

CONTENTS

Updated January 2006

LLUMAR FILMS ON VARIOUS GLASS TYPES

[Chart 1-L Single-3mm-Clear](#)

[Chart 2-L Single-6mm-Clear](#)

[Chart 3-L Single-3mm-Tinted](#)

[Chart 4-L Single-6mm-Tinted](#)

[Chart 5-L IGU-3mm-Clear](#)

[Chart 6-L IGU-6mm-Clear](#)

[Chart 7-L IGU-3mm-Tinted](#)

[Chart 8-L IGU-6mm-Tinted](#)

[Chart 9-L IGU-3mm-LowE](#)

[Chart 10-L IGU-6mm-LowE](#)

[Chart 11-L IGU-3mm-LowE 2](#)

[Chart 12-L IGU-6mm-LowE 2](#)

[Chart 13-L IGU-3mm-Tinted-LowE 2](#)

[Chart 14-L IGU-6mm-Tinted-LowE 2](#)

CHART 1: Single-Pane, 1/8 Inch (3mm), 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film			
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction	
Window without film applied:	83	8	9	90	8	8	29	1.033	0.963	5.8656	5.4681	1	14	0.86	0.84	0.9	-	-	-	
Window with film applied:																				
RELECTIVE SERIES																				
R-15B SR CDF (Bronze)	10	35	55	10	19	60	99	0.94	0.88	5.34	5.00	0.28	76	0.24	0.70	0.36	72%	9%	89%	
R-15G SR CDF (Gray)	9	33	58	7	13	61	99	0.94	0.88	5.34	5.00	0.29	75	0.25	0.70	0.24	71%	9%	92%	
R-15BL SR PS (Blue)	10	38	52	11	25	62	99	0.94	0.88	5.34	5.00	0.29	75	0.25	0.70	0.38	71%	9%	88%	
R-15GO SR PS (Gold)	11	50	39	14	52	64	99	0.94	0.88	5.34	5.00	0.25	79	0.21	0.70	0.56	75%	9%	84%	
R-30B SR CDF (Bronze)	24	22	54	22	12	29	99	0.96	0.90	5.45	5.11	0.43	63	0.37	0.74	0.51	57%	7%	76%	
R-30G SR CDF (Gray)	24	22	54	23	13	31	99	0.97	0.91	5.51	5.17	0.44	62	0.38	0.75	0.52	56%	6%	74%	
PCR-15BL SR CDF (Blue)	15	25	60	13	22	33	99	1.00	0.89	5.68	5.05	0.37	68	0.32	0.76	0.35	63%	3%	86%	
PCR-35GN SR CDF (Green)	28	25	47	33	22	30	99	0.92	0.86	5.22	4.88	0.46	60	0.40	0.63	0.72	54%	11%	63%	
R-20 SR CDF (Silver)	14	54	32	18	62	62	99	0.94	0.88	5.34	5.00	0.24	79	0.21	0.71	0.75	76%	9%	80%	
R-35 SR CDF (Silver)	22	43	35	28	51	49	99	0.96	0.90	5.45	5.11	0.36	68	0.32	0.73	0.78	64%	7%	69%	
R-50 SR CDF (Silver)	38	26	36	49	27	26	99	0.97	0.91	5.51	5.17	0.53	54	0.46	0.75	0.92	47%	6%	46%	
DUAL REFLECTIVE SERIES																				
DR-15 SR CDF	16	37	47	15	37	13	99	0.92	0.86	5.22	4.88	0.30	74	0.26	0.63	0.50	70%	11%	83%	
DR-25 SR CDF	25	26	49	22	27	13	99	0.92	0.81	5.22	4.60	0.41	65	0.35	0.61	0.54	59%	11%	76%	
DR-35 SR CDF	35	19	46	36	19	13	99	0.93	0.82	5.28	4.66	0.52	56	0.44	0.61	0.69	48%	10%	60%	
LOW-E SERIES																				
E-1220 SR CDF (Silver)	9	57	34	13	65	70	99	0.71	0.65	4.0315	3.6908	0.24	79.4	0.2064	0.36	0.5417	76%	31%	86%	
DELUXE SERIES																				
DL-05G SR CDF (Gray)	14	25	61	6	13	13	99	0.92	0.81	5.22	4.60	0.35	70	0.30	0.62	0.17	65%	11%	93%	
DL-15B SR CDF (Bronze)	27	13	60	14	8	8	99	0.98	0.92	5.56	5.22	0.45	61	0.39	0.77	0.31	55%	5%	84%	
DL-15G SR CDF (Gray)	26	15	59	16	9	10	99	0.99	0.93	5.62	5.28	0.45	61	0.39	0.78	0.36	55%	4%	82%	
DL-30GR SR PS (Green)	29	20	51	30	17	17	99	0.98	0.91	5.56	5.17	0.53	54	0.46	0.76	0.57	47%	5%	67%	
N SERIES (LLUMALLOY)																				
N-1020 SR CDF (Neutral)	22	26	52	24	31	28	99	1.03	0.96	5.85	5.45	0.43	63	0.37	0.84	0.56	57%	0%	73%	
N-1040 SR CDF (Neutral)	36	15	49	41	18	15	99	1.00	0.94	5.68	5.34	0.58	50	0.50	0.81	0.71	42%	3%	54%	
N-1050 SR CDF (Neutral)	44	13	43	50	15	12	99	1.03	0.96	5.85	5.45	0.64	45	0.55	0.84	0.78	36%	0%	44%	
N-1065 SR CDF (Neutral)	65	9	26	71	10	9	99	1.03	0.96	5.85	5.45	0.82	29	0.71	0.84	0.87	18%	0%	21%	
N-1020B SR CDF (Bronze)	14	44	42	21	37	35	99	0.93	0.87	5.28	4.94	0.26	77	0.23	0.69	0.81	74%	10%	77%	
N-1035B SR CDF (Bronze)	27	35	38	38	25	23	99	0.94	0.88	5.34	5.00	0.43	62	0.38	0.71	0.88	57%	9%	58%	
N-1050B SR CDF (Bronze)	43	23	34	55	16	14	99	0.96	0.90	5.45	5.11	0.57	51	0.49	0.73	0.96	43%	7%	39%	
NONREFLECTIVE SERIES																				
NRM-PS2 (Frosty)	72	16	12	79	21		99	1.03	0.91			0.87	25	0.75	0.84	0.84	13%	0%	12%	
NRMB-PS2 (Bronze)	50	13	37	36	11		98	1.03				0.69	39	0.38	0.84	0.52	31%	0%	60%	
NRMM-PS3 (Black)	0	11	89	0	13		100	1.03				0.32	72	0.28	0.84	0.00	68%	0%	100%	
NRMW-PS3 (White)	18	66	16	14	87		99	1.03	0.93			0.26	77	0.23	0.84	0.28	74%	0%	84%	
RMS-PS2 (Silver)	13	57	30	16	60		99	1.03				0.24	79	0.21	0.72	0.67	76%	0%	82%	
UV CL-SR PS (Clear)	84	9	7	84	9		99.9	0.99				0.99	62	0.38	0.83	0.85	1%	4%	7%	

PATTERN SERIES																				
NRM FS SR HPR (stripes)	72	17	11	73	20		99	1.03					0.90	21	0.77	0.84	0.81	10%	0%	17%
NRM FB SR HPR (bands)	63	19	18	63	23		99	1.03					0.80	30	0.38	0.84	0.79	20%	0%	28%
NRM FTL SR HPR (thin lines)	70	19	11	73	20		99	1.03					0.84	27	0.72	0.84	0.86	16%	0%	20%
NRM FSD SR HPR (small dots)	78	12	10	82	13		99	1.03					0.94	19	0.38	0.84	0.87	6%	0%	9%
NRM FMD SR HPR (mini dots)	76	12	12	81	15		99	1.03					0.91	21	0.78	0.84	0.88	9%	0%	10%
NRM MSQ SR HPR (matte squares)	61	20	19	61	25		99	1.03					0.75	34	0.38	0.84	0.80	25%	0%	33%
NRM FSQ SR HPR (squares)	68	16	16	69	20		99	1.03					0.87	23	0.75	0.84	0.79	13%	0%	22%
FROSTED SPARKLE	70	16	14	73	19		83	1.03					0.85	26	0.73	0.84	0.86	15%	0%	17%
RICE PAPER	63	23	14	67	25		99	1.01					0.77	34	0.66	0.81	0.87	23%	2%	26%
GRAPHICS ARTS SERIES																				
BLUE SR HPR	61	8	31	28	8		98	1.03					0.80	30	0.69	0.84	0.35	15%	0%	68%
GREEN SR HPR	46	7	47	32	8		98	1.03					0.68	41	0.38	0.84	0.47	28%	0%	64%
RED SR HPR	59	8	33	26	8		98	1.03					0.79	31	0.68	0.84	0.33	16%	0%	70%
YELLOW SR HPR	73	9	18	85	8		98	1.03					0.90	22	0.38	0.84	0.94	4%	0%	3%
SAFETY SERIES																				
SCL SR PS4	81	9	10	89	10		95	1.03					0.97	16	0.83	0.84	0.92	1%	0%	1%
SCL SR PS6	79	9	12	88	10		99	1.03					0.94	18	0.38	0.84	0.94	5%	0%	2%
SCL SR PS7	81	9	10	88	10		95	1.03					0.96	16	0.83	0.84	0.92	2%	0%	2%
SCL SR PS8	78	9	13	88	11		99	1.03					0.94	18	0.38	0.84	0.94	5%	0%	2%
SCL SR PS11	78	9	13	85	11		99	1.03					0.93	19	0.80	0.84	0.91	6%	0%	6%
SCL SR PS15	76	10	14	83	11		99	1.03					0.92	20	0.38	0.84	0.90	7%	0%	8%
R-30B SR PS4	24	22	54	22	12	29	99	0.96	0.90	5.45	5.11	0.43	63	0.37	0.74	0.51	57%	7%	79%	
R-20 SR PS4 & 8	14	54	32	18	62	62	99	0.94	0.88	5.34	5.00	0.24	79	0.38	0.71	0.75	76%	9%	80%	
N-1020 SR PS4 & 8	22	26	52	24	31	28	99	1.03	0.96	5.85	5.45	0.43	63	0.37	0.84	0.56	57%	0%	73%	
N-1040 SRPS4 & 8	36	16	48	41	18	15	99	1.03	0.96	5.85	5.45	0.55	53	0.47	0.84	0.75	45%	0%	54%	
N-1050 SR PS4 & 8	44	13	43	50	15	12	99	1.03	0.96	5.85	5.45	0.64	45	0.55	0.84	0.78	36%	0%	44%	
NUV65 SR PS4	63	9	28	63	11	10	99.9	1.03	0.96	5.85	5.45	0.79	29	0.71	0.84	0.80	18%	0%	22%	
GRAFFITI SERIES																				
GCL SR PS4	81	9	10	89	10		95	1.02					0.97	16	0.84	0.84	0.92	2%	1%	1%
GCL SR PS6	79	8	13	89	10		99	1.02					0.95	17	0.83	0.84	0.94	5%	1%	1%
EXTERIOR SERIES																				
RK-20 PS (Silver)	14	65	21	18	62	62	99	1.02	0.95	5.7918	5.3943	0.23	80.2	0.20	0.71	0.7826	77%	1%	80%	

CHART 2: Single-Pane, 1/4 Inch (6mm), 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film		
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	77	7	16	88	8	8	38	1.00	0.96	5.68	5.47	0.94	19	0.81	0.84	0.94	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	9	29	62	10	19	60	99	0.92	0.86	5.22	4.88	0.28	76	0.24	0.70	0.36	70%	8%	89%
R-15G SR CDF (Gray)	8	27	65	7	13	61	99	0.92	0.86	5.22	4.88	0.30	74	0.26	0.70	0.23	68%	8%	92%
R-15BL SR PS (Blue)	9	32	59	10	24	62	99	0.92	0.86	5.22	4.88	0.34	71	0.29	0.70	0.29	64%	8%	89%
R-15GO SR PS (Gold)	10	43	47	14	50	64	99	0.92	0.86	5.22	4.88	0.27	77	0.23	0.70	0.52	71%	8%	84%
R-30B SR CDF (Bronze)	22	19	59	22	12	29	99	0.95	0.89	5.39	5.05	0.42	64	0.36	0.74	0.52	55%	5%	75%
R-30G SR CDF (Gray)	22	19	59	22	13	31	99	0.95	0.89	5.39	5.05	0.43	63	0.37	0.75	0.51	54%	5%	75%
PCR-15BL SR CDF (Blue)	14	22	64	13	22	33	99	0.97	0.88	5.51	5.00	0.35	70	0.30	0.76	0.37	63%	3%	85%
PCR-35GN SR CDF (Green)	26	22	52	33	21	30	99	0.90	0.81	5.11	4.60	0.46	61	0.39	0.63	0.73	52%	10%	63%
R-20 SR CDF(Silver)	13	47	40	18	60	62	99	0.93	0.87	5.28	4.94	0.25	79	0.22	0.71	0.72	73%	7%	80%
R-35 SR CDF (Silver)	20	38	42	28	49	49	99	0.94	0.88	5.34	5.00	0.36	69	0.31	0.73	0.78	62%	6%	68%
R-50 SR CDF(Silver)	35	23	42	48	26	26	99	0.95	0.89	5.39	5.05	0.51	56	0.44	0.75	0.94	46%	5%	45%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	14	35	51	15	37	13	99	0.90	0.81	5.11	4.60	0.28	76	0.24	0.63	0.54	70%	10%	83%
DR-25 SR CDF	23	23	54	22	27	13	99	0.89	0.80	5.05	4.54	0.39	66	0.34	0.61	0.56	59%	11%	75%
DR-35 SR CDF	32	17	51	35	19	13	99	0.90	0.81	5.11	4.60	0.49	58	0.42	0.61	0.71	48%	10%	60%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	9	49	42	13	63	70	99	0.70	0.65	3.97	3.69	0.25	79	0.22	0.36	0.52	73%	30%	85%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	13	22	65	6	13	13	99	0.91	0.80	5.17	4.55	0.33	72	0.28	0.62	0.18	65%	9%	93%
DL-15B SR CDF (Bronze)	24	11	65	13	8	8	99	0.96	0.90	5.45	5.11	0.44	62	0.38	0.77	0.30	53%	4%	85%
DL-15G SR CDF (Gray)	24	13	63	16	9	10	99	0.97	0.91	5.51	5.17	0.44	62	0.38	0.78	0.36	53%	3%	82%
DL-30GR SR PS (Green)	27	17	56	30	16	17	99	0.96	0.90	5.45	5.11	0.51	56	0.44	0.76	0.59	46%	4%	66%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	20	23	57	24	30	28	99	1.00	0.94	5.68	5.34	0.42	64	0.36	0.84	0.57	55%	0%	73%
N-1040 SR CDF (Neutral)	33	14	53	40	18	15	99	0.99	0.93	5.62	5.28	0.57	51	0.49	0.81	0.70	39%	1%	55%
N-1050 SR CDF (Neutral)	41	11	48	49	14	12	99	1.00	0.94	5.68	5.34	0.61	48	0.52	0.84	0.80	35%	0%	44%
N-1065 SR CDF (Neutral)	60	8	32	70	10	9	99	1.00	0.94	5.68	5.34	0.80	31	0.69	0.84	0.88	15%	0%	20%
N-1020B SR CDF (Bronze)	13	38	49	21	35	35	99	0.92	0.86	5.22	4.88	0.28	76	0.24	0.69	0.75	70%	8%	76%
N-1035B SR CDF (Bronze)	25	30	45	37	24	23	99	0.93	0.87	5.28	4.94	0.43	63	0.37	0.71	0.86	54%	7%	58%
N-1050B SR CDF (Bronze)	40	20	40	54	16	14	99	0.94	0.88	5.34	5.00	0.55	53	0.47	0.73	0.98	41%	6%	39%
EXTERIOR SERIES																			
RK-20 PS (Silver)	12	65	23	18	62	60	99	1.00	0.93	5.68	5.28	0.23	81	0.19	0.71	0.80	76%	0%	80%

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



	(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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film			
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction	
Window without film applied:	61	6	33	62	6	6	61	1.03	0.96	5.87	5.47	0.81	30	0.70	0.84	0.77	-	-	-	
Window with film applied:																				
RELECTIVE SERIES																				
R-15B SR CDF (Bronze)	8	22	70	7	8	60	99	0.94	0.88	5.34	5.00	0.32	72	0.28	0.70	0.22	60%	9%	89%	
R-15G SR CDF (Gray)	7	20	73	5	9	61	99	0.94	0.88	5.34	5.00	0.32	72	0.28	0.70	0.16	60%	9%	92%	
R-15BL SR PS (Blue)	7	23	70	7	14	62	99	0.94	0.88	5.34	5.00	0.32	72	0.28	0.70	0.22	60%	9%	89%	
R-15GO SR PS (Gold)	8	29	63	10	26	64	99	0.94	0.88	5.34	5.00	0.30	74	0.26	0.70	0.33	63%	9%	84%	
R-30B SR CDF (Bronze)	18	14	68	15	8	29	99	0.96	0.90	5.45	5.11	0.43	63	0.37	0.74	0.35	47%	7%	76%	
R-30G SR CDF (Gray)	17	14	69	16	8	30	99	0.97	0.91	5.51	5.17	0.43	63	0.37	0.75	0.37	47%	6%	74%	
PCR-15BL SR CDF (Blue)	11	16	73	9	12	33	99	0.98	0.92	5.56	5.22	0.38	68	0.32	0.76	0.24	54%	5%	85%	
PCR-35GN SR CDF (Green)	20	16	64	23	13	30	99	0.89	0.84	5.05	4.77	0.43	63	0.37	0.63	0.53	47%	14%	63%	
R-20 SR CDF (Silver)	10	31	59	12	31	62	99	0.94	0.88	5.34	5.00	0.31	74	0.26	0.71	0.39	62%	9%	81%	
R-35 SR CDF (Silver)	13	25	62	17	25	49	99	0.96	0.90	5.45	5.11	0.36	69	0.31	0.73	0.48	56%	7%	73%	
R-50 SR CDF (Silver)	27	16	57	33	15	26	99	0.98	0.97	0.91	5.51	0.50	57	0.43	0.75	0.65	38%	5%	47%	
DUAL REFLECTIVE SERIES																				
DR-15 SR CDF	12	22	66	10	21	13	99	0.89	0.84	5.05	4.77	0.35	70	0.30	0.63	0.29	57%	14%	84%	
DR-25 SR CDF	20	14	66	17	13	11	99	0.88	0.82	5.00	4.66	0.44	63	0.37	0.61	0.39	46%	15%	73%	
DR-35 SR CDF	25	13	62	25	11	13	99	0.88	0.82	5.00	4.66	0.48	59	0.41	0.61	0.52	41%	15%	60%	
LOW-E SERIES																				
E-1220 SR CDF (Silver)	7	32	61	9	32	70	99	0.71	0.65	4.03	3.69	0.24	79	0.21	0.36	0.38	70%	31%	85%	
DELUXE SERIES																				
DL-05G SR CDF (Gray)	9	16	75	4	8	12	99	0.89	0.83	5.05	4.71	0.34	71	0.29	0.62	0.12	58%	14%	94%	
DL-15B SR CDF (Bronze)	20	9	71	9	6	8	99	0.98	0.92	5.56	5.22	0.48	59	0.41	0.77	0.19	41%	5%	85%	
DL-15G SR CDF (Gray)	19	10	71	11	7	10	99	0.99	0.92	5.62	5.22	0.47	60	0.40	0.76	0.23	42%	4%	82%	
DL-30GR SR PS (Green)	13	7	80	8	6	10	99	0.99	1.09	5.62	6.19	0.41	65	0.35	0.76	0.20	49%	4%	87%	
N SERIES (LLUMALLOY)																				
N-1020 SR CDF (Neutral)	16	16	68	16	17	28	99	1.02	0.96	5.79	5.45	0.43	63	0.37	0.84	0.38	47%	1%	74%	
N-1040 SR CDF (Neutral)	26	10	64	28	11	14	99	1.00	0.94	5.68	5.34	0.53	55	0.45	0.81	0.53	35%	3%	55%	
N-1050 SR CDF (Neutral)	32	9	59	34	9	11	99	1.02	0.96	5.79	5.45	0.58	50	0.50	0.84	0.59	28%	1%	45%	
N-1065 SR CDF (Neutral)	48	7	45	49	7	7	99	1.02	0.96	5.79	5.45	0.71	39	0.61	0.84	0.69	12%	1%	21%	
N-1020B SR CDF (Bronze)	10	26	64	14	19	35	99	0.93	0.87	5.28	4.94	0.33	72	0.28	0.69	0.43	60%	10%	77%	
N-1035B SR CDF (Bronze)	20	21	59	26	14	23	99	0.94	0.88	5.34	5.00	0.42	64	0.36	0.71	0.62	48%	9%	58%	
N-1050B SR CDF (Bronze)	31	15	54	37	10	13	99	0.96	0.89	5.45	5.05	0.54	54	0.46	0.73	0.69	33%	7%	40%	
EXTERIOR SERIES																				
RK-20 PS (Silver)	10	64	26	12	62	31	99	1.02	0.95	5.79	5.39	0.20	83	0.17	0.71	0.60	75%	1%	81%	

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



	(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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film			
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction	
Window without film applied:	42	5	53	44	6	6	76	1.00	0.96	5.68	5.47	0.67	42	0.58	0.84	0.66	-	-	-	
Window with film applied:																				
RELECTIVE SERIES																				
R-15B SR CDF (Bronze)	5	13	82	5	8	60	99	0.92	0.86	5.22	4.88	0.34	71	0.29	0.70	0.15	49%	8%	89%	
R-15G SR CDF (Gray)	4	12	84	4	7	61	99	0.92	0.86	5.22	4.88	0.34	71	0.29	0.70	0.12	50%	8%	91%	
R-15BL SR PS (Blue)	5	13	82	5	10	62	99	0.92	0.86	5.22	4.88	0.34	71	0.29	0.70	0.15	50%	8%	89%	
R-15GO SR PS (Gold)	5	17	78	7	16	64	99	0.92	0.86	5.22	4.88	0.33	72	0.28	0.70	0.21	51%	8%	84%	
R-30B SR CDF (Bronze)	12	9	79	11	7	29	99	0.95	0.89	5.39	5.05	0.41	65	0.35	0.74	0.27	39%	5%	75%	
R-30G SR CDF (Gray)	12	9	79	11	7	31	99	0.95	0.89	5.39	5.05	0.41	65	0.35	0.75	0.27	39%	5%	75%	
PCR-15BL SR CDF (Blue)	7	10	83	6	9	33	99	0.96	0.90	5.45	5.11	0.37	68	0.32	0.76	0.16	45%	4%	86%	
PCR-35GN SR CDF (Green)	14	10	76	16	9	30	99	0.88	0.83	5.00	4.71	0.41	65	0.35	0.63	0.40	40%	12%	64%	
R-20 SR CDF (Silver)	7	18	75	9	19	62	99	0.96	0.87	5.45	4.94	0.34	71	0.29	0.71	0.27	50%	4%	80%	
R-35 SR CDF (Silver)	9	15	76	13	16	49	99	0.94	0.88	5.34	5.00	0.36	69	0.31	0.73	0.36	46%	6%	70%	
R-50 SR CDF (Silver)	19	10	71	24	10	25	99	0.95	0.88	5.39	5.00	0.46	60	0.40	0.75	0.52	31%	5%	45%	
DUAL REFLECTIVE SERIES																				
DR-15 SR CDF	8	13	79	7	13	13	99	0.88	0.83	5.00	4.71	0.35	70	0.30	0.63	0.20	49%	12%	84%	
DR-25 SR CDF	14	9	77	13	9	11	99	0.87	0.81	4.94	4.60	0.40	66	0.34	0.61	0.33	40%	13%	70%	
DR-35 SR CDF	17	8	75	18	8	13	99	0.87	0.81	4.94	4.60	0.43	63	0.37	0.61	0.42	36%	13%	59%	
LOW-E SERIES																				
E-1220 SR CDF (Silver)	5	18	77	6	19	70	99	0.70	0.76	3.97	4.32	0.26	78	0.22	0.36	0.23	61%	30%	86%	
DELUXE SERIES																				
DL-05G SR CDF (Gray)	6	10	84	3	6	12	99	0.87	0.82	4.94	4.66	0.34	71	0.29	0.62	0.09	49%	13%	93%	
DL-15B SR CDF (Bronze)	13	7	80	7	5	8	99	0.97	0.90	5.51	5.11	0.43	63	0.37	0.77	0.16	35%	3%	84%	
DL-15G SR CDF (Gray)	13	7	80	8	6	10	99	0.97	0.91	5.51	5.17	0.43	63	0.37	0.78	0.19	36%	3%	82%	
DL-30GR SR PS (Green)	14	9	77	15	8	16	99	0.96	0.90	5.45	5.11	0.43	63	0.37	0.76	0.35	36%	4%	66%	
N SERIES (LLUMALLOY)																				
N-1020 SR CDF (Neutral)	11	10	79	12	11	28	99	1.00	0.94	5.68	5.34	0.41	65	0.35	0.84	0.29	39%	0%	73%	
N-1040 SR CDF (Neutral)	18	7	75	20	8	14	99	0.99	0.93	5.62	5.28	0.48	59	0.41	0.81	0.42	28%	1%	55%	
N-1050 SR CDF (Neutral)	22	7	71	24	7	11	99	1.00	0.94	5.68	5.34	0.51	56	0.44	0.84	0.47	24%	0%	45%	
N-1065 SR CDF (Neutral)	33	6	61	35	6	7	99	1.00	0.94	5.68	5.34	0.60	49	0.51	0.84	0.59	11%	0%	20%	
N-1020B SR CDF (Bronze)	7	15	78	10	12	35	99	0.92	0.86	5.22	4.88	0.34	71	0.29	0.69	0.29	49%	8%	77%	
N-1035B SR CDF (Bronze)	14	13	73	19	10	23	99	0.93	0.87	5.28	4.94	0.41	65	0.35	0.71	0.47	39%	7%	57%	
N-1050B SR CDF (Bronze)	21	10	69	27	8	13	99	0.94	0.88	5.34	5.00	0.48	58	0.42	0.73	0.56	28%	6%	39%	
EXTERIOR SERIES																				
RK-20 PS (Silver)	4	35	61	5	38	62	99	0.93	0.87	5.28	4.94	0.26	78	0.22	0.71	0.20	62%	7%	89%	

CHART 5: Dual-Pane, 1/8 inch (3mm) Panes, Both Panes 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	70	13	17	81	15	15	44	0.57	0.57	3.24	3.24	0.88	24	0.76	0.84	0.92	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	9	32	59	9	24	60	99	0.54	0.54	3.07	3.07	0.43	63	0.37	0.70	0.21	51%	5%	89%
R-15G SR CDF (Gray)	8	30	62	7	19	61	99	0.54	0.54	3.07	3.07	0.44	62	0.38	0.70	0.16	50%	5%	91%
R-15BL SR PS (Blue)	9	34	57	10	29	63	99	0.54	0.54	3.07	3.07	0.42	64	0.36	0.70	0.24	52%	5%	88%
R-15GO SR PS (Gold)	10	44	46	13	52	64	99	0.54	0.54	3.07	3.07	0.35	70	0.30	0.70	0.37	60%	5%	84%
R-30B SR CDF (Bronze)	20	22	58	20	18	30	99	0.55	0.55	3.12	3.12	0.56	52	0.48	0.74	0.36	36%	4%	75%
R-30G SR CDF (Gray)	20	23	57	21	19	19	99	0.55	0.55	3.12	3.12	0.56	52	0.48	0.75	0.38	36%	4%	74%
PCR-15BL SR CDF (Blue)	12	26	62	12	26	33	99	0.56	0.56	3.18	3.18	0.51	57	0.43	0.76	0.24	43%	2%	85%
PCR-35GN SR CDF (Green)	24	25	51	31	26	31	99	0.53	0.53	3.01	3.01	0.57	51	0.49	0.63	0.55	36%	7%	62%
R-20 SR CDF (Silver)	12	48	40	17	61	63	99	0.54	0.54	3.07	3.07	0.34	71	0.29	0.71	0.50	61%	5%	79%
R-35 SR CDF (Silver)	16	41	43	24	51	50	99	0.55	0.55	3.12	3.12	0.41	65	0.35	0.73	0.59	53%	4%	70%
R-50 SR CDF (Silver)	33	26	41	45	31	28	99	0.55	0.55	3.12	3.12	0.59	49	0.51	0.75	0.76	33%	4%	44%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	14	34	52	13	41	13	99	0.53	0.53	3.01	3.01	0.45	61	0.39	0.63	0.29	48%	7%	84%
DR-25 SR CDF	21	26	53	20	31	13	99	0.52	0.52	2.95	2.95	0.52	55	0.45	0.61	0.38	41%	9%	75%
DR-35 SR CDF	29	21	50	33	24	14	99	0.52	0.52	2.95	2.95	0.60	48	0.52	0.61	0.55	32%	9%	59%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	8	49	43	12	64	70	99	0.45	0.44	2.56	2.50	0.28	76	0.24	0.36	0.43	68%	21%	85%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	11	25	64	6	18	12	99	0.53	0.54	3.01	3.07	0.48	59	0.41	0.62	0.13	45%	7%	93%
DL-15B SR CDF (Bronze)	22	16	62	12	15	8	99	0.50	0.51	2.84	2.90	0.62	47	0.53	0.77	0.19	30%	12%	85%
DL-15G SR CDF (Gray)	22	18	60	15	16	10	99	0.56	0.56	3.18	3.18	0.61	48	0.52	0.78	0.25	31%	2%	81%
DL-30GR SR PS (Green)	25	21	54	27	22	17	99	0.55	0.56	3.12	3.18	0.59	49	0.51	0.76	0.46	33%	4%	67%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	19	26	55	22	34	28	99	0.57	0.57	3.24	3.24	0.54	54	0.46	0.84	0.41	39%	0%	73%
N-1040 SR CDF (Neutral)	31	18	51	37	23	16	99	0.56	0.57	3.18	3.24	0.65	44	0.56	0.81	0.57	26%	2%	54%
N-1050 SR CDF (Neutral)	38	16	46	45	20	14	99	0.57	0.57	3.24	3.24	0.70	40	0.60	0.84	0.64	20%	0%	44%
N-1065 SR CDF (Neutral)	55	14	31	65	17	13	99	0.57	0.57	3.24	3.24	0.80	31	0.69	0.84	0.81	9%	0%	20%
N-1020B SR CDF (Bronze)	12	39	49	19	39	35	99	0.54	0.54	3.07	3.07	0.40	66	0.34	0.69	0.48	55%	5%	77%
N-1035B SR CDF (Bronze)	24	32	44	35	29	24	99	0.54	0.54	3.07	3.07	0.51	56	0.44	0.71	0.69	42%	5%	57%
N-1050B SR CDF (Bronze)	37	24	39	50	22	17	99	0.54	0.54	3.07	3.07	0.63	46	0.54	0.73	0.79	28%	5%	38%
EXTERIOR SERIES																			
RK-20 PS (Silver)	12	65	23	17	63	62	99	0.57	0.57	3.24	3.24	0.19	84	0.16	0.71	0.89	78%	0%	79%

CHART 6: Dual-Pane, 1/4 inch (6mm) Panes, Both Panes 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	61	11	28	79	14	14	54	0.49	0.50	2.78	2.84	0.81	30	0.70	0.84	0.98	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	7	24	69	8	23	60	99	0.47	0.49	2.67	2.78	0.47	60	0.40	0.70	0.17	42%	4%	90%
R-15G SR CDF (Gray)	6	23	71	6	18	61	99	0.47	0.49	2.67	2.78	0.48	59	0.41	0.70	0.13	41%	4%	92%
R-15BL SR PS (Blue)	7	26	67	9	27	63	99	0.47	0.49	2.67	2.78	0.45	61	0.39	0.70	0.20	44%	4%	89%
R-15GO SR PS (Gold)	8	35	57	13	49	64	99	0.47	0.49	2.67	2.78	0.39	66	0.34	0.70	0.33	52%	4%	84%
R-30B SR CDF (Bronze)	17	18	65	19	17	30	99	0.48	0.49	2.73	2.78	0.57	51	0.49	0.74	0.33	30%	2%	76%
R-30G SR CDF (Gray)	17	18	65	20	18	31	99	0.47	0.49	2.67	2.78	0.56	52	0.48	0.75	0.36	31%	4%	75%
PCR-15BL SR CDF (Blue)	11	21	68	12	25	33	99	0.48	0.49	2.73	2.78	0.52	56	0.44	0.76	0.23	36%	2%	85%
PCR-35GN SR CDF (Green)	20	20	60	29	25	31	99	0.46	0.47	2.61	2.67	0.55	53	0.47	0.63	0.53	32%	6%	63%
R-20 SR CDF (Silver)	10	38	52	17	57	63	99	0.47	0.49	2.67	2.78	0.38	68	0.32	0.71	0.45	54%	4%	78%
R-35 SR CDF (Silver)	14	33	53	23	48	50	99	0.47	0.49	2.67	2.78	0.43	63	0.37	0.73	0.53	47%	4%	71%
R-50 SR CDF (Silver)	28	22	50	43	29	28	99	0.47	0.49	2.67	2.78	0.58	50	0.50	0.75	0.74	28%	4%	46%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	11	28	61	13	38	13	99	0.46	0.47	2.61	2.67	0.45	61	0.39	0.63	0.29	44%	6%	84%
DR-25 SR CDF	20	19	61	23	25	11	99	0.45	0.46	2.56	2.61	0.55	53	0.47	0.61	0.42	32%	8%	71%
DR-35 SR CDF	25	18	57	32	23	14	99	0.45	0.46	2.56	2.61	0.59	49	0.51	0.61	0.54	27%	8%	59%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	7	39	54	12	60	70	99	0.39	0.40	2.21	2.27	0.32	73	0.27	0.36	0.38	61%	20%	85%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	8	19	73	5	17	12	99	0.45	0.46	2.56	2.61	0.50	57	0.43	0.62	0.10	38%	8%	94%
DL-15B SR CDF (Bronze)	18	13	69	12	14	8	99	0.48	0.49	2.73	2.78	0.61	48	0.52	0.77	0.20	25%	2%	85%
DL-15G SR CDF (Gray)	18	15	67	14	15	10	99	0.49	0.50	2.78	2.84	0.60	48	0.52	0.78	0.23	26%	0%	82%
DL-30GR SR PS (Green)	21	18	61	27	21	17	99	0.48	0.49	2.73	2.78	0.59	50	0.50	0.76	0.46	28%	2%	66%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	16	22	62	21	32	29	99	0.49	0.50	2.78	2.84	0.54	53	0.47	0.84	0.39	33%	0%	73%
N-1040 SR CDF (Neutral)	26	16	58	36	22	16	99	0.48	0.50	2.73	2.84	0.63	46	0.54	0.81	0.57	22%	2%	54%
N-1050 SR CDF (Neutral)	32	14	54	43	19	14	99	0.49	0.50	2.78	2.84	0.67	42	0.58	0.84	0.64	17%	0%	46%
N-1065 SR CDF (Neutral)	47	12	41	62	16	13	99	0.49	0.50	2.78	2.84	0.75	36	0.65	0.84	0.83	7%	0%	22%
N-1020B SR CDF (Bronze)	11	31	58	19	36	35	99	0.47	0.50	2.67	2.84	0.43	63	0.37	0.69	0.44	47%	4%	76%
N-1035B SR CDF (Bronze)	21	25	54	34	27	24	99	0.47	0.50	2.67	2.84	0.52	55	0.45	0.71	0.65	36%	4%	57%
N-1050B SR CDF (Bronze)	32	19	49	48	20	17	99	0.48	0.51	2.73	2.90	0.62	47	0.53	0.73	0.77	23%	2%	39%
EXTERIOR SERIES																			
RK-20 PS (Silver)	10	65	25	16	63	58	99	0.49	0.50	2.78	2.84	0.17	85	0.15	0.71	0.94	79%	0%	80%

CHART 7: 1/8 Inch (3mm) Panes, Tinted Exterior Pane, Clear Interior Pane



																			<i>Compared to window w/o film</i>		
	(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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction		
Window without film applied:	51	9	40	56	9	13	67	0.57	0.57	3.24	3.24	0.70	40	0.60	0.84	0.80	-	-	-		
Window with film applied:																					
RELECTIVE SERIES																					
R-15B SR CDF (Bronze)	64	20	16	6	14	60	99	0.54	0.54	3.07	3.07	0.38	68	0.32	0.70	0.16	46%	5%	89%		
R-15G SR CDF (Gray)	6	19	75	4	11	61	99	0.54	0.54	3.07	3.07	0.38	67	0.33	0.70	0.11	45%	5%	93%		
R-15BL SR PS (Blue)	6	21	73	7	16	63	99	0.54	0.54	3.07	3.07	0.37	69	0.31	0.70	0.19	48%	5%	88%		
R-15GO SR PS (Gold)	7	26	67	9	26	64	99	0.54	0.54	3.07	3.07	0.32	72	0.28	0.70	0.28	54%	5%	84%		
R-30B SR CDF (Bronze)	15	14	71	14	11	30	99	0.54	0.54	3.07	3.07	0.47	60	0.40	0.74	0.30	33%	5%	75%		
R-30G SR CDF (Gray)	15	15	70	14	11	31	99	0.54	0.54	3.07	3.07	0.47	60	0.40	0.75	0.30	33%	5%	75%		
PCR-15BL SR CDF (Blue)	12	26	62	12	26	33	99	0.56	0.56	3.18	3.18	0.51	56	0.44	0.76	0.24	27%	2%	79%		
PCR-35GN SR CDF (Green)	17	16	67	21	15	31	99	0.53	0.54	3.01	3.07	0.46	60	0.40	0.63	0.45	33%	7%	63%		
R-20 SR CDF (Silver)	9	28	63	12	31	63	99	0.54	0.54	3.07	3.07	0.32	73	0.27	0.71	0.38	55%	5%	79%		
R-35 SR CDF (Silver)	11	23	66	16	26	50	99	0.54	0.54	3.07	3.07	0.36	69	0.31	0.73	0.44	48%	5%	71%		
R-50 SR CDF (Silver)	24	16	60	31	17	28	99	0.55	0.55	3.12	3.12	0.49	58	0.42	0.75	0.63	30%	4%	45%		
DUAL REFLECTIVE SERIES																					
DR-15 SR CDF	10	20	70	9	21	13	99	0.53	0.54	3.01	3.07	0.39	67	0.33	0.63	0.23	45%	7%	84%		
DR-25 SR CDF	15	16	69	14	17	13	99	0.52	0.53	2.95	3.01	0.44	62	0.38	0.61	0.32	37%	9%	75%		
DR-35 SR CDF	21	13	66	22	14	14	99	0.52	0.53	2.95	3.01	0.49	58	0.42	0.61	0.45	30%	9%	61%		
LOW-E SERIES																					
E-1220 SR CDF (Silver)	6	28	66	8	32	70	99	0.45	0.44	2.56	2.50	0.26	77	0.23	0.36	0.30	62%	21%	86%		
DELUXE SERIES																					
DL-05G SR CDF (Gray)	8	16	76	4	11	12	99	0.53	0.54	3.01	3.07	0.41	65	0.35	0.62	0.10	41%	7%	93%		
DL-15B SR CDF (Bronze)	16	11	73	8	9	8	99	0.55	0.56	3.12	3.18	0.51	56	0.44	0.77	0.16	27%	4%	86%		
DL-15G SR CDF (Gray)	16	12	72	10	10	10	99	0.56	0.56	3.18	3.18	0.50	57	0.43	0.78	0.20	28%	2%	82%		
DL-30GR SR PS (Green)	18	14	68	19	13	17	99	0.55	0.56	3.12	3.18	0.49	58	0.42	0.76	0.39	30%	4%	66%		
N SERIES (LLUMALLOY)																					
N-1020 SR CDF (Neutral)	14	16	70	15	18	28	99	0.57	0.57	3.24	3.24	0.46	61	0.39	0.84	0.33	34%	0%	73%		
N-1040 SR CDF (Neutral)	22	12	66	25	13	16	99	0.56	0.57	3.18	3.24	0.53	54	0.46	0.81	0.47	24%	2%	55%		
N-1050 SR CDF (Neutral)	27	11	62	31	12	13	99	0.57	0.57	3.24	3.24	0.57	51	0.49	0.84	0.54	18%	0%	45%		
N-1065 SR CDF (Neutral)	40	9	51	44	10	12	99	0.57	0.57	3.24	3.24	0.64	45	0.55	0.84	0.69	8%	0%	21%		
N-1020B SR CDF (Bronze)	9	13	78	13	20	35	99	0.54	0.54	3.07	3.07	0.35	70	0.30	0.69	0.37	50%	5%	77%		
N-1035B SR CDF (Bronze)	17	20	63	24	16	24	99	0.54	0.54	3.07	3.07	0.43	63	0.37	0.71	0.56	38%	5%	57%		
N-1050B SR CDF (Bronze)	27	15	58	34	12	16	99	0.54	0.54	3.07	3.07	0.52	55	0.45	0.73	0.65	25%	5%	39%		
EXTERIOR SERIES																					
RK-20 PS (Silver)	8	65	27	11	62	34	99	0.57	0.57	3.24	3.24	0.16	86	0.14	0.71	70%	77%	0%	80%		

CHART 8: Dual-Pane, 1/4 Inch (6mm) Panes, Tinted 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	33	7	60	39	7	13	81	0.49	0.50	2.78	2.84	0.53	54	0.46	0.84	0.74	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	4	11	85	4	9	60	99	0.47	0.48	2.67	2.73	0.34	71	0.29	0.70	0.12	36%	4%	90%
R-15G SR CDF (Gray)	3	10	87	3	8	61	99	0.47	0.48	2.67	2.73	0.34	71	0.29	0.70	0.09	36%	4%	92%
R-15BL SR PS (Blue)	4	11	85	5	10	63	99	0.47	0.48	2.67	2.73	0.33	72	0.28	0.70	0.15	38%	4%	87%
R-15GO SR PS (Gold)	4	14	82	6	16	64	99	0.47	0.48	2.67	2.73	0.30	74	0.26	0.70	0.20	43%	4%	85%
R-30B SR CDF (Bronze)	9	9	82	10	8	30	99	0.47	0.48	2.67	2.73	0.39	66	0.34	0.74	0.26	26%	4%	74%
R-30G SR CDF (Gray)	9	9	82	10	8	31	99	0.47	0.49	2.67	2.78	0.39	66	0.34	0.75	0.26	26%	4%	74%
PCR-15BL SR CDF (Blue)	6	9	85	6	10	33	99	0.48	0.49	2.73	2.78	0.37	68	0.32	0.76	0.16	30%	2%	85%
PCR-35GN SR CDF (Green)	11	9	80	15	10	31	99	0.46	0.47	2.61	2.67	0.38	67	0.33	0.63	0.39	28%	6%	62%
R-20 SR CDF (Silver)	5	15	80	8	18	63	99	0.47	0.48	2.67	2.73	0.30	75	0.25	0.71	0.27	44%	4%	79%
R-35 SR CDF (Silver)	8	13	79	12	16	50	99	0.47	0.48	2.67	2.73	0.33	72	0.28	0.73	0.36	38%	4%	69%
R-50 SR CDF (Silver)	15	10	75	22	11	28	99	0.47	0.49	2.67	2.78	0.41	65	0.35	0.75	0.54	24%	4%	44%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	6	11	83	6	13	13	99	0.46	0.47	2.61	2.67	0.33	72	0.28	0.63	0.18	38%	6%	85%
DR-25 SR CDF	11	9	80	11	10	11	99	0.45	0.46	2.56	2.61	0.38	67	0.33	0.61	0.29	28%	8%	72%
DR-35 SR CDF	13	9	78	16	9	14	99	0.45	0.46	2.56	2.61	0.40	66	0.34	0.61	0.40	25%	8%	59%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	4	15	81	6	18	63	99	0.39	0.39	2.21	2.21	0.26	78	0.22	0.36	0.23	51%	20%	85%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	5	9	86	3	8	12	99	0.45	0.46	2.56	2.61	0.35	70	0.30	0.62	0.09	34%	8%	92%
DL-15B SR CDF (Bronze)	10	8	82	7	7	10	99	0.48	0.42	2.73	2.38	0.42	64	0.36	0.77	0.17	22%	2%	82%
DL-15G SR CDF (Gray)	10	8	82	7	7	10	99	0.48	0.49	2.73	2.78	0.41	65	0.35	0.78	0.17	23%	2%	82%
DL-30GR SR PS (Green)	11	9	80	13	9	17	99	0.48	0.49	2.73	2.78	0.41	65	0.35	0.76	0.32	24%	2%	67%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	9	10	81	11	12	28	99	0.49	0.50	2.78	2.84	0.39	67	0.33	0.84	0.29	27%	0%	72%
N-1040 SR CDF (Neutral)	14	8	78	18	9	16	99	0.48	0.50	2.73	2.84	0.43	63	0.37	0.84	0.42	19%	2%	54%
N-1050 SR CDF (Neutral)	18	7	75	22	8	13	99	0.49	0.50	2.78	2.84	0.45	61	0.39	0.84	0.49	15%	0%	44%
N-1065 SR CDF (Neutral)	26	7	67	31	8	12	99	0.49	0.50	2.78	2.84	0.49	58	0.42	0.84	0.63	7%	0%	21%
N-1020B SR CDF (Bronze)	6	13	81	9	13	35	99	0.47	0.47	2.67	2.67	0.32	72	0.28	0.69	0.28	40%	4%	77%
N-1035B SR CDF (Bronze)	11	11	78	17	10	24	99	0.47	0.48	2.67	2.73	0.37	68	0.32	0.71	0.46	30%	4%	56%
N-1050B SR CDF (Bronze)	17	9	74	24	9	16	99	0.47	0.48	2.67	2.73	0.42	64	0.36	0.73	0.57	21%	4%	38%
EXTERIOR SERIES																			
RK-20 PS (Silver)	5	65	30	4	62	39	99	0.49	0.50	2.78	2.84	0.11	91	0.09	0.71	0.38	80%	0%	90%

CHART 9: 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	60	15	25	76	17	17	55	0.46	0.47	2.61	2.67	0.76	34	0.66	0.22	1.00	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	8	25	67	8	25	60	99	0.44	0.44	2.50	2.50	0.44	62	0.38	0.22	0.18	42%	4%	89%
R-15G SR CDF (Gray)	7	26	67	6	20	61	99	0.44	0.44	2.50	2.50	0.45	61	0.39	0.22	0.13	41%	4%	92%
R-15BL SR PS (Blue)	8	29	63	9	29	63	99	0.44	0.44	2.50	2.50	0.43	63	0.37	0.22	0.21	44%	4%	88%
R-15GO SR PS (Gold)	9	38	53	13	49	64	99	0.44	0.44	2.50	2.50	0.36	69	0.31	0.22	0.37	53%	4%	83%
R-30B SR CDF (Bronze)	18	21	61	19	20	30	99	0.45	0.45	2.56	2.56	0.54	53	0.47	0.22	0.35	29%	2%	75%
R-30G SR CDF (Gray)	18	21	61	19	20	31	99	0.45	0.45	2.56	2.56	0.54	54	0.46	0.22	0.35	29%	2%	75%
PCR-15BL SR CDF (Blue)	11	25	64	11	26	33	99	0.45	0.46	2.56	2.61	0.49	58	0.42	0.22	0.22	36%	2%	86%
PCR-35GN SR CDF (Green)	21	24	55	28	26	31	99	0.45	0.47	2.56	2.67	0.55	53	0.47	0.22	0.51	28%	2%	63%
R-20 SR CDF (Silver)	11	41	48	16	57	63	99	0.44	0.44	2.50	2.50	0.34	71	0.29	0.22	0.47	55%	4%	79%
R-35 SR CDF (Silver)	15	36	49	23	49	51	99	0.45	0.45	2.53	2.56	0.40	66	0.34	0.22	0.58	48%	3%	70%
R-50 SR CDF (Silver)	29	24	47	42	30	29	99	0.45	0.45	2.56	2.56	0.56	52	0.48	0.22	0.75	27%	2%	45%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	12	30	58	13	39	13	99	0.45	0.47	2.56	2.67	0.45	61	0.39	0.22	0.29	40%	2%	83%
DR-25 SR CDF	18	25	57	19	30	14	99	0.45	0.46	2.56	2.61	0.50	57	0.43	0.22	0.38	34%	2%	75%
DR-35 SR CDF	25	21	54	31	24	15	99	0.45	0.46	2.56	2.61	0.57	51	0.49	0.22	0.54	25%	2%	59%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	8	43	49	12	60	70	99	0.38	0.37	2.16	2.10	0.29	75	0.25	0.22	0.41	62%	17%	84%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	9	22	69	5	19	12	99	0.45	0.46	2.56	2.61	0.48	59	0.41	0.22	0.10	37%	2%	93%
DL-15B SR CDF (Bronze)	18	17	65	12	17	8	99	0.45	0.45	2.56	2.56	0.59	49	0.51	0.22	0.20	23%	2%	84%
DL-15G SR CDF (Gray)	18	15	67	13	15	10	99	0.45	0.44	2.53	2.50	0.58	50	0.50	0.22	0.22	24%	3%	83%
DL-30GR SR PS (Green)	21	20	59	26	23	18	99	0.45	0.44	2.56	2.50	0.57	51	0.49	0.22	0.46	25%	2%	66%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	16	25	59	21	33	29	99	0.46	0.46	2.61	2.61	0.51	56	0.44	0.22	0.41	33%	0%	72%
N-1040 SR CDF (Neutral)	26	19	55	35	24	17	99	0.46	0.46	2.61	2.61	0.60	48	0.52	0.22	0.58	21%	0%	54%
N-1050 SR CDF (Neutral)	32	18	50	42	21	15	99	0.46	0.46	2.61	2.61	0.64	45	0.55	0.22	0.66	16%	0%	45%
N-1065 SR CDF (Neutral)	47	16	37	60	18	15	99	0.46	0.46	2.61	2.61	0.71	39	0.61	0.22	0.85	7%	0%	21%
N-1020B SR CDF (Bronze)	11	34	55	18	37	35	99	0.44	0.44	2.50	2.50	0.40	66	0.34	0.22	0.45	48%	4%	76%
N-1035B SR CDF (Bronze)	21	28	51	33	29	25	99	0.44	0.44	2.50	2.50	0.49	58	0.42	0.22	0.67	36%	4%	57%
N-1050B SR CDF (Bronze)	33	22	45	46	22	18	99	0.45	0.44	2.56	2.50	0.59	49	0.51	0.22	0.78	23%	2%	39%
EXTERIOR SERIES																			
RK-20 PS (Silver)	10	65	25	16	63	57	99	0.46	0.46	2.61	2.61	0.17	86	0.14	0.22	0.96	78%	0%	79%

CHART 10: 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film		
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	52	13	35	73	16	17	64	0.34	0.35	1.93	1.99	0.71	39	0.61	0.22	1.02	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	7	22	71	8	24	60	99	0.33	0.34	1.87	1.93	0.48	59	0.41	0.22	0.17	33%	3%	89%
R-15G SR CDF (Gray)	6	20	74	6	20	61	99	0.33	0.34	1.87	1.93	0.49	58	0.42	0.22	0.12	31%	3%	92%
R-15BL SR PS (Blue)	7	24	69	9	28	63	99	0.33	0.34	1.87	1.93	0.46	60	0.40	0.22	0.20	36%	3%	88%
R-15GO SR PS (Gold)	8	31	61	12	47	64	99	0.33	0.34	1.87	1.93	0.39	66	0.34	0.22	0.31	45%	3%	84%
R-30B SR CDF (Bronze)	15	17	68	18	19	30	99	0.33	0.34	1.87	1.93	0.55	52	0.48	0.22	0.32	22%	3%	75%
R-30G SR CDF (Gray)	15	18	67	19	19	31	99	0.33	0.34	1.87	1.93	0.55	53	0.47	0.22	0.34	23%	3%	74%
PCR-15BL SR CDF (Blue)	9	21	70	11	25	33	99	0.34	0.35	1.93	1.99	0.51	56	0.44	0.22	0.22	29%	0%	85%
PCR-35GN SR CDF (Green)	18	20	62	28	25	31	99	0.32	0.34	1.82	1.93	0.53	54	0.46	0.22	0.53	25%	6%	62%
R-20 SR CDF (Silver)	10	34	56	16	54	63	99	0.33	0.34	1.87	1.93	0.37	68	0.32	0.22	0.43	48%	3%	78%
R-35 SR CDF (Silver)	13	30	57	22	46	50	99	0.33	0.34	1.87	1.93	0.42	64	0.36	0.22	0.52	41%	3%	70%
R-50 SR CDF (Silver)	25	20	55	41	29	29	99	0.33	0.34	1.87	1.93	0.55	53	0.48	0.22	0.74	23%	3%	44%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	10	26	64	12	37	13	99	0.32	0.34	1.82	1.93	0.45	61	0.39	0.22	0.27	37%	6%	84%
DR-25 SR CDF	17	19	64	21	26	12	99	0.32	0.33	1.82	1.87	0.54	54	0.46	0.22	0.39	24%	6%	71%
DR-35 SR CDF	22	18	60	30	23	14	99	0.32	0.33	1.82	1.87	0.56	51	0.49	0.22	0.53	21%	6%	59%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	7	35	58	11	56	70	99	0.29	0.30	1.65	1.70	0.33	72	0.28	0.22	0.33	54%	15%	85%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	7	18	75	5	19	12	99	0.32	0.33	1.82	1.87	0.51	56	0.44	0.22	0.10	29%	6%	93%
DL-15B SR CDF (Bronze)	15	15	70	11	16	8	99	0.34	0.35	1.93	1.99	0.59	49	0.51	0.22	0.19	17%	0%	85%
DL-15G SR CDF (Gray)	15	15	70	13	17	10	99	0.34	0.35	1.93	1.99	0.58	50	0.50	0.22	0.22	19%	0%	82%
DL-30GR SR PS (Green)	8	14	78	19	19	17	99	0.34	0.34	1.93	1.93	0.58	50	0.50	0.22	0.33	19%	0%	74%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	14	22	64	20	32	28	99	0.34	0.35	1.93	1.99	0.52	55	0.45	0.22	0.38	27%	0%	73%
N-1040 SR CDF (Neutral)	23	17	60	34	23	16	99	0.34	0.35	1.93	1.99	0.59	49	0.51	0.22	0.58	17%	0%	53%
N-1050 SR CDF (Neutral)	28	16	56	41	20	15	99	0.34	0.35	1.93	1.99	0.62	47	0.53	0.22	0.66	13%	0%	44%
N-1065 SR CDF (Neutral)	41	14	45	58	18	14	99	0.34	0.35	1.93	1.99	0.67	42	0.58	0.22	0.87	6%	0%	21%
N-1020B SR CDF (Bronze)	10	27	63	18	36	35	99	0.33	0.34	1.87	1.93	0.43	63	0.37	0.22	0.42	40%	3%	75%
N-1035B SR CDF (Bronze)	19	23	58	32	28	25	99	0.34	0.35	1.93	1.99	0.51	56	0.44	0.22	0.63	29%	0%	56%
N-1050B SR CDF (Bronze)	29	18	53	45	22	17	99	0.34	0.35	1.93	1.99	0.58	50	0.50	0.22	0.77	18%	0%	38%
EXTERIOR SERIES																			
RK-20 PS (Silver)	10	65	25	16	63	55	99	0.33	0.34	1.87	1.93	0.16	86	0.14	0.22	1.00	78%	3%	78%

CHART 11: Dual-Pane, 1/8 Inch (3mm) Panes, Exterior Pane High Performance 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film		
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	38	36	26	72	11	12	84	0.28	0.28	1.59	1.59	0.48	59	0.41	0.04	1.52	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	5	40	55	8	18	60	99	0.27	0.27	1.53	1.53	0.35	70	0.30	0.04	0.23	26%	4%	89%
R-15G SR CDF (Gray)	4	39	57	6	14	61	99	0.27	0.27	1.53	1.53	0.37	68	0.32	0.04	0.16	22%	4%	92%
R-15BL SR PS (Blue)	5	41	54	8	22	63	99	0.27	0.27	1.53	1.53	0.34	71	0.29	0.04	0.24	29%	4%	89%
R-15GO SR PS (Gold)	6	48	46	12	39	64	99	0.27	0.27	1.53	1.53	0.27	77	0.23	0.04	0.45	44%	4%	83%
R-30B SR CDF (Bronze)	10	38	52	18	13	30	99	0.27	0.27	1.53	1.53	0.39	66	0.34	0.04	0.46	17%	4%	75%
R-30G SR CDF (Gray)	11	38	51	18	14	31	99	0.27	0.27	1.53	1.53	0.39	66	0.34	0.04	0.46	17%	4%	75%
PCR-15BL SR CDF (Blue)	7	41	52	10	19	33	99	0.27	0.28	1.53	1.59	0.35	70	0.30	0.04	0.29	27%	4%	86%
PCR-35GN SR CDF (Green)	14	40	46	27	20	31	99	0.26	0.27	1.48	1.53	0.37	68	0.32	0.04	0.73	22%	7%	63%
R-20 SR CDF(Silver)	8	51	41	15	46	62	99	0.27	0.27	1.53	1.53	0.24	80	0.20	0.04	0.64	50%	4%	79%
R-35 SR CDF (Silver)	10	48	42	21	39	50	99	0.27	0.27	1.53	1.53	0.28	76	0.24	0.04	0.76	41%	4%	71%
R-50 SR CDF(Silver)	20	41	39	39	23	27	99	0.27	0.27	1.53	1.53	0.38	67	0.33	0.04	1.03	20%	4%	46%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	7	45	48	12	31	13	99	0.26	0.27	1.48	1.53	0.30	74	0.26	0.04	0.40	36%	7%	83%
DR-25 SR CDF	11	41	48	18	23	13	99	0.26	0.27	1.48	1.53	0.35	70	0.30	0.04	0.52	27%	7%	75%
DR-35 SR CDF	16	39	45	29	18	14	99	0.26	0.27	1.48	1.53	0.39	67	0.33	0.04	0.75	19%	7%	60%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	6	52	42	11	48	70	99	0.24	0.24	1.36	1.36	0.21	82	0.18	0.04	0.53	57%	14%	85%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	4	38	58	5	13	12	99	0.27	0.27	1.53	1.53	0.38	68	0.32	0.04	0.13	21%	4%	93%
DL-15B SR CDF (Bronze)	9	36	55	11	11	8	99	0.27	0.27	1.53	1.53	0.41	65	0.35	0.04	0.27	14%	4%	85%
DL-15G SR CDF (Gray)	9	37	54	13	12	10	99	0.27	0.27	1.53	1.53	0.41	65	0.35	0.04	0.32	15%	4%	82%
DL-30GR SR PS (Green)	12	38	50	24	16	17	99	0.27	0.27	1.53	1.53	0.39	66	0.34	0.04	0.61	17%	4%	67%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	10	42	48	19	25	28	99	0.28	0.28	1.59	1.59	0.35	70	0.30	0.04	0.55	27%	0%	74%
N-1040 SR CDF (Neutral)	17	39	44	33	17	15	99	0.28	0.28	1.59	1.59	0.40	65	0.35	0.04	0.82	15%	0%	54%
N-1050 SR CDF (Neutral)	20	38	42	40	15	13	99	0.28	0.28	1.59	1.59	0.42	64	0.36	0.04	0.95	12%	0%	44%
N-1065 SR CDF (Neutral)	22	39	39	44	16	16	99	0.28	0.28	1.59	1.59	0.41	65	0.35	0.04	1.08	14%	0%	39%
N-1020B SR CDF (Bronze)	8	45	47	17	29	35	99	0.28	0.28	1.59	1.59	0.30	74	0.26	0.04	0.57	37%	0%	76%
N-1035B SR CDF (Bronze)	15	42	43	33	31	22	99	0.28	0.28	1.59	1.59	0.36	69	0.31	0.04	0.92	25%	0%	54%
N-1050B SR CDF (Bronze)	22	39	39	44	16	18	99	0.28	0.28	1.59	1.59	0.41	65	0.35	0.04	1.08	14%	0%	39%
EXTERIOR SERIES																			
RK-20 PS (Silver)	10	65	25	16	63	57	99	0.28	0.28	1.59	1.59	0.14	88	0.12	0.04	1.14	71%	0%	78%

CHART 12: Dual-Pane, 1/4 Inch (6mm) Panes, Exterior Pane High Performance Low-E on #2 Surface, 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film		
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	34	30	36	69	11	11	84	0.27	0.28	1.53	1.59	0.46	60	0.40	0.04	1.49	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	4	33	63	8	17	60	99	0.27	0.28	1.53	1.59	0.35	70	0.30	0.04	0.23	24%	0%	88%
R-15G SR CDF (Gray)	3	31	66	6	14	61	99	0.27	0.28	1.53	1.59	0.36	69	0.31	0.04	0.17	22%	0%	91%
R-15BL SR PS (Blue)	4	34	62	8	21	63	99	0.27	0.28	1.53	1.59	0.34	71	0.29	0.04	0.24	27%	0%	88%
R-15GO SR PS (Gold)	5	40	55	11	37	64	99	0.27	0.28	1.53	1.59	0.27	77	0.23	0.04	0.41	42%	0%	84%
R-30B SR CDF (Bronze)	9	31	60	17	13	30	99	0.27	0.28	1.53	1.59	0.39	66	0.34	0.04	0.44	16%	0%	75%
R-30G SR CDF (Gray)	9	31	60	18	13	31	99	0.27	0.28	1.53	1.59	0.39	66	0.34	0.04	0.46	16%	0%	74%
PCR-15BL SR CDF (Blue)	6	34	60	10	19	33	99	0.27	0.28	1.53	1.59	0.34	70	0.30	0.04	0.29	26%	0%	86%
PCR-35GN SR CDF (Green)	12	33	55	26	19	31	99	0.26	0.27	1.48	1.53	0.37	68	0.32	0.04	0.70	20%	4%	62%
R-20 SR CDF(Silver)	7	42	51	14	44	62	99	0.27	0.28	1.53	1.59	0.25	79	0.21	0.04	0.57	47%	0%	80%
R-35 SR CDF (Silver)	10	40	50	20	37	50	99	0.27	0.28	1.53	1.59	0.29	75	0.25	0.04	0.69	38%	0%	71%
R-50 SR CDF(Silver)	18	34	48	38	22	27	99	0.27	0.28	1.53	1.59	0.37	68	0.32	0.04	1.03	20%	0%	45%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	6	37	57	11	29	13	99	0.26	0.27	1.48	1.53	0.30	74	0.26	0.66	0.36	34%	4%	84%
DR-25 SR CDF	11	33	56	20	19	11	99	0.27	0.28	1.53	1.59	0.36	69	0.31	0.04	0.55	21%	0%	71%
DR-35 SR CDF	14	32	54	28	17	14	99	0.27	0.28	1.53	1.59	0.38	67	0.33	0.04	0.74	18%	0%	59%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	5	43	52	10	45	70	99	0.24	0.24	1.36	1.36	0.22	81	0.19	0.04	0.45	52%	11%	86%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	4	31	65	5	13	12	99	0.27	0.28	1.53	1.59	0.37	68	0.32	0.04	0.14	20%	0%	93%
DL-15B SR CDF (Bronze)	7	30	63	11	10	8	99	0.27	0.28	1.53	1.59	0.40	66	0.34	0.04	0.28	13%	0%	84%
DL-15G SR CDF (Gray)	8	30	62	12	11	10	99	0.27	0.28	1.53	1.59	0.40	66	0.34	0.04	0.30	14%	0%	83%
DL-30GR SR PS (Green)	11	31	58	23	16	17	99	0.27	0.28	1.53	1.59	0.39	67	0.33	0.04	0.60	16%	0%	67%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	9	35	56	19	24	28	99	0.27	0.28	1.53	1.59	0.34	70	0.30	0.04	0.55	26%	0%	72%
N-1040 SR CDF (Neutral)	15	32	60	31	17	15	99	0.27	0.28	1.93	1.99	0.39	66	0.34	0.04	0.79	16%	0%	55%
N-1050 SR CDF (Neutral)	19	31	50	38	14	13	99	0.27	0.28	1.53	1.59	0.41	64	0.36	0.04	0.92	10%	0%	45%
N-1065 SR CDF (Neutral)	27	30	43	55	12	11	99	0.27	0.28	1.53	1.59	0.44	62	0.38	0.04	1.25	5%	0%	20%
N-1020B SR CDF (Bronze)	7	37	56	16	28	35	99	0.27	0.28	1.53	1.59	0.31	74	0.26	0.04	0.52	34%	0%	77%
N-1035B SR CDF (Bronze)	14	34	52	30	21	24	99	0.27	0.28	1.53	1.59	0.36	69	0.31	0.04	0.85	23%	0%	57%
N-1050B SR CDF (Bronze)	20	32	48	42	15	15	99	0.27	0.28	1.53	1.59	0.41	65	0.35	0.04	1.02	11%	0%	39%
EXTERIOR SERIES																			
RK-20 PS (Silver)	11	65	24	17	63	58	99	0.27	0.28	1.53	1.59	0.16	86	0.14	0.04	1.06	65%	0%	75%

CHART 13: Dual-Pane, 1/8 Inch (3mm) Panes, Exterior Pane Tinted High Performance Low-E on #2 Surface, 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film		
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction
Window without film applied:	29	33	38	56	10	17	84	0.28	0.28	1.59	1.59	0.39	66	0.34	0.04	1.44	-	-	-
Window with film applied:																			
RELECTIVE SERIES																			
R-15B SR CDF (Bronze)	4	35	61	6	14	60	99	0.27	0.27	1.53	1.53	0.29	75	0.25	0.04	0.21	26%	4%	89%
R-15G SR CDF (Gray)	3	35	62	4	12	61	99	0.27	0.27	1.53	1.53	0.30	74	0.26	0.04	0.13	23%	4%	93%
R-15BL SR PS (Blue)	4	36	60	7	17	63	99	0.27	0.27	1.53	1.53	0.28	76	0.24	0.04	0.25	28%	4%	88%
R-15GO SR PS (Gold)	5	41	54	9	28	64	99	0.27	0.27	1.53	1.53	0.22	81	0.19	0.04	0.41	44%	4%	84%
R-30B SR CDF (Bronze)	8	34	58	14	12	30	99	0.27	0.27	1.53	1.53	0.32	72	0.28	0.04	0.44	18%	4%	75%
R-30G SR CDF (Gray)	8	34	58	14	12	31	99	0.27	0.27	1.53	1.53	0.32	72	0.28	0.04	0.44	18%	4%	75%
PCR-15BL SR CDF (Blue)	5	36	59	8	15	33	99	0.27	0.28	1.53	1.59	0.29	75	0.25	0.04	0.28	26%	4%	86%
PCR-35GN SR CDF (Green)	11	35	54	21	15	31	99	0.26	0.27	1.48	1.53	0.31	74	0.26	0.04	0.69	22%	7%	63%
R-20 SR CDF(Silver)	6	42	52	12	32	63	99	0.27	0.27	1.53	1.53	0.20	83	0.17	0.04	0.59	48%	4%	79%
R-35 SR CDF (Silver)	8	40	52	17	27	50	99	0.27	0.27	1.53	1.53	0.23	80	0.20	0.04	0.73	40%	4%	70%
R-50 SR CDF(Silver)	15	36	49	31	17	29	99	0.27	0.27	1.53	1.53	0.31	73	0.27	0.04	1.00	21%	4%	45%
DUAL REFLECTIVE SERIES																			
DR-15 SR CDF	5	38	57	9	22	13	99	0.26	0.27	1.48	1.53	0.25	78	0.22	0.04	0.36	35%	7%	84%
DR-25 SR CDF	8	36	56	14	17	13	99	0.26	0.27	1.48	1.53	0.29	75	0.25	0.04	0.49	26%	7%	75%
DR-35 SR CDF	12	35	53	29	23	14	99	0.26	0.27	1.48	1.53	0.32	72	0.28	0.04	0.91	18%	7%	48%
LOW-E SERIES																			
E-1220 SR CDF (Silver)	4	43	53	9	33	70	99	0.24	0.24	1.36	1.36	0.18	85	0.15	0.04	0.50	54%	14%	84%
DELUXE SERIES																			
DL-05G SR CDF (Gray)	3	34	63	4	11	12	99	0.27	0.27	1.53	1.53	0.31	73	0.27	0.04	0.13	21%	4%	93%
DL-15B SR CDF (Bronze)	7	33	60	9	10	8	99	0.27	0.27	1.53	1.53	0.33	71	0.29	0.04	0.27	14%	4%	84%
DL-15G SR CDF (Gray)	7	33	60	10	10	10	99	0.27	0.27	1.53	1.53	0.33	71	0.29	0.04	0.30	14%	4%	82%
DL-30GR SR PS (Green)	10	34	56	19	13	18	99	0.27	0.27	1.53	1.53	0.32	72	0.28	0.04	0.59	17%	4%	66%
N SERIES (LLUMALLOY)																			
N-1020 SR CDF (Neutral)	8	37	55	15	19	28	99	0.28	0.28	1.59	1.59	0.29	75	0.25	0.04	0.52	26%	0%	73%
N-1040 SR CDF (Neutral)	13	35	52	26	14	16	99	0.28	0.28	1.59	1.59	0.33	71	0.29	0.04	0.78	15%	0%	54%
N-1050 SR CDF (Neutral)	16	34	50	31	12	15	99	0.28	0.28	1.59	1.59	0.35	70	0.30	0.04	0.90	12%	0%	45%
N-1065 SR CDF (Neutral)	23	33	44	45	11	14	99	0.28	0.28	1.59	1.59	0.37	68	0.32	0.04	1.22	5%	0%	20%
N-1020B SR CDF (Bronze)	6	39	55	13	21	35	99	0.28	0.28	1.59	1.59	0.25	79	0.22	0.04	0.52	36%	0%	77%
N-1035B SR CDF (Bronze)	12	36	52	24	17	25	99	0.28	0.28	1.59	1.59	0.29	75	0.25	0.04	0.82	25%	0%	57%
N-1050B SR CDF (Bronze)	17	35	48	44	34	13	17	0.28	0.28	1.59	1.59	0.33	71	0.29	0.04	1.32	14%	0%	21%
EXTERIOR SERIES																			
RK-20 PS (Silver)	10	65	25	17	60	62	99	0.27	0.28	1.53	1.59	0.17	85	0.15	0.04	1.00	56%	4%	70%

CHART 14: Dual-Pane, 1/4 Inch (6mm) Panes, Exterior Pane Tinted High Performance Low-E on #2 Surface, 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 Median U-value	(9) Summer Daytime U-value	(10) Winter Median k-value	(11) Summer Daytime k-value	(12) Shading Coefficient	(13) % Total Solar Energy Rejected	(14) Solar Heat Gain Coefficient (SHGC)	(15) Emissivity	(16) Luminous Efficacy	Compared to window w/o film			
																	(17) % Summer Solar Heat Gain Reduction	(18) % Winter Heat Loss Reduction	(19) % Glare Reduction	
Window without film applied:	27	28	45	54	10	17	84	0.27	0.28	1.53	1.59	0.38	67	0.33	0.04	1.42	-	-	-	
Window with film applied:																				
RELECTIVE SERIES																				
R-15B SR CDF (Bronze)	3	30	67	6	14	60	99	0.27	0.28	1.53	1.59	0.29	75	0.25	0.04	0.21	24%	0%	89%	
R-15G SR CDF (Gray)	3	30	67	4	12	61	99	0.27	0.28	1.53	1.59	0.30	74	0.26	0.04	0.13	22%	0%	93%	
R-15BL SR PS (Blue)	3	31	66	6	16	63	99	0.27	0.28	1.53	1.59	0.28	76	0.24	0.04	0.22	27%	0%	89%	
R-15GO SR PS (Gold)	4	35	61	9	26	64	99	0.27	0.28	1.53	1.59	0.23	80	0.20	0.04	0.39	40%	0%	83%	
R-30B SR CDF (Bronze)	7	29	64	13	11	30	99	0.27	0.28	1.53	1.59	0.32	72	0.28	0.04	0.41	16%	0%	76%	
R-30G SR CDF (Gray)	7	29	64	14	12	31	99	0.27	0.28	1.53	1.59	0.32	72	0.28	0.04	0.44	16%	0%	74%	
PCR-15BL SR CDF (Blue)	5	31	64	8	15	33	99	0.27	0.28	1.53	1.59	0.29	75	0.25	0.04	0.28	25%	0%	85%	
PCR-35GN SR CDF (Green)	10	30	60	20	15	31	99	0.26	0.27	1.48	1.53	0.30	74	0.26	0.04	0.66	21%	4%	63%	
R-20 SR CDF(Silver)	5	36	59	12	31	63	99	0.27	0.28	1.53	1.59	0.21	82	0.18	0.04	0.57	44%	0%	78%	
R-35 SR CDF (Silver)	7	35	58	16	26	50	99	0.27	0.28	1.53	1.59	0.24	79	0.21	0.04	0.67	37%	0%	70%	
R-50 SR CDF(Silver)	14	31	55	30	17	29	99	0.27	0.28	1.53	1.59	0.31	74	0.27	0.04	0.98	19%	0%	44%	
DUAL REFLECTIVE SERIES																				
DR-15 SR CDF	5	33	62	9	21	13	99	0.26	0.27	1.48	1.53	0.26	78	0.22	0.66	0.35	33%	4%	83%	
DR-25 SR CDF	8	30	62	16	15	12	99	0.27	0.28	1.53	1.59	0.30	74	0.26	0.04	0.53	21%	0%	70%	
DR-35 SR CDF	11	30	59	22	14	14	99	0.27	0.28	1.53	1.59	0.31	73	0.27	0.04	0.70	18%	0%	59%	
LOW-E SERIES																				
E-1220 SR CDF (Silver)	4	37	59	8	32	70	99	0.24	0.24	1.36	1.36	0.19	84	0.16	0.04	0.42	50%	11%	85%	
DELUXE SERIES																				
DL-05G SR CDF (Gray)	3	29	68	4	11	12	99	0.27	0.28	1.53	1.59	0.30	74	0.26	0.04	0.13	20%	0%	93%	
DL-15B SR CDF (Bronze)	6	29	65	8	10	8	99	0.27	0.28	1.53	1.59	0.33	72	0.28	0.04	0.24	14%	0%	85%	
DL-15G SR CDF (Gray)	6	29	65	10	10	10	99	0.27	0.28	1.53	1.59	0.33	72	0.28	0.04	0.31	14%	0%	81%	
DL-30GR SR PS (Green)	9	30	61	18	13	18	99	0.27	0.28	1.53	1.59	0.32	72	0.28	0.04	0.56	16%	0%	67%	
N SERIES (LLUMALLOY)																				
N-1020 SR CDF (Neutral)	7	32	61	15	18	28	99	0.27	0.28	1.53	1.59	0.29	75	0.25	0.04	0.52	24%	0%	72%	
N-1040 SR CDF (Neutral)	12	30	60	25	13	16	99	0.27	0.28	1.93	1.99	0.32	72	0.28	0.04	0.77	15%	0%	54%	
N-1050 SR CDF (Neutral)	15	29	56	30	12	14	99	0.27	0.28	1.53	1.59	0.34	71	0.29	0.04	0.89	11%	0%	44%	
N-1065 SR CDF (Neutral)	21	29	50	43	11	14	99	0.27	0.28	1.53	1.59	0.36	69	0.31	0.04	1.19	5%	0%	20%	
N-1020B SR CDF (Bronze)	6	33	61	13	20	35	99	0.27	0.28	1.53	1.59	0.26	78	0.22	0.04	0.51	33%	0%	76%	
N-1035B SR CDF (Bronze)	11	31	58	24	16	25	99	0.27	0.28	1.53	1.59	0.29	75	0.25	0.04	0.82	23%	0%	56%	
N-1050B SR CDF (Bronze)	16	30	54	33	13	17	99	0.27	0.28	1.53	1.59	0.33	72	0.28	0.04	1.00	13%	0%	39%	
EXTERIOR SERIES																				
RK-20 PS (Silver)	11	65	24	17	59	62	99	0.27	0.28	1.53	1.59	0.16	86	0.14	0.04	1.06	58%	0%	69%	