	38	21	15	99.9	0.47	0.65	44	0.56	0.84	0.68	20%	0%	52%
V58 SR CDF	38	13	49	52	18	12	99.9	0.47	0.71	39	0.61	0.84	0.85	12%	0%	34%
DUAL REFLECTIVES																
V14 SR CDF	6	33	61	10	49	25	99.9	0.47	0.41	65	0.35	0.80	0.29	49%	0%	87%
V18 SR CDF	11	27	62	18	38	21	99.9	0.47	0.48	59	0.41	0.68	0.44	41%	0%	77%
V28 SR CDF (PS8)	14	25	61	23	36	23	99.9	0.47	0.50	57	0.43	0.78	0.53	38%	0%	71%
V38 SR CDF (PS8)	23	19	58	35	26	17	99.9	0.47	0.59	49	0.51	0.78	0.69	27%	0%	56%
V48 SR CDF	28	15	57	41	19	12	99.9	0.47	0.66	43	0.57	0.73	0.72	19%	0%	48%
V33 BR SR CDF	17	28	55	32	27	19	99.9	0.47	0.49	58	0.42	0.78	0.76	40%	0%	59%
HARMONY SERIES																
V31 SR CDF	15	16	69	31	14	9	99.9	0.45	0.57	51	0.49	0.60	0.63	30%	4%	61%
V40 SR CDF	25	16	59	38	14	10	99.9	0.45	0.61	47	0.53	0.70	0.72	25%	4%	52%
V41 SR CDF	22	16	62	41	13	9	99.9	0.45	0.59	49	0.51	0.70	0.80	27%	4%	48%
V50 SR CDF	28	16	56	44	14	10	99.9	0.46	0.63	46	0.54	0.70	0.81	22%	2%	44%
V51 SR CDF	26	17	57	47	14	10	99.9	0.45	0.6	48	0.52	0.61	0.90	26%	4%	41%
LOW-E SERIES																
VE35 SR CDF	16	30	54	27	40	40	99.9	0.40	0.42	64	0.36	0.33	0.75	48%	15%	66%
VE50 SR CDF	26	23	51	43	27	25	99.9	0.41	0.54	54	0.46	0.36	0.93	33%	13%	46%
EXTERIOR																
VRE20 ER HPR	8	65	27	12	65	56	99.9	0.47	0.15	87	0.13	0.70	0.92	81%	0%	85%
VNE35 ER HPR	24	18	58	33	20	20	99.9	0.47	0.41	64	0.36	0.83	0.92	49%	0%	58%
ENERLOGIC																
VEP35 SR CDF	15	34	51	29	45	29	99	0.33	0.36	70	0.30	0.07	0.97	56%	30%	63%
VEP70 SR CDF	35	17	48	61	14	8	99	0.34	0.58	50	0.50	0.09	1.22	28%	28%	23%
SPECTRALLY SELECTIVE																
VS60 SR CDF	26	18	56	54	15	12	99.9	0.45	0.6	49	0.51	0.67	1.06	26%	4%	32%
VS61 SR CDF	35	20	45	55	23	22	99.9	0.45	0.62	46	0.54	0.67	1.02	23%	4%	30%
VS70 SR CDF	30	18	52	61	14	12	99.9	0.45	0.61	48	0.52	0.66	1.17	25%	4%	23%
VS80BL SR CDF	32	11	57	67	15	13	99.9	0.47	0.69	40	0.60	0.82	1.12	15%	0%	15%

CHART 11: 1/8 Inch (3mm) Panes, Grey Exterior Pane, Clear Interior Pane



														Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	49	9	42	54	9	14	69	0.48	0.67	42	0.58	0.84	0.93	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	17	13	70	20	15	20	99.9	0.47	0.49	58	0.42	0.84	0.48	27%	2%	63%
V45 SR CDF	23	11	66	27	12	15	99.9	0.48	0.52	54	0.46	0.84	0.59	22%	0%	50%
V58 SR CDF	31	9	60	35	11	12	99.9	0.48	0.58	50	0.50	0.84	0.70	13%	0%	35%
DUAL REFLECTIVES																
V14 SR CDF	5	23	72	7	26	24	99.9	0.48	0.34	71	0.29	0.80	0.24	49%	0%	87%
V18 SR CDF	9	19	72	13	21	21	99.9	0.48	0.39	66	0.34	0.68	0.38	42%	0%	76%
V28 SR CDF (PS8)	11	18	71	16	20	23	99.9	0.47	0.41	65	0.35	0.78	0.46	39%	2%	70%
V38 SR CDF (PS8)	19	14	67	24	15	17	99.9	0.48	0.48	58	0.42	0.78	0.57	28%	0%	56%
V48 SR CDF	23	11	66	28	12	12	99.9	0.48	0.54	53	0.47	0.73	0.60	19%	0%	48%
V33 BR SR CDF	14	21	65	22	16	19	99.9	0.47	0.39	67	0.33	0.78	0.67	42%	2%	59%
HARMONY SERIES																
V31 SR CDF	12	13	75	22	9	9	99.9	0.46	0.46	61	0.39	0.60	0.56	31%	4%	59%
V40 SR CDF	20	12	68	27	9	10	99.9	0.46	0.50	57	0.43	0.70	0.63	25%	4%	50%
V41 SR CDF	18	13	69	29	9	9	99.9	0.46	0.48	59	0.41	0.70	0.71	28%	4%	46%
V50 SR CDF	23	13	64	32	10	11	99.9	0.45	0.50	57	0.43	0.70	0.74	25%	6%	41%
V51 SR CDF	20	14	66	33	9	10	99.9	0.46	0.48	59	0.41	0.61	0.80	28%	4%	39%
LOW-E SERIES																
VE35 SR CDF	11	23	66	17	24	36	99.9	0.40	0.31	73	0.27	0.33	0.63	54%	17%	69%
VE50 SR CDF	21	17	62	30	16	28	99.9	0.41	0.43	63	0.37	0.36	0.81	36%	15%	44%
EXTERIOR																
VRE20 ER HPR	6	65	29	8	65	33	99.9	0.48	0.12	89	0.11	0.70	0.73	82%	0%	85%
VNE35 ER HPR	20	18	62	23	19	16	99.9	0.48	0.35	70	0.30	0.83	0.77	48%	0%	57%
ENERLOGIC																
VEP35 SR CDF	12	23	65	20	24	29	99	0.33	0.29	75	0.25	0.07	0.80	57%	31%	63%
VEP70 SR CDF	28	13	59	42	9	7	99	0.34	0.46	60	0.40	0.09	1.05	31%	29%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	20	14	66	37	10	12	99.9	0.46	0.47	59	0.41	0.67	0.90	30%	4%	31%
VS61 SR CDF	27	15	58	38	13	21	99.9	0.46	0.51	56	0.44	0.67	0.86	24%	4%	30%
VS70 SR CDF	23	15	62	43	9	11	99.9	0.45	0.48	58	0.42	0.66	1.02	28%	6%	20%
VS80BL SR CDF	24	8	68	46	9	13	99.9	0.48	0.57	51	0.49	0.82	0.94	15%	0%	15%

CHART 12: Dual-Pane, 1/4 Inch (6mm) Panes, Grey Exterior Pane, Clear Interior Pane



							(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (L.S.G)	Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)								(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	33	7	60	39	7	13	81	0.47	0.53	55	0.45	0.84	0.87	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	12	8	80	15	10	19	99.9	0.47	0.42	64	0.36	0.84	0.42	21%	0%	62%
V45 SR CDF	15	8	77	19	9	15	99.9	0.47	0.44	62	0.38	0.84	0.50	17%	0%	51%
V58 SR CDF	21	7	72	26	8	11	99.9	0.47	0.47	59	0.41	0.84	0.63	11%	0%	33%
DUAL REFLECTIVES																
V14 SR CDF	3	13	84	5	16	25	99.9	0.47	0.32	73	0.27	0.80	0.19	40%	0%	87%
V18 SR CDF	6	11	83	9	13	21	99.9	0.47	0.36	70	0.30	0.68	0.30	32%	0%	77%
V28 SR CDF (PS8)	8	11	81	11	13	22	99.9	0.47	0.36	69	0.31	0.78	0.35	32%	0%	72%
V38 SR CDF (PS8)	12	9	79	17	10	17	99.9	0.47	0.41	65	0.35	0.78	0.49	23%	0%	56%
V48 SR CDF	15	7	78	20	8	11	99.9	0.47	0.45	62	0.38	0.73	0.53	15%	0%	49%
V33 BR SR CDF	9	12	79	16	10	19	99.9	0.47	0.36	70	0.30	0.78	0.53	32%	0%	59%
HARMONY SERIES																
V31 SR CDF	8	8	84	16	7	9	99.9	0.45	0.39	67	0.33	0.60	0.48	26%	4%	59%
V40 SR CDF	13	8	79	19	7	10	99.9	0.45	0.41	64	0.36	0.70	0.53	23%	4%	51%
V41 SR CDF	12	8	80	21	7	9	99.9	0.45	0.41	65	0.35	0.70	0.60	23%	4%	46%
V50 SR CDF	15	8	77	22	7	10	99.9	0.46	0.42	64	0.36	0.70	0.61	21%	2%	44%
V51 SR CDF	14	9	77	24	7	10	99.9	0.45	0.41	65	0.35	0.61	0.69	23%	4%	38%
LOW-E SERIES																
VE35 SR CDF	8	12	80	14	14	40	99.9	0.40	0.31	74	0.26	0.33	0.54	42%	15%	64%
VE50 SR CDF	14	10	76	22	10	25	99.9	0.41	0.37	68	0.32	0.36	0.69	30%	13%	44%
EXTERIOR																
VRE20 ER HPR	4	65	31	6	65	23	99.9	0.47	0.11	91	0.09	0.70	0.67	79%	0%	85%
VNE35 ER HPR	13	18	69	17	19	14	99.9	0.47	0.3	75	0.25	0.83	0.68	43%	0%	56%
ENERGLOGIC																
VEP35 SR CDF	8	13	79	14	15	29	99	0.33	0.26	78	0.22	0.07	0.64	51%	30%	64%
VEP70 SR CDF	19	9	72	31	7	7	99	0.34	0.38	68	0.32	0.09	0.96	29%	28%	21%
SPECTRALLY SELECTIVE																
VS60 SR CDF	14	9	77	27	7	11	99.9	0.45	0.41	65	0.35	0.67	0.77	23%	4%	31%
VS61 SR CDF	19	9	72	28	9	21	99.9	0.45	0.42	64	0.36	0.67	0.78	21%	4%	28%
VS70 SR CDF	16	9	75	31	7	11	99.9	0.45	0.41	65	0.35	0.66	0.89	23%	4%	21%
VS80BL SR CDF	17	6	77	33	7	12	99.9	0.47	0.46	60	0.40	0.82	0.83	13%	0%	15%

CHART 13: 1/8 Inch (3mm) Panes, Bronze Exterior Pane, Clear Interior Pane



	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
														(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	54	9	37	61	10	14	68	0.48	0.72	37	0.63	0.84	0.97	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	19	14	67	23	17	20	99.9	0.47	0.52	55	0.45	0.84	0.51	28%	2%	62%
V45 SR CDF	26	12	62	30	14	15	99.9	0.48	0.58	50	0.50	0.84	0.60	19%	0%	51%
V58 SR CDF	35	10	55	40	12	12	99.9	0.48	0.63	46	0.54	0.84	0.74	13%	0%	34%
DUAL REFLECTIVES																
V14 SR CDF	6	27	67	8	31	24	99.9	0.48	0.35	70	0.30	0.80	0.27	51%	0%	87%
V18 SR CDF	10	23	67	14	25	21	99.9	0.48	0.41	65	0.35	0.68	0.40	43%	0%	77%
V28 SR CDF (PS8)	13	21	66	18	24	23	99.9	0.47	0.43	63	0.37	0.78	0.49	40%	2%	70%
V38 SR CDF (PS8)	21	16	63	27	17	17	99.9	0.48	0.52	56	0.44	0.78	0.61	28%	0%	56%
V48 SR CDF	26	12	62	32	13	12	99.9	0.48	0.58	50	0.50	0.73	0.64	19%	0%	48%
V33 BR SR CDF	15	25	60	25	18	19	99.9	0.47	0.41	65	0.35	0.78	0.71	43%	2%	59%
HARMONY SERIES																
V31 SR CDF	13	14	73	24	10	9	99.9	0.46	0.49	58	0.42	0.60	0.57	32%	4%	61%
V40 SR CDF	22	14	64	30	10	10	99.9	0.46	0.53	54	0.46	0.70	0.65	26%	4%	51%
V41 SR CDF	20	15	65	32	10	9	99.9	0.46	0.51	56	0.44	0.70	0.73	29%	4%	48%
V50 SR CDF	26	15	59	36	11	11	99.9	0.45	0.53	54	0.46	0.70	0.78	26%	6%	41%
V51 SR CDF	23	16	61	37	10	10	99.9	0.46	0.52	56	0.44	0.61	0.84	28%	4%	39%
LOW-E SERIES																
VE35 SR CDF	12	28	60	19	29	36	99.9	0.40	0.33	72	0.28	0.33	0.68	54%	17%	69%
VE50 SR CDF	23	20	57	34	19	27	99.9	0.41	0.46	61	0.39	0.36	0.87	36%	15%	44%
EXTERIOR																
VRE20 ER HPR	6	65	29	9	65	39	99.9	0.48	0.13	89	0.11	0.70	0.82	82%	0%	85%
VNE35 ER HPR	22	18	60	26	19	17	99.9	0.48	0.38	68	0.32	0.83	0.81	47%	0%	57%
ENERLOGIC																
VEP35 SR CDF	13	28	59	22	29	29	99	0.33	0.30	74	0.26	0.07	0.85	58%	31%	64%
VEP70 SR CDF	31	15	54	48	10	7	99	0.34	0.50	57	0.43	0.09	1.12	31%	29%	21%
SPECTRALLY SELECTIVE																
VS60 SR CDF	22	17	61	42	11	12	99.9	0.46	0.51	56	0.44	0.67	0.95	29%	4%	31%
VS61 SR CDF	31	17	52	43	15	21	99.9	0.46	0.54	53	0.47	0.67	0.91	25%	4%	30%
VS70 SR CDF	26	17	57	48	10	11	99.9	0.45	0.52	56	0.44	0.66	1.09	28%	6%	21%
VS80BL SR CDF	27	9	64	52	10	12	99.9	0.48	0.61	47	0.53	0.82	0.98	15%	0%	15%

**CHART 14: Dual-Pane, 1/4 Inch (6mm) Panes,
Bronze Exterior Pane, Clear Interior Pane**



							(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)								(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	38	7	55	47	8	12	81	0.47	0.58	50	0.50	0.84	0.94	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	14	10	76	18	12	19	99.9	0.47	0.45	61	0.39	0.84	0.46	22%	0%	62%
V45 SR CDF	18	9	73	23	10	15	99.9	0.47	0.48	58	0.42	0.84	0.55	17%	0%	51%
V58 SR CDF	24	8	68	31	9	11	99.9	0.47	0.52	55	0.45	0.84	0.69	10%	0%	34%
DUAL REFLECTIVES																
V14 SR CDF	4	16	80	6	21	24	99.9	0.47	0.34	71	0.29	0.80	0.21	41%	0%	87%
V18 SR CDF	7	13	80	11	17	21	99.9	0.47	0.38	68	0.32	0.68	0.34	34%	0%	77%
V28 SR CDF (PS8)	9	13	78	14	16	22	99.9	0.47	0.39	67	0.33	0.78	0.42	33%	0%	70%
V38 SR CDF (PS8)	14	10	76	21	12	17	99.9	0.47	0.44	62	0.38	0.78	0.55	24%	0%	55%
V48 SR CDF	18	8	74	24	10	11	99.9	0.47	0.49	58	0.42	0.73	0.57	16%	0%	49%
V33 BR SR CDF	11	14	75	19	13	19	99.9	0.47	0.38	67	0.33	0.78	0.58	34%	0%	60%
HARMONY SERIES																
V31 SR CDF	10	10	80	19	8	9	99.9	0.45	0.42	64	0.36	0.60	0.53	28%	4%	60%
V40 SR CDF	15	9	76	23	8	10	99.9	0.45	0.45	61	0.39	0.70	0.59	22%	4%	51%
V41 SR CDF	14	9	77	25	7	9	99.9	0.45	0.44	62	0.38	0.70	0.66	24%	4%	47%
V50 SR CDF	18	9	73	27	8	10	99.9	0.46	0.46	60	0.40	0.70	0.68	21%	2%	43%
V51 SR CDF	16	10	74	28	8	9	99.9	0.45	0.45	62	0.38	0.61	0.74	22%	4%	40%
LOW-E SERIES																
VE35 SR CDF	10	15	75	16	14	40	99.9	0.40	0.33	72	0.28	0.33	0.57	43%	15%	66%
VE50 SR CDF	16	12	72	26	13	25	99.9	0.41	0.4	66	0.34	0.36	0.76	31%	13%	45%
EXTERIOR																
VRE20 ER HPR	5	65	30	7	65	27	99.9	0.47	0.11	90	0.10	0.70	0.70	81%	0%	85%
VNE35 ER HPR	15	18	67	20	19	14	99.9	0.47	0.32	73	0.27	0.83	0.74	45%	0%	57%
ENERLOGIC																
VEP35 SR CDF	9	16	75	17	19	29	99	0.33	0.28	76	0.24	0.07	0.71	52%	30%	64%
VEP70 SR CDF	22	10	68	37	8	7	99	0.34	0.41	65	0.35	0.09	1.06	29%	28%	21%
SPECTRALLY SELECTIVE																
VS60 SR CDF	16	10	74	32	8	11	99.9	0.45	0.44	62	0.38	0.67	0.84	24%	4%	32%
VS61 SR CDF	22	11	67	33	11	21	99.9	0.45	0.46	61	0.39	0.67	0.85	21%	4%	30%
VS70 SR CDF	19	10	71	37	8	10	99.9	0.45	0.45	61	0.39	0.66	0.95	22%	4%	21%
VS80BL SR CDF	20	7	73	40	8	12	99.9	0.47	0.51	57	0.43	0.82	0.93	12%	0%	15%

CHART 15: 1/8 Inch (3mm) Panes, Green Exterior Pane, Clear Interior Pane



							(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)								(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	41	8	51	69	12	14	76	0.48	0.59	49	0.51	0.84	1.35	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	15	11	74	26	21	20	99.9	0.47	0.44	62	0.38	0.84	0.68	25%	2%	62%
V45 SR CDF	20	10	70	34	17	15	99.9	0.47	0.48	59	0.41	0.84	0.83	19%	2%	51%
V58 SR CDF	26	9	65	45	14	12	99.9	0.48	0.52	55	0.45	0.84	1.00	12%	0%	35%
DUAL REFLECTIVES																
V14 SR CDF	5	20	75	9	39	24	99.9	0.48	0.31	73	0.27	0.80	0.33	47%	0%	87%
V18 SR CDF	8	17	75	16	31	21	99.9	0.48	0.36	69	0.31	0.68	0.52	39%	0%	77%
V28 SR CDF (PS8)	10	16	74	20	30	23	99.9	0.47	0.37	68	0.32	0.78	0.63	37%	2%	71%
V38 SR CDF (PS8)	17	12	71	31	21	17	99.9	0.48	0.44	62	0.38	0.78	0.82	25%	0%	55%
V48 SR CDF	20	10	70	36	16	12	99.9	0.48	0.49	58	0.42	0.73	0.86	17%	0%	48%
V33 BR SR CDF	13	15	72	28	22	19	99.9	0.47	0.38	68	0.32	0.78	0.88	36%	2%	59%
HARMONY SERIES																
V31 SR CDF	12	9	79	27	12	9	99.9	0.46	0.43	63	0.37	0.60	0.73	27%	4%	61%
V40 SR CDF	18	9	73	34	12	10	99.9	0.46	0.46	61	0.39	0.70	0.87	22%	4%	51%
V41 SR CDF	17	9	74	36	11	9	99.9	0.46	0.45	61	0.39	0.70	0.92	24%	4%	48%
V50 SR CDF	21	10	69	41	13	11	99.9	0.45	0.46	60	0.40	0.70	1.03	22%	6%	41%
V51 SR CDF	19	10	71	42	12	10	99.9	0.46	0.46	61	0.39	0.61	1.08	22%	4%	39%
LOW-E SERIES																
VE35 SR CDF	10	19	71	22	36	36	99.9	0.40	0.3	75	0.25	0.33	0.88	49%	17%	68%
VE50 SR CDF	19	14	67	39	23	28	99.9	0.41	0.4	66	0.34	0.36	1.15	32%	15%	43%
EXTERIOR																
VRE20 ER HPR	5	65	30	11	65	47	99.9	0.48	0.12	90	0.10	0.70	1.10	80%	0%	84%
VNE35 ER HPR	17	18	65	29	19	18	99.9	0.48	0.32	72	0.28	0.83	1.04	46%	0%	58%
ENERLOGIC																
VEP35 SR CDF	11	19	70	25	36	29	99	0.33	0.27	77	0.23	0.07	1.09	54%	31%	64%
VEP70 SR CDF	26	10	64	54	12	8	99	0.34	0.43	63	0.37	0.09	1.46	27%	29%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	20	10	70	48	13	12	99.9	0.46	0.46	61	0.39	0.67	1.23	22%	4%	30%
VS61 SR CDF	25	12	63	49	19	22	99.9	0.46	0.47	60	0.40	0.67	1.23	20%	4%	29%
VS70 SR CDF	24	10	66	54	12	12	99.9	0.45	0.47	60	0.40	0.66	1.35	20%	6%	22%
VS80BL SR CDF	25	8	67	59	13	13	99.9	0.48	0.52	55	0.45	0.82	1.31	12%	0%	14%

**CHART 16: Dual-Pane, 1/4 Inch (6mm) Panes,
Green Exterior Pane, Clear Interior Pane**



							(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)								(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	29	6	65	60	11	14	87	0.47	0.47	60	0.40	0.84	1.50	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	10	9	81	22	17	20	99.9	0.47	0.37	68	0.32	0.84	0.69	21%	0%	63%
V45 SR CDF	13	8	79	29	14	15	99.9	0.47	0.40	66	0.34	0.84	0.85	15%	0%	52%
V58 SR CDF	18	7	75	39	13	12	99.9	0.47	0.42	64	0.36	0.84	1.08	11%	0%	35%
DUAL REFLECTIVES																
V14 SR CDF	3	13	84	8	30	24	99.9	0.47	0.29	76	0.24	0.80	0.33	38%	0%	87%
V18 SR CDF	6	11	83	14	24	21	99.9	0.47	0.32	73	0.27	0.68	0.52	32%	0%	77%
V28 SR CDF (PS8)	7	11	82	18	23	23	99.9	0.47	0.33	72	0.28	0.78	0.64	30%	0%	70%
V38 SR CDF (PS8)	12	9	79	27	17	17	99.9	0.47	0.37	68	0.32	0.78	0.84	21%	0%	55%
V48 SR CDF	14	7	79	31	13	12	99.9	0.47	0.40	66	0.34	0.73	0.91	15%	0%	48%
V33 BR SR CDF	9	10	81	24	18	19	99.9	0.47	0.34	71	0.29	0.78	0.83	28%	0%	60%
HARMONY SERIES																
V31 SR CDF	9	7	84	24	10	9	99.9	0.45	0.37	69	0.31	0.60	0.77	21%	4%	60%
V40 SR CDF	12	7	81	29	10	10	99.9	0.45	0.38	67	0.33	0.70	0.88	19%	4%	52%
V41 SR CDF	12	7	81	31	10	9	99.9	0.45	0.38	67	0.33	0.70	0.94	19%	4%	48%
V50 SR CDF	14	7	79	34	10	10	99.9	0.46	0.39	66	0.34	0.70	1.00	17%	2%	43%
V51 SR CDF	14	7	79	36	10	10	99.9	0.45	0.39	67	0.33	0.61	1.09	17%	4%	40%
LOW-E SERIES																
VE35 SR CDF	8	12	80	21	25	40	99.9	0.40	0.29	75	0.25	0.33	0.84	38%	15%	65%
VE50 SR CDF	14	9	77	33	18	25	99.9	0.41	0.35	70	0.30	0.36	1.10	26%	13%	45%
EXTERIOR																
VRE20 ER HPR	4	65	31	9	65	37	99.9	0.47	0.11	91	0.09	0.70	1.00	77%	0%	85%
VNE35 ER HPR	12	18	70	25	19	16	99.9	0.47	0.27	76	0.24	0.83	1.04	43%	0%	58%
ENERLOGIC																
VEP35 SR CDF	8	13	79	22	29	29	99	0.33	0.24	79	0.21	0.07	1.05	49%	30%	63%
VEP70 SR CDF	19	7	74	46	10	7	99	0.34	0.36	70	0.30	0.09	1.53	23%	28%	23%
SPECTRALLY SELECTIVE																
VS60 SR CDF	15	7	78	41	11	12	99.9	0.45	0.39	66	0.34	0.67	1.21	17%	4%	32%
VS61 SR CDF	18	8	74	42	15	21	99.9	0.45	0.39	67	0.33	0.67	1.27	17%	4%	30%
VS70 SR CDF	18	7	75	47	11	11	99.9	0.45	0.4	66	0.34	0.66	1.38	15%	4%	22%
VS80BL SR CDF	19	6	75	51	11	12	99.9	0.47	0.43	63	0.37	0.82	1.38	9%	0%	15%

CHART 17: Dual-Pane, 1/8 Inch (3mm) Panes, Exterior Pane Low-E on #2 Surface, Clear Interior Pane



									Compared to window w/o film								
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction	
Window without film applied:	60	15	25	76	17	17	52	0.35	0.76	34	0.66	0.22	1.15	-	-	-	
Window with film applied:	NEUTRALS																
V33 SR CDF	21	21	58	28	27	21	99.9	0.35	0.59	49	0.51	0.22	0.55	22%	0%	63%	
V45 SR CDF	28	18	54	37	23	15	99.9	0.35	0.64	45	0.55	0.22	0.67	16%	0%	51%	
V58 SR CDF	38	16	46	29	17	13	99.9	0.35	0.68	41	0.59	0.22	0.49	11%	0%	62%	
DUAL REFLECTIVES																	
V14 SR CDF	7	37	56	10	49	25	99.9	0.35	0.39	66	0.34	0.22	0.29	49%	0%	87%	
V18 SR CDF	12	31	57	18	39	21	99.9	0.35	0.47	60	0.40	0.22	0.45	38%	0%	76%	
V28 SR CDF (PS8)	15	29	56	22	37	23	99.9	0.35	0.49	58	0.42	0.22	0.52	36%	0%	71%	
V38 SR CDF (PS8)	24	23	53	34	27	18	99.9	0.35	0.58	50	0.50	0.22	0.68	24%	0%	55%	
V48 SR CDF	29	18	53	39	21	13	99.9	0.35	0.65	44	0.56	0.22	0.70	14%	0%	49%	
V33 BR SR CDF	18	32	50	31	29	19	99.9	0.35	0.46	60	0.40	0.22	0.78	39%	0%	59%	
HARMONY SERIES																	
V31 SR CDF	16	19	65	30	16	10	99.9	0.34	0.58	50	0.50	0.22	0.60	24%	3%	61%	
V40 SR CDF	26	19	55	37	17	11	99.9	0.34	0.61	47	0.53	0.22	0.70	20%	3%	51%	
V41 SR CDF	23	19	58	40	15	10	99.9	0.34	0.60	48	0.52	0.22	0.77	21%	3%	47%	
V50 SR CDF	30	20	50	45	18	12	99.9	0.33	0.61	47	0.53	0.22	0.85	20%	6%	41%	
V51 SR CDF	27	20	53	46	16	11	99.9	0.34	0.60	49	0.51	0.22	0.90	21%	3%	39%	
LOW-E SERIES																	
VE35 SR CDF	14	37	49	24	45	36	99.9	0.30	0.38	68	0.32	0.22	0.75	50%	14%	68%	
VE50 SR CDF	27	27	46	43	29	29	99.9	0.31	0.52	55	0.45	0.22	0.96	32%	11%	43%	
EXTERIOR																	
VRE20 ER HPR	9	65	26	13	65	60	99.9	0.35	0.14	88	0.12	0.22	1.08	82%	0%	83%	
VNE35 ER HPR	28	19	53	34	20	21	99.9	0.35	0.41	64	0.36	0.22	0.94	46%	0%	55%	
ENERLOGIC																	
VEP35 SR CDF	16	37	47	28	46	30	99	0.26	0.36	69	0.31	0.07	0.90	53%	26%	63%	
VEP70 SR CDF	36	20	44	59	16	10	99	0.26	0.59	49	0.51	0.09	1.16	22%	26%	22%	
SPECTRALLY SELECTIVE																	
VS60 SR CDF	27	22	51	52	17	13	99.9	0.34	0.58	50	0.50	0.22	1.04	24%	3%	32%	
VS61 SR CDF	35	23	42	53	24	23	99.9	0.34	0.60	48	0.52	0.22	1.02	21%	3%	30%	
VS70 SR CDF	31	22	47	59	17	14	99.9	0.34	0.59	49	0.51	0.22	1.16	22%	3%	22%	
VS80BL SR CDF	31	14	55	64	17	15	99.9	0.35	0.69	41	0.59	0.22	1.08	9%	0%	16%	

CHART 18: Dual-Pane, 1/4 Inch (6mm) Panes, Exterior Pane Low-E on #2 Surface, Clear Interior Pane



	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorptance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	Compared to window w/o film		
														(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	52	13	35	73	16	17	60	0.35	0.71	38	0.62	0.22	1.18	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	19	18	63	27	25	20	99.9	0.35	0.57	51	0.49	0.22	0.55	20%	0%	63%
V45 SR CDF	24	16	60	36	22	16	99.9	0.35	0.61	47	0.53	0.22	0.68	14%	0%	51%
V58 SR CDF	33	15	52	48	19	13	99.9	0.35	0.65	44	0.56	0.22	0.86	8%	0%	34%
DUAL REFLECTIVES																
V14 SR CDF	6	30	64	10	46	25	99.9	0.35	0.41	65	0.35	0.22	0.29	42%	0%	86%
V18 SR CDF	10	25	65	17	37	21	99.9	0.35	0.47	59	0.41	0.22	0.41	34%	0%	77%
V28 SR CDF (PS8)	13	24	63	22	35	23	99.9	0.34	0.49	58	0.42	0.22	0.52	31%	3%	70%
V38 SR CDF (PS8)	20	19	61	33	26	18	99.9	0.35	0.56	51	0.49	0.22	0.67	21%	0%	55%
V48 SR CDF	25	16	59	38	20	12	99.9	0.35	0.61	47	0.53	0.22	0.72	14%	0%	48%
V33 BR SR CDF	16	25	59	30	27	19	99.9	0.34	0.48	59	0.41	0.22	0.73	32%	3%	59%
HARMONY SERIES																
V31 SR CDF	14	15	71	29	16	10	99.9	0.33	0.57	51	0.49	0.22	0.59	20%	6%	60%
V40 SR CDF	22	15	63	36	16	11	99.9	0.34	0.59	49	0.51	0.22	0.71	17%	3%	51%
V41 SR CDF	21	16	63	38	15	10	99.9	0.33	0.58	50	0.50	0.22	0.76	18%	6%	48%
V50 SR CDF	26	15	59	41	16	11	99.9	0.34	0.60	48	0.52	0.22	0.79	15%	3%	44%
V51 SR CDF	24	16	60	44	16	11	99.9	0.33	0.58	49	0.51	0.22	0.86	18%	6%	40%
LOW-E SERIES																
VE35 SR CDF	14	28	58	26	39	40	99.9	0.30	0.42	64	0.36	0.22	0.72	41%	14%	64%
VE50 SR CDF	24	21	55	41	27	26	99.9	0.31	0.52	55	0.45	0.22	0.91	27%	11%	44%
EXTERIOR																
VRE20 ER HPR	8	65	27	12	65	57	99.9	0.35	0.13	89	0.11	0.22	1.09	82%	0%	84%
VNE35 ER HPR	24	19	57	33	20	20	99.9	0.35	0.39	67	0.33	0.22	1.00	45%	0%	55%
ENERLOGIC																
VEP35 SR CDF	14	30	56	27	44	29	99	0.26	0.37	69	0.31	0.07	0.87	48%	26%	63%
VEP70 SR CDF	32	16	52	57	16	9	99	0.26	0.56	52	0.48	0.09	1.19	21%	26%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	24	17	59	50	16	13	99.9	0.33	0.58	50	0.50	0.22	1.00	18%	6%	32%
VS61 SR CDF	31	19	50	52	23	23	99.9	0.34	0.58	50	0.50	0.22	1.04	18%	3%	29%
VS70 SR CDF	28	17	55	57	16	13	99.9	0.33	0.58	49	0.51	0.22	1.12	18%	6%	22%
VS80BL SR CDF	29	13	58	62	16	15	99.9	0.35	0.65	44	0.56	0.22	1.11	8%	0%	15%

CHART 19: Dual-Pane, 1/8 Inch (3mm) Panes, Exterior Pane High Performance Low-E on #2 Surface, Clear Interior Pane



														Compared to window w/o film		
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorptance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	38	35	27	72	11	12	84	0.30	0.48	58	0.42	0.04	1.71	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	14	39	47	27	20	20	99.9	0.29	0.38	67	0.33	0.04	0.82	21%	3%	63%
V45 SR CDF	18	37	45	35	16	14	99.9	0.30	0.41	64	0.36	0.04	0.97	15%	0%	51%
V58 SR CDF	24	36	40	46	13	11	99.9	0.30	0.44	62	0.38	0.04	1.21	8%	0%	36%
DUAL REFLECTIVES																
V14 SR CDF	5	47	48	9	39	24	99.9	0.30	0.27	77	0.23	0.04	0.39	44%	0%	88%
V18 SR CDF	8	43	49	16	31	21	99.9	0.30	0.32	73	0.27	0.04	0.59	33%	0%	78%
V28 SR CDF (PS8)	10	42	48	21	29	22	99.9	0.29	0.33	72	0.28	0.04	0.75	31%	3%	71%
V38 SR CDF (PS8)	16	39	45	32	20	17	99.9	0.30	0.38	67	0.33	0.04	0.97	21%	0%	56%
V48 SR CDF	19	36	45	37	15	11	99.9	0.30	0.42	64	0.36	0.04	1.03	13%	0%	49%
V33 BR SR CDF	14	42	44	29	22	19	99.9	0.29	0.34	70	0.30	0.04	0.97	29%	3%	60%
HARMONY SERIES																
V31 SR CDF	12	35	53	28	10	9	99.9	0.29	0.42	64	0.36	0.04	0.78	13%	3%	61%
V40 SR CDF	18	35	47	35	11	9	99.9	0.29	0.43	63	0.37	0.04	0.95	10%	3%	51%
V41 SR CDF	18	35	47	38	10	8	99.9	0.29	0.43	63	0.37	0.04	1.03	10%	3%	47%
V50 SR CDF	21	36	43	43	12	10	99.9	0.28	0.42	63	0.37	0.04	1.16	13%	7%	40%
V51 SR CDF	20	35	45	43	10	9	99.9	0.29	0.43	63	0.37	0.04	1.16	10%	3%	40%
LOW-E SERIES																
VE35 SR CDF	11	46	43	22	36	36	99.9	0.26	0.27	77	0.23	0.04	0.96	44%	13%	69%
VE50 SR CDF	20	40	40	40	22	27	99.9	0.26	0.36	68	0.32	0.04	1.25	25%	13%	44%
EXTERIOR																
VRE20 ER HPR	9	65	26	13	65	60	99.9	0.30	0.13	88	0.12	0.04	1.08	73%	0%	82%
VNE35 ER HPR	29	19	52	34	20	21	99.9	0.30	0.41	65	0.35	0.04	0.97	15%	0%	53%
ENERLOGIC																
VEP35 SR CDF	12	46	42	26	36	29	99	0.22	0.26	77	0.23	0.04	1.13	46%	27%	64%
VEP70 SR CDF	27	35	38	56	11	6	99	0.23	0.42	63	0.37	0.04	1.51	13%	23%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	22	36	42	49	11	11	99.9	0.29	0.43	63	0.37	0.04	1.32	10%	3%	32%
VS61 SR CDF	25	38	37	50	18	20	99.9	0.29	0.41	65	0.35	0.04	1.43	15%	3%	31%
VS70 SR CDF	25	35	40	56	11	10	99.9	0.28	0.44	62	0.38	0.04	1.47	8%	7%	22%
VS80BL SR CDF	26	35	39	61	11	11	99.9	0.30	0.45	61	0.39	0.04	1.56	6%	0%	15%

CHART 20: Dual-Pane, 1/4 Inch (6mm) Panes, Exterior Pane High



													Compared to window w/o film			
	(1) % Total Solar Transmittance	(2) % Total Solar Reflectance	(3) % Total Solar Absorbance	(4) % Visible Transmittance	(5) % Visible Reflectance (exterior)	(6) % Visible Reflectance (interior)	(7) % UV Rejected	(8) Winter U-value	(10) Shading Coefficient	(11) % Total Solar Energy Rejected	(12) Solar Heat Gain Coefficient (SHGC)	(13) Emissivity	(14) Light to Solar Heat Gain Ratio (LSG)	(15) % Summer Solar Heat Gain Reduction	(16) % Winter Heat Loss Reduction	(17) % Glare Reduction
Window without film applied:	34	28	38	69	10	11	86	0.29	0.46	60	0.40	0.04	1.73	-	-	-
Window with film applied:																
NEUTRALS																
V33 SR CDF	12	32	56	26	19	19	99.9	0.29	0.38	67	0.33	0.04	0.79	17%	0%	62%
V45 SR CDF	16	30	54	33	15	14	99.9	0.29	0.40	65	0.35	0.04	0.94	13%	0%	52%
V58 SR CDF	22	30	48	46	13	11	99.9	0.29	0.43	63	0.37	0.04	1.24	7%	0%	33%
DUAL REFLECTIVES																
V14 SR CDF	4	39	57	9	37	24	99.9	0.29	0.28	76	0.24	0.04	0.38	39%	0%	87%
V18 SR CDF	7	36	57	16	29	21	99.9	0.29	0.32	72	0.28	0.04	0.57	30%	0%	77%
V28 SR CDF (PS8)	9	35	56	20	27	22	99.9	0.29	0.33	71	0.29	0.04	0.69	28%	0%	71%
V38 SR CDF (PS8)	15	32	53	31	19	17	99.9	0.29	0.38	67	0.33	0.04	0.94	17%	0%	55%
V48 SR CDF	17	30	53	36	14	11	99.9	0.29	0.41	64	0.36	0.04	1.00	11%	0%	48%
V33 BR SR CDF	12	34	54	28	20	18	99.9	0.29	0.35	70	0.30	0.04	0.93	24%	0%	59%
HARMONY SERIES																
V31 SR CDF	11	28	61	27	10	9	99.9	0.28	0.41	65	0.35	0.04	0.77	11%	3%	61%
V40 SR CDF	16	29	55	34	10	9	99.9	0.28	0.42	64	0.36	0.04	0.94	9%	3%	51%
V41 SR CDF	16	28	56	36	10	8	99.9	0.28	0.42	64	0.36	0.04	1.00	9%	3%	48%
V50 SR CDF	18	29	53	39	10	9	99.9	0.29	0.42	64	0.36	0.04	1.08	9%	0%	43%
V51 SR CDF	19	29	52	42	10	9	99.9	0.28	0.42	64	0.36	0.04	1.17	9%	3%	39%
LOW-E SERIES																
VE35 SR CDF	11	37	52	24	30	40	99.9	0.26	0.30	74	0.26	0.04	0.92	35%	10%	65%
VE50 SR CDF	18	33	49	38	20	24	99.9	0.27	0.36	68	0.32	0.04	1.19	22%	7%	45%
EXTERIOR																
VRE20 ER HPR	8	65	27	13	65	59	99.9	0.29	0.13	89	0.11	0.04	1.18	72%	0%	81%
VNE35 ER HPR	27	19	54	34	20	20	99.9	0.29	0.38	67	0.33	0.04	1.03	17%	0%	51%
ENERLOGIC																
VEP35 SR CDF	11	38	51	25	34	29	99	0.22	0.27	77	0.23	0.04	1.09	41%	24%	64%
VEP70 SR CDF	25	29	46	54	10	6	99	0.23	0.41	65	0.35	0.04	1.54	11%	21%	22%
SPECTRALLY SELECTIVE																
VS60 SR CDF	20	29	51	47	11	11	99.9	0.28	0.42	64	0.36	0.04	1.31	9%	3%	32%
VS61 SR CDF	23	31	46	48	17	20	99.9	0.28	0.40	65	0.35	0.04	1.37	13%	3%	30%
VS70 SR CDF	23	29	48	54	10	10	99.9	0.28	0.43	63	0.37	0.04	1.46	7%	3%	22%
VS80BL SR CDF	24	28	48	59	11	11	99.9	0.29	0.44	62	0.38	0.04	1.55	4%	0%	14%