Design Guide

Architectural Window Film

AVERY DENNISON

Avery Dennison Architectural Window Films can improve the performance and transform the appearance of commercial, industrial and residential buildings. Major glazing system enhancements are available for both interior and exterior use, including solar protection and window safety applications.

Contents

Reflective Window Films

With their bold aesthetics, the Avery Dennison Reflective Films deliver a strong visual statement while improving a building's energy efficiency, the occupants' comfort and overall value to the commercial building owner.


B.C.I.
IMAGING
www.bciimage.com
866 971-1008

Reflective Window Films - Interior

Optical and Solar Properties**	R Silver 20i		R Silver 35i		R Silver 20i Low E	
Item Number	R06922W / R05822S PS		R06934W / R05834S PS		R06922E PS	
Pane	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	18%	17%	33%	31%	17%	16%
Visible Light Reflected (Interior)	62%	62%	41%	42%	63%	63%
Visible Light Reflected (Exterior)	61%	61%	42%	44%	56%	57%
Ultra Violet Block	99%	99%	99%	99%	99%	99%
Total Solar Energy Reflected	55%	49%	39%	37%	51%	46%
Total Solar Energy Transmitted	13%	12%	25%	22%	12%	11%
Total Solar Energy Absorbed	32%	38%	36%	41%	37%	43%
Emissivity (Room Side)	0.71	0.71	0.72	0.72	0.39	0.39
Glare Reduction	80%	79%	63%	62%	81%	81%
Selective InfraRed Reduction (SIRR)	90%	90%	80%	80%	91%	91%
InfraRed Energy Rejection (IRER)	79%	79%	68%	68%	82%	82%
Shading Coefficient	0.25	0.35	0.40	0.49	0.24	0.34
Solar Heat Gain Coeff. (G-Value)	0.22	0.30	0.35	0.42	0.20	0.29
U-Value Winter (IP)	0.97	0.46	0.98	0.46	0.79	0.41
U-Value Winter (SI)	5.51	2.62	5.57	2.63	4.49	2.31
Luminous Efficacy	0.72	0.49	0.85	0.64	0.71	0.47
Total Solar Energy Rejected (%)	78%	70%	65%	58%	80%	71%

Optical and Solar Properties**	R Silver 20 4 mil		R Silver 20 9 mil	
Item Number	R12122T PS		R24603T PS	
Pane	Single	Double	Single	Double
Visible Light Transmitted	19%	18%	20%	19%
Visible Light Reflected (Interior)	61%	61%	61%	61%
Visible Light Reflected (Exterior)	60%	60%	57%	56%
Ultra Violet Block	99%	99%	99%	99%
Total Solar Energy Reflected	53%	48%	50%	46%
Total Solar Energy Transmitted	14%	12%	15%	13%
Total Solar Energy Absorbed	33%	40%	35%	41%
Emissivity (Room Side)	0.74	0.74	0.91	0.91
Glare Reduction	79%	78%	78%	77%
Selective InfraRed Reduction (SIRR)	65%	65%	92%	92%
InfraRed Energy Rejection (IRER)	49%	49%	80%	80%
Shading Coefficient	0.27	0.36	0.30	0.40
Solar Heat Gain Coeff. (G-Value)	0.23	0.31	0.25	0.34
U-Value Winter (IP)	0.99	0.47	1.08	0.49
U-Value Winter (SI)	5.62	2.65	6.13	2.78
Luminous Efficacy	0.70	0.49	0.67	0.48
Total Solar Energy Rejected (%)	77%	69%	75%	66%

Solar Safety Window Film, R Silver 20 4 mil

Mechanical Properties	
Thickness	mil 4
Tensile Strength at Break	PSI 28,500
Break Strength	lb/ inch 112
Elongation at Break	125%
Peel Strength	lb/ inch 7
Safety Testing	
Impact	EN 12600 Class 2B2

Solar Safety Window Film, R Silver 20 9 mil

Mechanical Properties	
Thickness	mil 9
Tensile Strength at Break	PSI 28,500
Break Strength	lb/ inch 245
Elongation at Break	125%
Peel Strength	lb/ inch 7

Reflective Window Films - Exterior

Optical and Solar Properties**	R Silver 20X		R Silver 35X		R Silver 20X Poly
Item Number	R07022X		R07035X		R0705XP
Pane	Single	Double	Single	Double	Single
Visible Light Transmitted	17%	16%	33%	31%	16%
Visible Light Reflected (Interior)	62%	62%	42%	44%	63%
Visible Light Reflected (Exterior)	62%	62%	42%	43%	64%
Ultra Violet Block	99%	99%	99%	99%	99%
Total Solar Energy Reflected	63%	64%	45%	46%	65%
Total Solar Energy Transmitted	12%	11%	25%	22%	12%
Total Solar Energy Absorbed	25%	25%	30%	32%	23%
Emissivity (Room Side)	0.84	0.84	0.84	0.84	0.84
Glare Reduction	81%	80%	63%	62%	82%
Selective InfraRed Reduction (SIRR)	91%	91%	80%	80%	90%
InfraRed Energy Rejection (IRER)	84%	84%	71%	71%	84%
Shading Coefficient	0.22	0.18	0.39	0.32	0.22
Solar Heat Gain Coeff. (G-Value)	0.19	0.15	0.34	0.28	0.19
U-Value Winter (IP)	1.04	0.48	1.04	0.48	1.04
U-Value Winter (SI)	5.91	2.73	5.91	2.73	5.91
Luminous Efficacy	0.75	0.91	0.84	0.96	0.75
Total Solar Energy Rejected (%)	81%	85%	66%	72%	81%

Optical and Solar Properties**	R Silver 20 XTRM		R SkyLite 20 XTRM		R SkyLite 20 XTRM Poly
Item Number	R12219X		R157X15		R157X5P
Pane	Single	Double	Single	Double	Single
Visible Light Transmitted	15%	14%	15%	14%	15%
Visible Light Reflected (Interior)	63%	65%	63%	65%	63%
Visible Light Reflected (Exterior)	63%	65%	66%	66%	66%
Ultra Violet Block	99.9%	99.9%	99.9%	99.9%	99.9%
Total Solar Energy Reflected	64%	66%	64%	66%	64%
Total Solar Energy Transmitted	11%	10%	10%	10%	10%
Total Solar Energy Absorbed	25%	24%	26%	24%	26%
Emissivity (Room Side)	0.84	0.84	0.84	0.84	0.84
Glare Reduction	84%	83%	84%	83%	84%
Selective InfraRed Reduction (SIRR)	91%	91%	92%	92%	92%
InfraRed Energy Rejection (IRER)	84%	84%	85%	85%	85%
Shading Coefficient	0.20	0.16	0.20	0.16	0.20
Solar Heat Gain Coeff. (G-Value)	0.17	0.14	0.17	0.14	0.17
U-Value Winter (IP)	1.04	0.48	1.03	0.48	1.03
U-Value Winter (SI)	5.91	2.73	5.85	2.71	5.85
Luminous Efficacy	0.75	0.88	0.72	0.89	0.72
Total Solar Energy Rejected (%)	83%	86%	83%	86%	83%

e calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are
ocess conditions within industry standards and are only intended for estimating purposes.

Dual Reflective Window Films

Avery Dennison Dual Reflective Films have been designed for both residential and commercial applications and block over 99% of UV to prevent fading and damage from the sun. They are particularly effective for saving energy associated with building cooling and providing excellent glare control.


B.C.I.
IMAGING
www.bciimage.com
866 971-1008

Dual Reflective Window Films - Interior

Optical and Solar Properties**	DR OptiTune 05i		DR OptiTune 15i		DR OptiTune 20i		DR OptiTune 30i		DR OptiTune 40i	
Item Number	R070R0W		R070R1W		R069R2W		R069R3W		R069R4W	
Pane	Single	Double	Single	Double	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	6%	6%	13%	13%	21%	19%	32%	30%	41%	38%
Visible Light Reflected (Interior)	15%	15%	25%	24%	15%	15%	26%	27%	18%	19%
Visible Light Reflected (Exterior)	63%	63%	56%	56%	32%	35%	32%	36%	21%	26%
Ultra Violet Block	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Total Solar Energy Reflected	56%	50%	51%	46%	31%	31%	32%	31%	22%	24%
Total Solar Energy Transmitted	6%	6%	12%	11%	18%	16%	25%	22%	33%	29%
Total Solar Energy Absorbed	38%	44%	37%	43%	51%	53%	43%	47%	45%	47%
Emissivity (Room Side)	0.75	0.75	0.76	0.76	0.80	0.80	0.81	0.81	0.83	0.83
Glare Reduction	93%	93%	85%	85%	77%	76%	63%	63%	54%	54%
Selective InfraRed Reduction (SIRR)	94%	94%	88%	88%	83%	83%	79%	79%	71%	79%
InfraRed Energy Rejection (IRER)	82%	82%	77%	77%	68%	68%	65%	65%	57%	65%
Shading Coefficient	0.19	0.31	0.26	0.37	0.38	0.51	0.44	0.53	0.54	0.62
Solar Heat Gain Coeff. (G-Value)	0.16	0.27	0.22	0.32	0.33	0.44	0.37	0.46	0.46	0.54
U-Value Winter (IP)	0.99	0.47	1.00	0.47	1.02	0.48	1.03	0.48	1.04	0.48
U-Value Winter (SI)	5.62	2.66	5.68	2.67	5.79	2.70	5.85	2.71	5.91	2.72
Luminous Efficacy	0.32	0.19	0.50	0.34	0.55	0.38	0.75	0.57	0.77	0.60
Total Solar Energy Rejected (%)	84%	73%	78%	68%	67%	56%	63%	54%	54%	46%

Optical and Solar Properties**	DR OptiShade 15i		DR OptiShade 25i		DR OptiShade 35i	
Item Number	R069O1W		R069O2W		R069O3W	
Pane	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	16%	15%	27%	25%	35%	32%
Visible Light Reflected (Interior)	17%	17%	14%	14%	10%	11%
Visible Light Reflected (Exterior)	44%	46%	25%	30%	13%	20%
Ultra Violet Block	99%	99%	99%	99%	99%	99%
Total Solar Energy Reflected	42%	39%	26%	27%	14%	18%
Total Solar Energy Transmitted	13%	11%	23%	20%	34%	29%
Total Solar Energy Absorbed	45%	50%	51%	53%	53%	53%
Emissivity (Room Side)	0.79	0.79	0.84	0.84	0.86	0.86
Glare Reduction	82%	82%	70%	69%	61%	61%
Selective InfraRed Reduction (SIRR)	88%	88%	78%	78%	65%	65%
InfraRed Energy Rejection (IRER)	74%	74%	63%	63%	49%	49%
Shading Coefficient	0.31	0.43	0.44	0.56	0.58	0.67
Solar Heat Gain Coeff. (G-Value)	0.27	0.38	0.39	0.49	0.50	0.59
U-Value Winter (IP)	1.01	0.47	1.04	0.48	1.05	0.48
U-Value Winter (SI)	5.76	2.69	5.91	2.73	5.97	2.75
Luminous Efficacy	0.52	0.34	0.61	0.45	0.60	0.47
Total Solar Energy Rejected (%)	73%	62%	61%	51%	50%	41%

Dual Reflective Window Films – Exterior

Optical and Solar Properties**	DR Grey 10X		DR Grey 20X		DR Grey 35X	
Item Number	R070W0X		R070W6X		R070W5X	
Pane	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	8%	7%	19%	18%	36%	32%
Visible Light Reflected (Interior)	17%	23%	14%	21%	14%	21%
Visible Light Reflected (Exterior)	55%	55%	34%	35%	22%	23%
Ultra Violet Block	99%	99%	99%	99%	99%	99%
Total Solar Energy Reflected	58%	58%	38%	38%	26%	27%
Total Solar Energy Transmitted	7%	6%	18%	15%	31%	26%
Total Solar Energy Absorbed	35%	36%	45%	47%	44%	47%
Emissivity (Room Side)	0.84	0.84	0.84	0.84	0.84	0.84
Glare Reduction	91%	91%	79%	78%	61%	61%
Selective InfraRed Reduction (SIRR)	93%	93%	82%	82%	71%	71%
InfraRed Energy Rejection (IRER)	83%	83%	70%	70%	58%	58%
Shading Coefficient	0.20	0.14	0.36	0.27	0.50	0.40
Solar Heat Gain Coeff. (G-Value)	0.17	0.12	0.31	0.23	0.43	0.35
U-Value Winter (IP)	1.04	0.48	1.04	0.48	1.04	0.48
U-Value Winter (SI)	5.91	2.73	5.91	2.73	5.91	2.73
Luminous Efficacy	0.40	0.50	0.54	0.66	0.70	0.80
Total Solar Energy Rejected (%)	83%	88%	69%	77%	57%	65%

Optical and Solar Properties**	DR Grey 10 XTRM		DR Grey 20 XTRM		DR Grey 35 XTRM	
Item Number	R122W0X		R122W6X		R122W5X	
Pane	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	7%	7%	20%	18%	36%	32%
Visible Light Reflected (Interior)	20%	26%	17%	23%	14%	21%
Visible Light Reflected (Exterior)	66%	66%	40%	41%	22%	23%
Ultra Violet Block	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
Total Solar Energy Reflected	66%	66%	44%	44%	25%	27%
Total Solar Energy Transmitted	7%	6%	17%	15%	31%	26%
Total Solar Energy Absorbed	27%	28%	39%	41%	44%	47%
Emissivity (Room Side)	0.84	0.84	0.84	0.84	0.84	0.84
Glare Reduction	92%	92%	78%	78%	61%	61%
Selective InfraRed Reduction (SIRR)	94%	94%	83%	83%	70%	70%
InfraRed Energy Rejection (IRER)	87%	87%	73%	73%	58%	58%
Shading Coefficient	0.17	0.12	0.33	0.25	0.50	0.40
Solar Heat Gain Coeff. (G-Value)	0.15	0.10	0.29	0.22	0.43	0.35
U-Value Winter (IP)	1.04	0.48	1.04	0.48	1.04	0.48
U-Value Winter (SI)	5.91	2.73	5.91	2.73	5.91	2.73
Luminous Efficacy	0.41	0.58	0.60	0.72	0.70	0.80
Total Solar Energy Rejected (%)	85%	90%	71%	78%	57%	65%

ıance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are
› variations in process conditions within industry standards and are only intended for estimating purposes.

Neutral Window Films

Avery Dennison Neutral interior window films add a neutral subtle grey appearance to glazing to reduce heat gain and glare while preserving the natural view through the glass.


B.C.I.
IMAGING
www.bciimage.com
866 971-1008

Neutral Window Films - Interior

Optical and Solar Properties**	NT PerLite Ceramic 20i		NT PerLite Ceramic 35i		NT PerLite Ceramic 35 6 mil		NT PerLite Ceramic 35 10 mil		NT PerLite Ceramic 50i		NT PerLite Ceramic 70i	
Item Number	R070L6W		R070L5W		R170L5T PS		R270L5T PS		R069L3W / R058L3S PS		R069L4W	
Pane	Single	Double	Single	Double	Single	Double	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	22%	20%	40%	37%	40%	36%	40%	37%	51%	47%	68%	61%
Visible Light Reflected (Interior)	24%	25%	15%	16%	16%	18%	17%	18%	16%	19%	9%	12%
Visible Light Reflected (Exterior)	25%	31%	17%	23%	18%	24%	17%	23%	18%	24%	10%	17%
Ultra Violet Block	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Total Solar Energy Reflected	29%	29%	17%	20%	19%	22%	18%	21%	20%	23%	10%	15%
Total Solar Energy Transmitted	14%	13%	29%	25%	29%	25%	30%	26%	40%	35%	59%	50%
Total Solar Energy Absorbed	57%	58%	54%	55%	52%	53%	52%	53%	40%	42%	31%	35%
Emissivity (Room Side)	0.76	0.76	0.82	0.82	0.90	0.90	0.91	0.91	0.84	0.84	0.91	0.91
Glare Reduction	76%	75%	56%	55%	56%	55%	55%	55%	43%	42%	25%	25%
Selective InfraRed Reduction (SIRR)	91%	91%	78%	78%	86%	86%	33%	33%	67%	67%	44%	44%
InfraRed Energy Rejection (IRER)	74%	74%	60%	60%	69%	69%	26%	26%	53%	53%	33%	33%
Shading Coefficient	0.36	0.51	0.52	0.64	0.52	0.63	0.53	0.54	0.60	0.66	0.79	0.79
Solar Heat Gain Coeff. (G-Value)	0.30	0.44	0.45	0.55	0.44	0.54	0.46	0.55	0.51	0.57	0.69	0.68
U-Value Winter (IP)	1.00	0.47	1.03	0.48	1.07	0.49	1.08	0.49	1.04	0.48	1.08	0.49
U-Value Winter (SI)	5.68	2.67	5.85	2.72	6.08	2.78	6.13	2.78	5.91	2.73	6.13	2.78
Luminous Efficacy	0.62	0.40	0.75	0.57	0.77	0.58	0.76	0.58	0.85	0.72	0.86	0.78
Total Solar Energy Rejected (%)	70%	56%	55%	45%	56%	46%	54%	45%	49%	43%	31%	32%

Solar Safety Window Film, NT PerLite Ceramic 35 6 mil

Mechanical Properties	
Thickness	mil 6
Tensile Strength at Break	PSI 28,500
Break Strength	lb/ inch 145
Elongation at Break	125%
Peel Strength	lb/ inch 7
Safety Testing	
Impact	AS/NZS 2208

Solar Safety Window Film, NT PerLite Ceramic 35 10 mil

Mechanical Properties	
Thickness	mil 10
Tensile Strength at Break	PSI 28,500
Break Strength	lb/ inch 270
Elongation at Break	125%
Peel Strength	lb/ inch 7

Optical and Solar Properties**	NT Natura 05i	NT Natura 15i	NT Natura 30i	
Item Number	R058L7W	R058L9W	R069L8W	
Pane	Single	Single	Single	Double
Visible Light Transmitted	7%	16%	31%	29%
Visible Light Reflected (Interior)	11%	11%	9%	10%
Visible Light Reflected (Exterior)	14%	9%	14%	21%
Ultra Violet Block	99%	99%	99%	99%
Total Solar Energy Reflected	20%	10%	15%	19%
Total Solar Energy Transmitted	12%	15%	33%	28%
Total Solar Energy Absorbed	68%	75%	52%	53%
Emissivity (Room Side)	0.78	0.86	0.87	0.87
Glare Reduction	92%	83%	65%	65%
Selective InfraRed Reduction (SIRR)	82%	85%	65%	65%
InfraRed Energy Rejection (IRER)	64%	63%	49%	49%
Shading Coefficient	0.35	0.44	0.56	0.66
Solar Heat Gain Coeff. (G-Value)	0.30	0.38	0.48	0.58
U-Value Winter (IP)	1.01	1.05	1.05	0.48
U-Value Winter (SI)	5.73	5.80	6.00	2.75
Luminous Efficacy	0.20	0.36	0.55	0.44
Total Solar Energy Rejected (%)	70%	62%	52%	42%

** Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

Spectrally Selective Window Films

Avery Dennison's Spectrally Selective window films reduce solar heat gain while maintaining high levels of daylight entering through windows. Spectrally Selective films reduce UV damage and fading caused by the sun and help maintain a comfortable interior - without compromising the view.


B.C.I.
IMAGING
www.bciimage.com
866 971-1008

Spectrally Selective Window Films - Interior

Optical and Solar Properties**	SP e-Lite 45i		SP e-Lite 70i	
Item Number	R081I4W / R081IS4 PS		R081ISW / R081IS7 PS	
Pane	Single	Double	Single	Double
Visible Light Transmitted	44%	40%	66%	61%
Visible Light Reflected (Interior)	12%	14%	15%	18%
Visible Light Reflected (Exterior)	17%	23%	16%	21%
Ultra Violet Block	99%	99%	99%	99%
Total Solar Energy Reflected	24%	26%	23%	25%
Total Solar Energy Transmitted	26%	23%	36%	33%
Total Solar Energy Absorbed	50%	51%	41%	42%
Emissivity (Room Side)	0.83	0.83	0.73	0.73
Glare Reduction	51%	50%	27%	25%
Selective InfraRed Reduction (SIRR)	86%	86%	87%	87%
InfraRed Energy Rejection (IRER)	69%	69%	71%	71%
Shading Coefficient	0.47	0.58	0.55	0.64
Solar Heat Gain Coeff. (G-Value)	0.41	0.51	0.48	0.56
U-Value Winter (IP)	1.04	0.48	0.98	0.46
U-Value Winter (SI)	5.88	2.72	5.59	2.64
Luminous Efficacy	0.94	0.69	1.20	0.95
Total Solar Energy Rejected (%)	59%	49%	52%	44%

Spectrally Selective Window Films - Exterior

Optical and Solar Properties**	SP e-Lite 45X		SP e-Lite 70X		SP Blue 75X	
Item Number	R105I4X		R105I7X		R09275X	
Pane	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	47%	43%	67%	61%	76%	69%
Visible Light Reflected (Interior)	12%	19%	17%	23%	9%	17%
Visible Light Reflected (Exterior)	17%	19%	18%	22%	9%	15%
Ultra Violet Block	99.9%	99.9%	99.9%	99.9%	99%	99%
Total Solar Energy Reflected					8%	10%
Total Solar Energy Transmitted					39%	34%
Total Solar Energy Absorbed					53%	56%
Emissivity (Room Side)					0.84	0.84
Glare Reduction					16%	15%
Selective InfraRed Reduction (SIRR)	86%	86%	83%	83%	88%	88%
InfraRed Energy Rejection (IRER)	72%	72%	70%	70%	63%	63%
Shading Coefficient	0.45	0.36	0.54	0.45	0.62	0.50
Solar Heat Gain Coeff. (G-Value)	0.39	0.31	0.47	0.39	0.54	0.43
U-Value Winter (IP)	1.04	0.48	1.04	0.48	1.04	0.48
U-Value Winter (SI)	5.92	2.73	5.92	2.73	5.91	2.73
Luminous Efficacy	1.04	1.19	1.24	1.36	1.20	1.38
Total Solar Energy Rejected (%)	61%	69%	53%	61%	46%	57%

B.C.I. IMAGING www.bciimage.com 866 971-1008

** Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

Design Window Films

Avery Dennison Design window films are an ideal way to add functionality and design to the built environment. Architects and interior designers depend on our Design interior films to create privacy, deliver messages and even disguise unattractive building features while our exterior films can be used for a makeover while contributing towards a more energy efficient building.


B.C.I.
IMAGING
www.bciimage.com
866 971-1008

Design Window Films - Interior

Optical and Solar Properties**	DS Matte 2 mil i		DS Black i	DS White i		DS UV Filter i	
Item Number	R070311		R06930S	R073WO		R069UVS	
Pane	Single	Double	Single	Single	Double	Single	Double
Visible Light Transmitted	72%	66%	0%	10%	10%	87%	79%
Visible Light Reflected (Interior)							
Visible Light Reflected (Exterior)	17%	23%	6%	48%	50%	11%	18%
Ultra Violet Block	94%	95%	100%	99%	99%	100%	100%
Total Solar Energy Reflected	14%	18%	41%	36%	34%	9%	15%
Total Solar Energy Transmitted	68%	58%	0%	17%	15%	79%	67%
Total Solar Energy Absorbed	18%	24%	59%	47%	51%	12%	18%
Emissivity (Room Side)	0.90	0.90	0.72	0.90	0.90	0.86	0.86
Glare Reduction	20%	19%	100%	89%	89%	3%	3%
Selective InfraRed Reduction (SIRR)	33%	33%	99%	98%	98%	21%	21%
InfraRed Energy Rejection (IRER)	26%	26%	91%	62%	62%	17%	17%
Shading Coefficient	0.84	0.79	0.20	0.37	0.49	0.95	0.86
Solar Heat Gain Coeff. (G-Value)	0.73	0.69	0.16	0.31	0.42	0.82	0.74
U-Value Winter (IP)	1.07	0.49	0.98	1.07	0.49	1.05	0.48
U-Value Winter (SI)	6.08	2.78	5.57	6.08	2.78	5.96	2.75
Luminous Efficacy	0.86	0.83	0.00	0.27	0.19	0.92	0.93
Total Solar Energy Rejected (%)	27%	31%	84%	69%	58%	18%	26%

Design Window Films - Exterior

Optical and Solar Properties**	DS Bronze 20X		DS Blue 35X	
Item Number	R069B2X		R081SBX	
Pane	Single	Double	Single	Double
Visible Light Transmitted	16%	15%	33%	19%
Visible Light Reflected (Interior)	46%	47%	21%	10%
Visible Light Reflected (Exterior)	39%	40%	15%	14%
Ultra Violet Block	99%	99%	99%	99%
Total Solar Energy Reflected	64%	64%	24%	23%
Total Solar Energy Transmitted	9%	8%	31%	17%
Total Solar Energy Absorbed	27%	28%	45%	60%
Emissivity (Room Side)	0.84	0.84	0.84	0.84
Glare Reduction	82%	81%	63%	79%
Selective InfraRed Reduction (SIRR)	96%	96%	69%	69%
InfraRed Energy Rejection (IRER)	92%	92%	59%	59%
Shading Coefficient	0.20	0.14	0.51	0.41
Solar Heat Gain Coeff. (G-Value)	0.17	0.12	0.45	0.35
U-Value Winter (IP)	1.04	0.48	1.04	0.48
U-Value Winter (SI)	5.91	2.73	5.91	2.73
Luminous Efficacy	0.83	1.06		
Total Solar Energy Rejected (%)	83%	88%	55%	65%

** Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

Safety and Security Window Films

You can feel confident when selecting Avery Dennison Safety and Security films. We have over two decades of experience in designing and manufacturing multiple layer safety and security films, designed to protect people and property against flying glass shards from a range of threats and hazards. Suitable for meeting building codes and insurance requirements, our Safety and Security films may help provide occupants additional time to escape perilous conditions while providing some protection for break-ins and blasts.


B.C.I.
IMAGING
www.bciimage.com
866 971-1008

Safety and Security Window Films - Interior

Optical and Solar Properties**	SF Clear 4 mil i	SF Clear 7 mil i	SF Clear 8 mil i	SF Clear 12 mil i	SF Clear 15 mil i
Item Number	R12306T	R19801T	R22301T	R32303T	R39803T
Pane	Single	Single	Single	Single	Single
Visible Light Transmitted	89%	88%	88%	87%	87%
Visible Light Reflected (Interior)	10%	11%	11%	11%	11%
Visible Light Reflected (Exterior)	10%	11%	11%	11%	11%
Ultra Violet Block	97%	99%	99%	99%	99%
Total Solar Energy Reflected	9%	9%	9%	10%	11%
Total Solar Energy Transmitted	81%	80%	80%	78%	77%
Total Solar Energy Absorbed	10%	11%	11%	12%	12%
Glare Reduction	1%	2%	2%	3%	3%
Selective InfraRed Reduction (SIRR)					
InfraRed Energy Rejection (IRER)					
Shading Coefficient	0.96	0.95	0.95	0.94	0.94
Solar Heat Gain Coeff. (G-Value)	0.84	0.83	0.83	0.82	0.82
U-Value Winter (IP)	1.07	1.07	1.07	1.07	1.07
U-Value Winter (SI)	6.07	6.07	6.07	6.07	6.07
Total Solar Energy Rejected (%)	16%	17%	17%	18%	18%

Mechanical Properties	SF Clear 4 mil i	SF Clear 7 mil i	SF Clear 8 mil i	SF Clear 12 mil i	SF Clear 15 mil i
Thickness	mil 4	mil 7	mil 8	mil 12	mil 15
Tensile Strength at Break	PSI 28,500	PSI 26,000	PSI 28,500	PSI 28,500	PSI 28,500
Break Strength	lb/ inch 112	lb/ inch 180	lb/ inch 224	lb/inch 336	lb/inch 420
Elongation at Break	125%	140%	125%	125%	% 140
Peel Strength	lb/ inch 7	lb/ inch 7	lb/ inch 7	lb/inch 7	lb/inch 8
Safety Testing					
Fire					
BS 476 Fire Propagation		✓			
ASTM D1929 Ignition	✓	✓			
ASTM E84 Surface Burn	✓				
Anti Graffiti					
Paris Metro Anti Graffiti	✓				
Impact					
AS/NZS 2208	✓	✓	✓		
ANSI Z97.1 12" pendulum fall	✓				
ANSI Z97.1 18" pendulum fall	✓				
ANSI Z97.1 48" pendulum fall		✓	✓		
CPSC 1201 Cat 1 18" pendulum fall	✓				
CPSC 1201 Title 16 48" pendulum fall	✓	✓	✓		
BS 6206 B	✓				
EN 12600 2B2	✓	✓	✓		
EN 12600 1B1		✓	✓		
EN 356 P4A				✓	✓
DIN 52290 Part 4, A1				✓	
Bomb Blast					
Siach Gefen IDF Testing (x2 + No Bar)				✓	
Bomb Blast GSA Level C (4 psi, 30 psi/msec) P(3B)	✓	✓			
Bomb Blast GSA Level D (10.2 psi, 90.6 psi/msec)				✓	
UL 972 Burglary Resisting Glazing Material (3A) x2 + No Bar on Both Sides				✓	
Wind Debris					
ASTM E330				✓	
TAS 201, 202, 203, Florida Building Code (Dade County Small Missile Test) Hurricane				✓	

Optical and Solar Properties**	SF Clear 4 mil Mod	SF Clear 7 mil Mod	SF Clear 12 mil Mod	SF Matte 5 mil i	SF Matte 12 mil i	AG Clear 4 mil ix	AG Clear 6 mil ix
Item Number	R12306C	R19801C	R32303C	R22301T	R32311C	R123G3X	R173G3X
Pane	Single	Single	Single	Single	Single	Single	Single
Visible Light Transmitted	89%	88%	87%	58%	55%	90%	90%
Visible Light Reflected (Interior)	10%	11%	11%	%	%	11%	12%
Visible Light Reflected (Exterior)	10%	11%	11%	25%	28%	11%	12%
Ultra Violet Block	97%	99%	99%	98%	99%	92%	97%
Total Solar Energy Reflected	9%	9%	10%	20%	23%	10%	11%
Total Solar Energy Transmitted	81%	80%	78%	55%	51%	82%	82%
Total Solar Energy Absorbed	10%	11%	12%	25%	26%	8%	7%
Glare Reduction	1%	2%	3%	36%	38%	0%	2%
Selective InfraRed Reduction (SIRR)					46%	21%	22%
InfraRed Energy Rejection (IRER)					37%	18%	18%
Shading Coefficient	0.96	0.95	0.94	0.72	0.69	0.97	0.97
Solar Heat Gain Coeff. (G-Value)	0.84	0.83	0.82	0.62	0.60	0.84	0.84
U-Value Winter (IP)	1.07	1.07	1.07	1.07	1.07	1.04	1.07
U-Value Winter (SI)	6.07	6.07	6.07	6.05	6.08	5.91	6.00
Total Solar Energy Rejected (%)	16%	17%	18%	38%	40%	16%	16%

Mechanical Properties	SF Clear 4 mil Mod	SF Clear 7 mil Mod	SF Clear 12 mil Mod	SF Matte 5 mil i	SF Matte 12 mil i	AG Clear 4 mil ix	AG Clear 6 mil ix
Thickness	mil 4	mil 7	mil 12	mil 5	mil 12	mil 4	mil 6
Tensile Strength at Break	PSI 28,500	PSI 26,000	PSI 28,500	PSI 25,000	PSI 28,500	PSI 28,500	PSI 28,500
Break Strength	lb/ inch 112	lb/ inch 180	lb/inch 336	lb/inch 140	lb/inch 336	lb/ inch 112	lb/ inch 112
Elongation at Break	125%	140%	125%	% 140	% 125	125%	125%
Peel Strength	lb/ inch 7	lb/ inch 7	lb/inch 7	lb/inch 5-7	lb/inch 7	lb/ inch 3-4	lb/ inch 2-3
Safety Testing							
Fire							
BS 476 Fire Propagation		✓					
ASTM D1929 Ignition	✓	✓					
ASTM E84 Surface Burn	✓						
Anti Graffiti							
Paris Metro Anti Graffiti	✓						
Impact							
AS/NZS 2208	✓	✓		✓			
ANSI Z97.1 12" pendulum fall	✓						
ANSI Z97.1 18" pendulum fall	✓						
ANSI Z97.1 48" pendulum fall		✓					
CPSC 1201 Cat 1 18" pendulum fall	✓						
CPSC 1201 Title 16 48" pendulum fall	✓	✓					
BS 6206 B	✓						
EN 12600 2B2	✓	✓		✓			
EN 12600 1B1		✓					
EN 356 P4A			✓				
DIN 52290 Part 4, A1							
Bomb Blast							
Siach Gefen IDF Testing (x2 + No Bar)			✓				
Bomb Blast GSA Level C (4 psi, 30 psi/msec) P(3B)	✓	✓					
Bomb Blast GSA Level D (10.2 psi, 90.6 psi/msec)			✓				
UL 972 Burglary Resisting Glazing Material (3A) x2 + No Bar on Both Sides			✓				
Wind Debris							
ASTM E330			✓				
TAS 201, 202, 203, Florida Building Code (Dade County Small Missile Test) Hurricane			✓				

** Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

Safety and Security Window Films - Exterior

Optical and Solar Properties**	SF Clear 4 mil X	SF Clear 7 mil X	AG Clear 4 mil ix	AG Clear 6 mil ix	Clear 4 mil Poly X	Clear 6 mil Poly X
Item Number	R12100X	R19600X	R123G3X	R173G3X	R1210XP	R1731XP
Pane	Single	Single	Single	Single	Single	Single
Visible Light Transmitted	88%	88%	90%	90%	88%	88%
Visible Light Reflected (Interior)	10%	11%	11%	12%	10%	10%
Visible Light Reflected (Exterior)	10%	11%	11%	12%	10%	10%
Ultra Violet Block	99%	99%	92%	97%	99%	99%
Total Solar Energy Reflected	10%	9%	10%	11%	10%	9%
Total Solar Energy Transmitted	80%	80%	82%	82%	80%	80%
Total Solar Energy Absorbed	10%	11%	8%	7%	10%	11%
Glare Reduction	2%	2%	0%	2%	2%	2%
Selective InfraRed Reduction (SIRR)	22%		21%	22%		
InfraRed Energy Rejection (IRER)	18%		18%	18%		
Shading Coefficient	0.96	0.95	0.97	0.97	0.96	0.95
Solar Heat Gain Coeff. (G-Value)	0.83	0.83	0.84	0.84	0.83	0.82
U-Value Winter (IP)	1.04	1.04	1.04	1.07	1.04	1.07
U-Value Winter (SI)	5.91	5.91	5.91	6.00	5.91	6.05
Total Solar Energy Rejected (%)	17%	17%	16%	16%	17%	18%

Mechanical Properties	SF Clear 4 mil X	SF Clear 7 mil X	AG Clear 4 mil ix	AG Clear 6 mil ix	Clear 4 mil Poly X	Clear 6 mil Poly X
Thickness	mil 4	mil 7	mil 4	mil 6	mil 4	mil 6
Tensile Strength at Break	PSI 28,500	PSI 26,000	PSI 28,500	PSI 28,500	PSI 28,500	PSI 28,000
Break Strength	lb/ inch 112	lb/ inch 180	lb/ inch 112	lb/ inch 112	lb/ inch 112	lb/ inch 125
Elongation at Break	125%	140%	125%	125%	125%	150%
Peel Strength	lb/ inch 7	lb/ inch 7	lb/ inch 3-4	lb/ inch 2-3	lb/ inch 1-2	lb/ inch 1-2
Safety Testing						
Anti Graffiti						
Paris Metro Anti Graffiti	✓					
Impact						
AS/NZS 2208	✓					
EN 12600 2B2	✓					
EN 12600 1B1		✓				

** Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

Solar Safety Window Films

Avery Dennison Solar Safety interior films combine the shard protection of Safety Security films with outstanding solar energy rejection for the needs of industry, businesses and institutions.


B.C.I.
IMAGING
www.bciimage.com
866 971-1008

Solar Safety Window Films - Interior

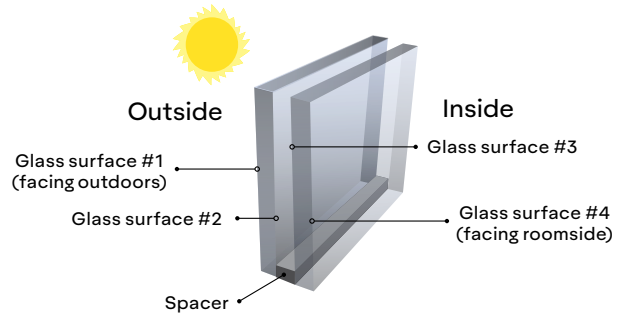
Optical and Solar Properties**	R Silver 20 4 Mil		R Silver 20 9 Mil		NT PerLite Ceramic 35 6 mil		NT PerLite Ceramic 35 10 mil	
Item Number	R12122T		R24603T		R170L5T		R270L5T	
Pane	Single	Double	Single	Double	Single	Double	Single	Double
Visible Light Transmitted	19%	18%	20%	19%	40%	36%	40%	37%
Visible Light Reflected (Interior)	61%	61%	61%	61%	16%	18%	17%	18%
Visible Light Reflected (Exterior)	60%	60%	57%	56%	18%	24%	17%	23%
Ultra Violet Block	99%	99%	99%	99%	99%	99%	99%	99%
Total Solar Energy Reflected	53%	48%	50%	46%	19%	22%	18%	21%
Total Solar Energy Transmitted	14%	12%	15%	13%	29%	25%	30%	26%
Total Solar Energy Absorbed	33%	40%	35%	41%	52%	53%	52%	53%
Emissivity (Room Side)	0.74	0.74	0.91	0.91	0.90	0.90	0.91	0.91
Glare Reduction	79%	78%	78%	77%	56%	55%	55%	55%
Selective InfraRed Reduction (SIRR)	65%	65%	92%	92%	86%	86%	33%	33%
InfraRed Energy Rejection (IRER)	49%	49%	80%	80%	69%	69%	26%	26%
Shading Coefficient	0.27	0.36	0.30	0.40	0.52	0.63	0.53	0.64
Solar Heat Gain Coeff. (G-Value)	0.23	0.31	0.25	0.34	0.44	0.54	0.46	0.55
U-Value Winter (IP)	0.99	0.47	1.08	0.49	1.07	0.49	1.08	0.49
U-Value Winter (SI)	5.62	2.65	6.13	2.78	6.08	2.78	6.13	2.78
Luminous Efficacy	0.70	0.49	0.67	0.48	0.77	0.58	0.76	0.58
Total Solar Energy Rejected (%)	77%	69%	75%	66%	56%	46%	54%	45%

Mechanical Properties	R Silver 20 4 Mil	R Silver 20 9 Mil	NT PerLite Ceramic 35 6 mil	NT PerLite Ceramic 35 10 mil
Thickness	mil 4	mil 9	mil 6	mil 10
Tensile Strength at Break	PSI 28,500	PSI 28,500	PSI 28,500	PSI 28,500
Break Strength	lb/ inch 112	lb/ inch 245	lb/ inch 145	lb/ inch 270
Elongation at Break	125%	125%	125%	125%
Peel Strength	lb/ inch 7	lb/ inch 7	lb/ inch 7	lb/ inch 7
Safety Testing				
Impact	EN 12600 Class 2B2		AS/NZS 2208	

** Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

Architectural Window Films
Film to Glass Application Chart

This Film To Glass (FTG) Application Chart is for guidance purposes only. For more information regarding the application of one of the products included in this FTG on a particular glass surface, please contact our technical team at windowfilms.techsupport@averydennison.com



IMPORTANT:
This chart refers to annealed glass.
See terms and conditions

✓ Compatible* Tinted glazing recommendations are based upon simulations done on 45% LT tinted glass. Film can be applied on darker tinted glass if glass is fully tempered or based on written approval from Avery Dennison technical support.

● Conditional Compatibility Film can be applied if VLT is lighter than 45% or if glass is fully tempered.

▲ Tempered / heat strengthened Film can be applied only if the glass is tempered, and not annealed (for IGU requirement for both panels).

✕ Incompatible

Interior

		Single Pane			IG Unit		Clear IG Unit - Low E	
		Clear	Tinted	Clear Laminated[3]	Clear	Tinted	On #3	High Performance on #2
Reflective	R Silver 20i	✓	✓	✓	✓	●	✓	✓
	R Silver 35i	✓	✓	✓	✓	●	▲	✓
	R Silver 20i Low E	✓	✓	✓	✓	●	✓	✓
Dual Reflective	DR OptiTune 05i	✓	✓	✓	✓	●	▲	✓
	DR OptiTune 15i	✓	✓	✓	✓	●	▲	✓
	DR OptiTune 20i	✓	✓	✓	✓	●	✓	✓
	DR OptiTune 30i	✓	✓	✓	✓	●	▲	✓
	DR OptiTune 40i	✓	✓	✓	✓	✓	▲	✓
	DR OptiShade 15i	✓	✓	✓	✓	●	▲	✓
	DR OptiShade 25i	✓	✓	✓	✓	●	▲	✓
	DR OptiShade 35i	✓	✓	✓	✓	●	▲	✓
Netural	NT PerLite Ceramic 20i	✓	✓	▲	▲	●	▲	▲
	NT PerLite Ceramic 35i	✓	✓	✓	✓	✓	▲	✓
	NT PerLite Ceramic 50i	✓	✓	✓	✓	✓	✓	✓
	NT PerLite Ceramic 70i	✓	●	●	✓	●	✓	▲
	NT Natura 05i	✓	▲	▲	▲[6]	▲[6]	▲[6]	▲[6]
	NT Natura 15i	✓	▲	▲	▲[6]	▲[6]	▲[6]	✓[6]
	NT Natura 30i	✓	●	●	✓	●	✓	✓
Spectrally Selective	SP e-Lite 45i[1]	✓	✓	✓	✓	✓	▲	✓
	SP e-Lite 70i[1]	✓	✓	✓	✓	✓	✓	✓
Design	DS Matte 2 mil i	✓	✓	✓	✓	●	✓	✓
	DS Black i	▲	▲	▲	✕	✕	✕	✕
	DS White i	✓	✓	✓	✓	●	▲	▲
	DS UV Filter i	✓	✓	✓	✓	✓	✓	✓
	DS Print SR 2/4 mil i[4]	✓	✓	✓	✓	✓	✓	✓
Safety & Security	SF Clear 4/7/8/12/15 mil i	✓	✓	✓	✓	✓	✓	✓
	SF Clear 4/7/12 mil Mod[5]	✓	✓	✓	✓	✓	✓	✓
	SF Matte 5/12 mil i	✓	✓	✓	✓	✓	▲	✓
	AG Clear 4/6 mil ix	✓	✓	✓	✓	✓	✓	✓
Solar Safety	R Silver 20 4/9 mil	✓	✓	✓	✓	✓	✓	✓
	NT PerLite Ceramic 35 6/10 mil	✓	✓	✓	✓	✓	▲	✓

1. Must be sealed if within 10 miles / 16km of the ocean. Use neutral sealing agent Dow Corning 791 or 795, Max 5000 by GE or equivalent neutral silicone seal agent. No edge sealing required on such location in case of fixed/stationary/ immovable windows that are not exposed to environment.
2. Projects larger than 5500 sqft (500 sqm) need prior written approval from Avery Dennison.
3. Laminated clear applies only to 1/4" + 1/4" (6.35mm + 6.35mm) structures and thinner.
4. Light and white inks are approved for print on DS Print SR films. Other colored or dark inks printed on DS Print SR films require prior approval from the Avery Dennison technical support team. DS Print SR films are not suitable for direct exposure to the sun.
5. Refers to application of clear safety films unless it's in combination with other Avery Dennison window films in which case the Safety Clear Mod film receives the characteristics and warranty of the film that is applied on it.
6. Window films are not warranted for seal failure.

Compatible* Tinted glazing recommendations are based upon simulations done on 45% LT tinted glass. Film can be applied on darker tinted glass if glass is fully tempered or based on written approval from Avery Dennison technical support.

Conditional Compatibility Film can be applied if VLT is lighter than 45% or if glass is fully tempered.

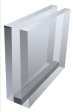
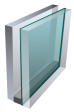
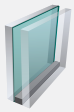
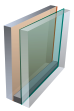
Tempered / heat strengthened Film can be applied only if the glass is tempered, and not annealed (for IGU requirement for both panels).

✕ Incompatible

All exterior films require sealing! Use neutral sealing agent Dow Corning 791 or 795, Max 5000 by GE or approved equivalent neutral silicone seal agent for exterior applications.

˄ Laminated clear applies only to 1/4" + 1/4" (6.35 mm + 6.35 mm) structures.

Exterior

		Single Pane			IG Unit		Clear IG Unit - Low E		IG Unit Low E
		 Clear	 Tinted	 Clear Laminated˄	 Clear	Tinted	 On #3	 High Performance on #2	 Solar coated glass #2 + High Performance Low E #3
Reflective	R Silver 20X	✓	✓	✓	✓	✓	✓	✓	✓
	R Silver 35X	✓	✓	✓	✓	✓	✓	✓	✓
	R Silver 20X Poly	✓	✓	✓	✓	✓	✓	✓	✓
	R Silver 20 XTRM	✓	✓	✓	✓	✓	✓	✓	✓
	R SkyLite 20 XTRM	✓	✓	✓	✓	✓	✓	✓	✓
	R SkyLite 20 XTRM Poly	✓	✓	✓	✓	✓	✓	✓	✓
Dual Reflective	DR Grey 10X	✓	✓	✓	✓	✓	✓	✓	✓
	DR Grey 20X	✓	✓	✓	✓	✓	✓	✓	✓
	DR Grey 35X	✓	✓	✓	✓	✓	✓	✓	▲
	DR Grey 10 XTRM	✓	✓	✓	✓	✓	✓	✓	✓
	DR Grey 20 XTRM	✓	✓	✓	✓	✓	✓	✓	✓
	DR Grey 35 XTRM	✓	✓	✓	✓	✓	✓	✓	▲
Spectrally Selective	SP e-Lite 45X	✓	✓	✓	✓	✓	✓	✓	▲
	SP e-Lite 70X	✓	✓	✓	✓	✓	✓	✓	▲
	SP Blue 75X	✓	●	✓	✓	▲	✓	▲	▲
Design	DS Bronze 20X	✓	✓	✓	✓	✓	✓	✓	✓
	DS Blue 35X	✓	✓	✓	✓	✓	✓	✓	✓
Clear Films	SF Clear 4/7 mil X	✓	✓	✓	✓	✓	✓	✓	✓
	Clear 4/6 mil poly X	✓	✓	✓	✓	✓	✓	✓	✓
Surface Protection	AG Clear 4/6 mil ix	✓	✓	✓	✓	✓	✓	✓	✓

Important restrictions and limitations on installation:

- It is the installer's responsibility to ensure that the film chosen is compatible with the glazing system.
- All film types can be applied to tempered glass, except for DS Black i and DS White i - see chart for limitations.
- Pane size: for glass with an edge dimension over 11.5 ft (3.5 m), and/or the surface of double pane glass has more than 40 sqft (3.7 sqm) surface area- use only on tempered glass.
- Pane thickness: clear glass > 3/8" (9.5 mm), tinted glass > 1/4" (6 mm) - use only on tempered glass unless given special approval otherwise.
- FTG chart refers to altitude up to 1640 ft (500 m). Above this altitude please consult with our technical support team. Altitude > 7000 ft (2310 m) - installation requires prior written approval from Avery Dennison (unless specifically specified, e.g. clear laminate).
- Installation on laminated glass requires prior written approval from Avery Dennison.
- Interior of skylights - installation requires prior written approval from Avery Dennison. These installations require sealing on all four edges.

Warranty is invalid if:

- Installation practices do not conform to Avery Dennison's published installation policies and procedures.
- Two or more films are applied to the same glass surface (with the exception of Avery Dennison Modular Film).
- Automotive film is applied to flat glass constructions.
- The filmed windows are triple or more pane construction, textured, wire film glass, or an IG unit inclusive of a suspended film, unless approved otherwise.
- Film is applied to any glass on which there is paint, lettering, signs, stickers or other permanent or temporary ornamentation (with the exception of small safety labels).
- Filmed glass has prior damage, is chipped, has cracked edges, has holes in it, or light is visible between the frame and the glass.
- Film is applied to non-glass substrates (unless specifically specified, i.e. Poly Films).
- Film is only partially applied to glass.
- Pane is shaded by exterior overhangs, extensions, columns, pillars etc.
- Glass is architecturally odd-shaped, and larger than 20 sqft (1.8 sqm).
- Damage is caused by acts of nature (accidents, floods, fire, explosion etc.).
- Avery Dennison XTRM films are installed by non-Avery Dennison Certified installers.

For information on warranty terms, exclusions and certain limitations that apply please see the applicable product data sheets and other literature and bulletins on our website: **graphics.averydennison.com/windowfilms**

Count on Avery Dennison Window Film Solutions

Avery Dennison is a leading, trusted provider of pressure sensitive film and laminate solutions for a wide range of industries. Our window films help improve energy efficiency; and increase occupant comfort, privacy, and safety; and enhance style and aesthetics in both architectural and vehicle applications worldwide. Customers rely on our superior performance, ease of use, and technical support.

We have over 35 years of window films expertise, in-house R&D in advanced facilities, as well as rigorous Quality Assurance standards and worldwide logistical support. Count on Avery Dennison window film solutions for even your most challenging applications.

For more information visit
graphics.averydennison.com

Contact us at windowfilm.orders@averydennison.com
or **1-800-660-5559**

AVERY DENNISON