

# Single Glass Standards

## Pilkington Monolithic Annealed Glass Sizes

Product	Quality Levels <sup>1</sup>	Nominal Glass Thickness		Approx. Weight <sup>4</sup>		Thickness Tolerance Range <sup>1</sup>				Maximum Standard Size <sup>2,3</sup>	
		in.	mm	lb/ft <sup>2</sup>	kg/m <sup>2</sup>	in.		mm		in.	mm
						min.	max.	min.	max.		
<b>Optifloat Clear, Activ, OptiView, Energy Advantage Low-E, Solar-E Solar Control Low-E Glass</b>	Q3	<b>3/32</b>	2.5	1.2	6	0.085	0.101	2.16	2.57	96x130	2438x3302
		<b>1/8</b>	3	1.6	8	0.115	0.134	2.92	3.40	102x130	2591x3302
		<b>5/32</b>	4	2.1	10	0.149	0.165	3.78	4.19	130x180	3302x4572
	Q1/Q3	<b>3/16</b>	5	2.5	12	0.180	0.199	4.57	5.05	130x204	3302x5182
	Q2/Q3	<b>1/4</b>	6	3.1	15	0.219	0.244	5.56	6.20		
<b>Optifloat Heavy Clear, Energy Advantage Low-E or Solar-E Solar Control Low-E Glass</b>	Q3	<b>5/16</b>	8	4.1	20	0.292	0.332	7.42	8.43	130x204	3302x5182
		<b>3/8</b>	10	5.2	25	0.355	0.406	9.02	10.31		
<b>1/2</b>		12	6.6	32	0.469	0.531	11.91	13.49	130x240	3302x6096	
<b>5/8</b>		16	8.2	40	0.595	0.656	15.09	16.66			
<b>Optifloat Heavy Clear</b>		<b>3/4</b>	19	9.9	48	0.719	0.781	18.26	19.84	130x204	3302x5182
<b>Optifloat Heavy Grey Tint or Bronze Tint</b>	Q3	5/16	<b>8</b>	4.1	20.3	0.303	0.327	7.70	8.30	130x204	3302x5182
		3/8	<b>10</b>	5.2	25.4	0.382	0.406	9.70	10.30		
		<b>1/2</b>	12	6.6	32.0	0.469	0.531	11.91	13.49	130x240	3302x6096
<b>Optifloat Grey Tint or Bronze Tint</b>	Q3	1/8	<b>3.2</b>	1.6	8.0	0.115	0.134	2.92	3.4	102x130	2591x3302
		3/16	<b>5</b>	2.6	12.7	0.189	0.205	4.80	5.2	130x204	3302x5182
		1/4	<b>6</b>	3.1	15.2	0.228	0.244	5.80	6.20	130x204	3302x5182
<b>Optifloat Heavy Blue-Green Tint</b>	Q3	5/16	<b>8</b>	4.1	20.3	0.303	0.327	7.70	8.30	130x204	3302x5182
		3/8	<b>10</b>	5.2	25.4	0.382	0.406	9.70	10.30		
<b>Optifloat Blue-Green Tint, Evergreen High-Performance Tint or SuperGrey High-Performance Tint</b>	Q3	1/8	<b>3.2</b>	1.6	8.0	0.115	0.134	2.92	3.40	102x130	2591x3302
		3/16	<b>5</b>	2.6	12.7	0.189	0.205	4.80	5.20	130x204	3302x5182
		1/4	<b>6</b>	3.1	15.2	0.228	0.244	5.80	6.20	130x180	3302x5182
<b>Arctic Blue High-Performance Tint</b>	Q3	5/32	<b>4</b>	2.1	10.1	0.150	0.165	3.80	4.20	130x180	3302x4572
		1/4	<b>6</b>	3.1	15.2	0.228	0.244	5.80	6.20	130x204	3302x5182
		3/8	<b>10</b>	5.2	25.4	0.382	0.406	9.70	10.30	130x204	3302x5182
<b>Eclipse Advantage Low-E Glass or Mirropane T.M. Transparent Mirror</b>	Q3	1/4	<b>6</b>	3.1	15.2	0.228	0.244	5.80	6.20	130x204	3302x5182
<b>Optiwhite Low Iron Float Glass</b>	EN572-2	1/8	<b>3</b>	1.6	7.6	0.110	0.126	2.80	3.20	88.6x126.4	2250x3210
		3/16	<b>5</b>	2.6	12.7	0.189	0.205	4.80	5.20		
		1/4	<b>6</b>	3.1	15.2	0.228	0.244	5.80	6.20		
		3/8	<b>10</b>	5.2	25.4	0.382	0.406	9.70	10.30	126.4x200.8	3210x5100
		1/2	<b>12</b>	6.2	30.4	0.461	0.484	11.70	12.30		
		5/8	<b>15</b>	7.8	38.0	0.571	0.61	14.5	15.5		
		3/4	<b>19</b>	9.8	48.2	0.709	0.787	18	20		
<b>Texture Glass (all products except as noted below)</b>	EN572-5	5/32	<b>4</b>	2.1	10.1	0.142	0.157	3.80	4.20	52.0x83.9	1320x2130
		1/4	<b>6</b>	3.1	15.2	0.228	0.244	5.70	6.30		
<b>Reeded (Texture Glass)</b>	EN572-5	5/32	<b>4</b>	2.1	10.1	0.150	0.165	3.80	4.20	52.0x83.9	1320x2130
<b>Austral &amp; Morisco (Texture Glass)</b>	EN572-5	5/32	<b>4</b>	2.1	10.1	0.142	0.157	3.80	4.20	63.0x98.4	1600x2500
<b>Rayado, Sparkel and Yacare (Texture Glass)</b>	EN572-5	5/32	<b>4</b>	2.1	10.1	0.142	0.157	3.80	4.20	57.1x88.6	1450x2250

1. Per ASTM C 1036; with exception of **Texture™** and **Optiwhite™**
  2. Size listed may, in some cases, be too large to meet applicable static load requirements.
  3. Certain other thicknesses and sizes may be available upon request
  4. Based on the mean of the thickness range. Note glass density = 158 lb./cu. ft.
  5. Typical production nominal glass thickness in bold typeface
  6. Coated glasses meet quality level of ASTM C 1376
- \* Pilkington **Optifloat™** Blue-Green Glass: 1/8" and 5mm are not standard products  
 \* Subject to Availability

# Single Glass Performance Data <sup>1,10</sup>

Product	Nominal Glass Thickness		Visible Light <sup>2</sup>			Solar Energy <sup>2</sup>			U-Factor <sup>5</sup>			Solar Heat Gain Coefficient <sup>7</sup>	Shading Coefficient <sup>8</sup>
			Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %		Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %	UV Transmittance <sup>2</sup> %	U.S. Summer	U.S. Winter	European <sup>6</sup>		
	in.	mm		Outside	Inside								

## Pilkington Uncoated Float Glass

Optifloat Clear	3/32	2.5	90	8	8	86	8	75	0.95	1.05	5.9	0.87	1.00
	1/8	3	90	8	8	84	8	72	0.94	1.04	5.8	0.86	0.99
	5/32	4	89	8	8	81	7	68	0.94	1.04	5.8	0.84	0.97
	3/16	5	89	8	8	80	7	65	0.93	1.03	5.8	0.83	0.96
	1/4	6	88	8	8	77	7	63	0.93	1.03	5.7	0.82	0.94
	5/16	8	87	8	8	73	7	57	0.92	1.01	5.7	0.79	0.91
	3/8	10	86	8	8	70	7	54	0.91	1.00	5.6	0.77	0.88
	1/2	12	84	8	8	64	6	49	0.89	0.98	5.5	0.73	0.84
	5/8	16	83	8	8	59	6	45	0.88	0.97	5.4	0.70	0.81
3/4	19	81	7	7	55	6	41	0.86	0.95	5.3	0.67	0.78	
Optifloat Grey Tint	1/8	3.2	61	6	6	59	6	35	0.94	1.04	5.8	0.69	0.80
	3/16	5	50	6	6	48	5	26	0.93	1.03	5.8	0.62	0.71
	1/4	6	44	5	5	41	5	21	0.93	1.02	5.7	0.57	0.66
	5/16	8	33	5	5	31	5	14	0.92	1.01	5.7	0.50	0.59
	3/8	10	28	5	5	26	5	11	0.91	1.00	5.6	0.47	0.55
1/2	12	19	4	4	17	4	7	0.89	0.98	5.5	0.42	0.49	
Optifloat Bronze Tint	1/8	3.2	68	6	6	65	6	37	0.94	1.04	5.8	0.73	0.84
	3/16	5	59	6	6	55	6	28	0.93	1.03	5.8	0.67	0.77
	1/4	6	51	6	6	48	5	22	0.93	1.02	5.7	0.62	0.72
	5/16	8	44	5	5	39	5	16	0.92	1.01	5.7	0.56	0.65
	3/8	10	39	5	5	34	5	13	0.91	1.00	5.6	0.53	0.61
1/2	12	29	5	5	25	4	8	0.89	0.98	5.5	0.47	0.55	
Optifloat Blue-Green Tint	1/4	6	75	7	7	48	6	32	0.93	1.02	5.7	0.62	0.72
	5/16	8	70	7	7	40	5	25	0.92	1.01	5.7	0.57	0.66
	3/8	10	67	6	6	36	5	21	0.91	1.00	5.6	0.54	0.63
EverGreen High-Performance Tint	1/8	3.2	76	7	7	49	6	27	0.94	1.04	5.8	0.62	0.72
	3/16	5	73	7	7	42	5	21	0.93	1.03	5.8	0.58	0.67
	1/4	6	66	6	6	33	5	14	0.93	1.02	5.7	0.52	0.60
Arctic Blue High-Performance Tint	5/32	4	65	6	6	45	5	31	0.94	1.04	5.8	0.60	0.69
	1/4	6	53	6	6	33	5	20	0.93	1.02	5.7	0.52	0.60
	3/8	10	39	5	5	20	5	12	0.91	1.00	5.6	0.43	0.51
SuperGrey High-Performance Tint	1/8	3.2	25	5	5	23	4	6	0.94	1.04	5.8	0.45	0.52
	3/16	5	12	4	4	11	4	2	0.93	1.03	5.8	0.37	0.44
	1/4	6	9	4	4	8	4	1	0.93	1.03	5.7	0.35	0.41

## Pilkington Optiwhite™ Low Iron Glass

Optiwhite Low Iron	1/8	3	91	8	8	90	8	87	0.94	1.04	5.8	0.91	1.04
	3/16	5	91	8	8	89	8	85	0.93	1.03	5.8	0.90	1.04
	1/4	6	91	8	8	89	8	84	0.93	1.02	5.7	0.90	1.03
	3/8	10	90	8	8	87	8	81	0.91	1.00	5.6	0.89	1.02
	1/2	12	90	8	8	86	8	79	0.90	0.99	5.5	0.88	1.01
	5/8	15	90	8	8	85	7	77	0.88	0.97	5.4	0.87	1.00
	3/4	19	89	8	8	83	7	74	0.86	0.95	5.3	0.86	0.99

Product	Nominal Thickness		Glass Substrate	Visible <sup>2</sup> Transmittance %	Visible <sup>2</sup> Reflectance On The Coated Side %	Visible <sup>2</sup> Reflectance Glass Side %	Recommended Light Ratio	Proper Glazing
	in.	mm						
Pilkington Mirropane T.M.	1/4	6	Grey	11	68	16	8:1 Subject-side: Observer-side	Mirror coating toward subject-side

# Single Glass Performance Data <sup>1,10</sup>

Product	Nominal Glass Thickness		Visible Light <sup>2</sup>			Solar Energy <sup>2</sup>			U-Factor <sup>5</sup>			Solar Heat Gain Coefficient <sup>7</sup>	Shading Coefficient <sup>8</sup>
			Transmittance <sup>3</sup>	Reflectance <sup>4</sup> %		Transmittance <sup>3</sup>	Reflectance <sup>4</sup> %	UV Transmittance <sup>2</sup>	U.S. Summer	U.S. Winter	European <sup>6</sup>		
	in.	mm		%	Outside								

## Pilkington Energy Advantage™ Low-E Glass (#2 Surface)<sup>9</sup>

Energy Advantage Low-E	3/32	2.5	83	11	11	71	11	60	0.50	0.65	3.7	0.74	0.85
	1/8	3	82	11	12	69	11	57	0.50	0.65	3.7	0.72	0.83
	5/32	4	82	10	11	68	10	55	0.49	0.65	3.7	0.71	0.82
	3/16	5	83	11	12	68	10	53	0.49	0.65	3.7	0.71	0.82
	1/4	6	82	10	11	66	10	49	0.49	0.64	3.6	0.70	0.81
	5/16	8	81	10	11	62	9	45	0.49	0.64	3.6	0.67	0.77
	3/8	10	80	10	11	59	9	42	0.49	0.63	3.6	0.64	0.75

## Pilkington Eclipse Advantage™ Low-E Glass (#2 Surface)<sup>9</sup>

Eclipse Advantage Clear	1/4	6	67	25	28	58	19	30	0.53	0.67	3.8	0.62	0.72
Eclipse Advantage Grey	1/4	6	32	10	27	29	8	10	0.53	0.67	3.8	0.41	0.48
Eclipse Advantage Bronze	1/4	6	38	11	27	35	10	11	0.53	0.67	3.8	0.45	0.53
Eclipse Advantage Blue-Green	1/4	6	56	19	27	35	11	16	0.53	0.67	3.8	0.45	0.53
Eclipse Advantage EverGreen	1/4	6	48	15	27	23	8	7	0.53	0.67	3.8	0.36	0.43
Eclipse Advantage Arctic Blue	1/4	6	39	12	27	23	8	10	0.53	0.67	3.8	0.36	0.42

## Pilkington Solar-E™ Solar Control Low-E Glass (#2 Surface)<sup>9</sup>

Solar-E Solar Control Low-E	1/8	3.2	60	8	9	46	8	48	0.50	0.65	3.7	0.54	0.63
	5/32	4	60	8	9	44	8	46	0.50	0.65	3.7	0.53	0.62
	3/16	5	60	7	9	48	7	44	0.50	0.65	3.7	0.53	0.61
	1/4	6	60	8	9	46	7	44	0.50	0.65	3.7	0.52	0.61
	5/16	8	59	8	9	42	7	41	0.50	0.64	3.7	0.51	0.59

## Pilkington OptiView™ Anti-Reflective Glass

OptiView Anti-Reflective Glass	1/4	6	92	1.7	1.7	70	4	<1	0.67	0.80	4.6	0.76	0.88
Clear Float Glass	1/4	6	88	8	8	77	7	63	0.93	1.02	5.7	0.81	0.94
OptiView Anti-Reflective Glass	1/2	12	88	1.7	1.7	61	3	<1	0.67	0.79	4.5	0.70	0.81
Clear Float Glass	1/2	12	84	8	8	64	6	49	0.89	0.98	5.5	0.73	0.84

Clear float glass performance based on non-laminated glass.

Pilkington OptiView™ Anti-Reflective Glass performance based on:

- 6mm (1/4") laminated glass: 3mm (1/8") OptiView™ (#1) + 0.76mm (0.030") clear pvb + 3mm (1/8") OptiView™ (#4)
- 12mm (1/2") laminated glass: 6mm (1/4") OptiView™ (#1) + 0.76mm (0.030") clear pvb + 6mm (1/4") OptiView™ (#4)

Notes: Contact Pilkington for other OptiView™ thickness and laminated glass combinations.

## Pilkington Activ™ Self-cleaning Glass (#1 Surface)

Activ Self-Cleaning	3/32	2.5	84	15	15	82	12	50	0.95	1.05	5.9	0.83	0.96
	1/8	3	83	15	15	80	13	49	0.94	1.04	5.8	0.82	0.94
	5/32	4	83	15	15	79	12	47	0.94	1.04	5.8	0.81	0.93
	3/16	5	83	15	14	77	12	46	0.93	1.03	5.8	0.80	0.92
	1/4	6	82	15	15	75	12	44	0.93	1.02	5.8	0.78	0.90

# Double Glass Performance Data <sup>1,10</sup>

Insulating units constructed of equal glass thicknesses and 1/2" (12.7mm) airspace

Product	Nominal Glass Thickness		Visible Light <sup>2</sup>			Total Solar Energy <sup>2</sup>			U-Factor <sup>5</sup>						Solar Heat Gain Coefficient <sup>7</sup>	Shading Coefficient <sup>8</sup>
			Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %		Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %	UV Transmittance <sup>2</sup> %	U.S. Summer		U.S. Winter		European <sup>6</sup>			
	in.	mm		Outside	Inside				Air	Argon	Air	Argon	Air	Argon		

## Pilkington Uncoated Float Glass Outer Lite and Clear Float Glass Inner Lite

Optifloat Clear	3/32	2.5	82	15	15	74	14	61	0.51	-	0.48	-	2.8	-	0.78	0.90
	1/8	3	81	15	15	71	13	57	0.51	-	0.48	-	2.8	-	0.76	0.88
	5/32	4	80	15	15	67	12	52	0.50	-	0.48	-	2.8	-	0.74	0.85
	3/16	5	79	15	15	64	12	50	0.50	-	0.48	-	2.8	-	0.72	0.83
	1/4	6	78	15	15	61	12	47	0.50	-	0.47	-	2.8	-	0.70	0.81
Optifloat Grey Tint	1/8	3.2	55	9	13	50	9	29	0.51	-	0.48	-	2.8	-	0.58	0.67
	3/16	5	45	8	13	39	7	21	0.50	-	0.48	-	2.8	-	0.50	0.58
	1/4	6	39	7	12	32	6	17	0.50	-	0.47	-	2.8	-	0.45	0.52
Optifloat Bronze Tint	1/8	3.2	62	10	13	55	9	31	0.51	-	0.48	-	2.8	-	0.63	0.72
	3/16	5	53	9	13	45	8	23	0.50	-	0.48	-	2.8	-	0.55	0.64
	1/4	6	45	8	12	38	7	18	0.50	-	0.47	-	2.8	-	0.50	0.58
Optifloat Blue-Green Tint	1/4	6	67	12	14	39	8	26	0.50	-	0.47	-	2.8	-	0.50	0.58
EverGreen High-Performance Tint	1/8	3.2	69	12	14	42	8	23	0.51	-	0.48	-	2.8	-	0.51	0.59
	3/16	5	65	11	14	35	7	18	0.50	-	0.48	-	2.8	-	0.46	0.53
	1/4	6	58	10	13	28	6	11	0.50	-	0.47	-	2.8	-	0.40	0.46
Arctic Blue High-Performance Tint	1/4	6	47	8	13	27	6	17	0.50	-	0.47	-	2.8	-	0.39	0.46
SuperGrey High-Performance Tint	1/8	3.2	23	5	12	19	5	6	0.51	-	0.48	-	2.8	-	0.32	0.37
	3/16	5	11	4	12	9	4	2	0.50	-	0.48	-	2.8	-	0.24	0.28
	1/4	6	8	4	11	6	4	1	0.50	-	0.47	-	2.8	-	0.21	0.25

## Pilkington Eclipse Advantage™ Low-E Glass Outer Lite (#2 Surface) and Clear Float Glass Inner Lite

Eclipse Advantage Clear	1/4	6	60	29	31	46	21	24	0.35	0.30	0.35	0.30	1.9	1.7	0.55	0.63
Eclipse Advantage Grey	1/4	6	29	10	29	23	9	8	0.35	0.30	0.35	0.30	1.9	1.7	0.33	0.39
Eclipse Advantage Bronze	1/4	6	34	13	29	28	11	9	0.35	0.30	0.35	0.30	1.9	1.7	0.38	0.44
Eclipse Advantage Blue-Green	1/4	6	51	21	29	29	12	13	0.35	0.30	0.35	0.30	1.9	1.7	0.38	0.44
Eclipse Advantage EverGreen	1/4	6	43	17	30	20	9	6	0.35	0.30	0.35	0.30	1.9	1.7	0.29	0.33
Eclipse Advantage Arctic Blue	1/4	6	35	13	30	19	9	9	0.35	0.30	0.35	0.30	1.9	1.7	0.29	0.33

## Pilkington Activ™ Self-Cleaning Glass Outer Lite (#1 Surface) and Clear Glass Inner Lite

Activ Self-Cleaning	3/32	2.5	77	21	21	71	18	42	0.51	-	0.48	-	2.8	-	0.75	0.86
	1/8	3	76	21	21	68	17	40	0.51	-	0.48	-	2.8	-	0.73	0.84
	5/32	4	75	21	20	65	17	38	0.50	-	0.48	-	2.8	-	0.72	0.82
	3/16	5	75	20	20	62	16	36	0.50	-	0.48	-	2.8	-	0.70	0.81
	1/4	6	74	21	20	59	16	34	0.50	-	0.47	-	2.8	-	0.68	0.78

## Pilkington Energy Advantage™ Low-E Glass Outer Lite (#2 Surface) and Clear Float Glass Inner Lite

Energy Advantage Low-E	3/32	2.5	76	17	18	62	16	48	0.33	0.28	0.34	0.29	1.9	1.6	0.67	0.77
	1/8	3	75	17	18	59	15	45	0.33	0.28	0.33	0.29	1.9	1.6	0.65	0.75
	5/32	4	74	16	17	56	14	42	0.33	0.28	0.33	0.29	1.9	1.6	0.63	0.73
	3/16	5	74	17	17	55	14	41	0.33	0.28	0.33	0.29	1.9	1.6	0.63	0.73
	1/4	6	73	16	17	52	13	37	0.33	0.28	0.33	0.29	1.8	1.5	0.62	0.71
	5/16	8	71	15	16	47	12	32	0.33	0.28	0.33	0.28	1.8	1.5	0.58	0.67
	3/8	10	69	15	16	43	12	29	0.32	0.27	0.33	0.28	1.8	1.5	0.56	0.64

## Pilkington Solar-E™ Low-E Glass Outer Lite (#2 Surface) and Clear Float Glass Inner Lite

Solar-E Solar Control Low-E	1/8	3.2	54	11	16	39	10	38	0.33	0.28	0.34	0.29	1.9	1.6	0.46	0.54
	5/32	4	54	10	16	38	9	36	0.33	0.28	0.34	0.29	1.9	1.6	0.47	0.53
	3/16	5	53	10	15	36	9	34	0.33	0.28	0.33	0.29	1.9	1.6	0.45	0.52
	1/4	6	53	11	15	35	9	33	0.33	0.28	0.33	0.29	1.9	1.6	0.45	0.51
	5/16	8	52	10	15	32	8	29	0.33	0.28	0.33	0.29	1.8	1.5	0.43	0.49

# Double Glass Performance Data<sup>1,10</sup>

Insulating units constructed of equal glass thicknesses and 1/2" (12.7mm) airspace

Product	Nominal Glass Thickness		Visible Light <sup>2</sup>				Solar Energy <sup>2</sup>			U-Factor <sup>5</sup>				Solar Heat Gain Coefficient <sup>7</sup>	Shading Coefficient <sup>8</sup>
			Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %		Transmittance <sup>3</sup> %	Reflectance <sup>4</sup> %	UV Transmittance <sup>2</sup> %	U.S. Summer		U.S. Winter		European <sup>6</sup>		
	in.	mm		Outside	Inside				Air	Argon	Air	Argon	Air		

## Pilkington Uncoated Float Glass Outer Lite and **Energy Advantage™** Low-E Glass Inner Lite (#3 Surface)

<b>Optifloat Clear</b>	3/32	2.5	76	18	17	62	17	48	0.33	0.28	0.34	0.29	1.9	1.6	0.73	0.84
	1/8	3	75	18	17	59	16	45	0.33	0.28	0.33	0.29	1.9	1.6	0.71	0.82
	5/32	4	74	17	16	56	16	42	0.33	0.28	0.33	0.29	1.9	1.6	0.69	0.80
	3/16	5	74	17	17	55	15	41	0.33	0.28	0.33	0.29	1.9	1.6	0.68	0.79
	1/4	6	73	17	16	52	14	37	0.33	0.28	0.33	0.29	1.8	1.5	0.67	0.77
	5/16	8	71	16	15	47	13	32	0.33	0.28	0.33	0.28	1.8	1.5	0.63	0.72
	3/8	10	69	16	15	43	12	29	0.32	0.28	0.33	0.28	1.8	1.5	0.60	0.70
<b>Optifloat Grey Tint</b>	1/8	3.2	50	10	15	41	11	24	0.33	0.28	0.33	0.29	1.9	1.6	0.53	0.61
	3/16	5	42	8	15	32	8	17	0.33	0.28	0.33	0.29	1.9	1.6	0.45	0.51
	1/4	6	36	7	14	27	7	13	0.33	0.28	0.33	0.29	1.8	1.6	0.40	0.46
<b>Optifloat Bronze Tint</b>	1/8	3.2	57	12	15	45	12	25	0.33	0.28	0.33	0.29	1.9	1.6	0.57	0.66
	3/16	5	49	10	15	38	10	19	0.33	0.28	0.33	0.29	1.9	1.6	0.50	0.58
	1/4	6	42	8	14	32	8	14	0.33	0.28	0.33	0.29	1.8	1.5	0.45	0.52
<b>Optifloat Blue-Green Tint</b>	1/4	6	62	13	15	34	9	21	0.33	0.28	0.33	0.29	1.8	1.6	0.45	0.52
<b>EverGreen High-Performance Tint</b>	1/8	3.2	64	14	16	35	9	18	0.33	0.28	0.33	0.29	1.9	1.6	0.46	0.53
	3/16	5	61	13	16	31	8	14	0.33	0.28	0.33	0.29	1.9	1.6	0.41	0.47
	1/4	6	54	11	14	24	7	9	0.33	0.28	0.33	0.29	1.8	1.5	0.35	0.40
<b>Arctic Blue High-Performance Tint</b>	1/4	6	43	9	14	23	7	13	0.33	0.28	0.33	0.29	1.8	1.5	0.34	0.39
<b>SuperGrey High-Performance Tint</b>	1/8	3.2	21	5	14	15	5	4	0.33	0.28	0.33	0.29	1.9	1.6	0.26	0.30
	3/16	5	10	4	14	7	4	2	0.33	0.28	0.33	0.29	1.9	1.6	0.18	0.21
	1/4	6	7	4	13	5	4	1	0.33	0.28	0.33	0.29	1.8	1.5	0.15	0.18

## Pilkington **Eclipse Advantage™** Low-E Glass Outer Lite (#2 Surface) and **Energy Advantage™** Low-E Glass Inner Lite (#3 Surface)

<b>Eclipse Advantage Clear</b>	1/4	6	56	30	30	41	22	19	0.30	0.25	0.31	0.26	1.7	1.4	0.53	0.61
<b>Eclipse Advantage Grey</b>	1/4	6	27	11	29	20	9	7	0.30	0.25	0.31	0.26	1.7	1.4	0.31	0.36
<b>Eclipse Advantage Bronze</b>	1/4	6	32	13	29	24	11	7	0.30	0.25	0.31	0.26	1.7	1.4	0.36	0.41
<b>Eclipse Advantage Blue-Green</b>	1/4	6	48	22	29	26	13	10	0.30	0.25	0.31	0.26	1.7	1.4	0.36	0.41
<b>Eclipse Advantage EverGreen</b>	1/4	6	40	18	29	18	9	5	0.30	0.25	0.31	0.26	1.7	1.4	0.27	0.31
<b>Eclipse Advantage Arctic Blue</b>	1/4	6	33	14	29	17	9	7	0.30	0.25	0.31	0.26	1.7	1.4	0.27	0.31

## Pilkington **Activ™** Self-Cleaning Glass Outer Lite (#1 Surface) and **Energy Advantage™** Low-E Glass Inner Lite (#3 Surface)

<b>Activ Self-Cleaning</b>	3/32	2.5	71	23	21	59	21	34	0.33	0.28	0.34	0.29	1.9	1.6	0.70	0.81
	1/8	3	70	24	22	56	21	33	0.33	0.28	0.33	0.29	1.9	1.6	0.68	0.78
	5/32	4	70	23	20	54	20	31	0.33	0.28	0.33	0.29	1.9	1.6	0.67	0.77
	3/16	5	70	23	21	53	19	30	0.33	0.28	0.33	0.29	1.9	1.6	0.66	0.76
	1/4	6	69	23	20	51	19	27	0.33	0.28	0.33	0.29	1.9	1.6	0.64	0.74

## Pilkington **Activ™** Self-Cleaning Glass Outer Lite (#1 Surface) and **Solar-E™** Solar Control Low-E Glass Inner Lite (#3 Surface)

<b>Activ Self-Cleaning</b>	1/8	3	51	22	13	37	20	27	0.33	0.28	0.34	0.29	1.9	1.6	0.64	0.74
	5/32	4	51	21	13	36	20	26	0.33	0.28	0.34	0.29	1.9	1.6	0.63	0.73
	3/16	5	50	21	13	35	19	25	0.33	0.28	0.33	0.29	1.9	1.6	0.62	0.71
	1/4	6	50	21	13	34	19	24	0.33	0.28	0.33	0.29	1.9	1.6	0.60	0.69

## Pilkington **OptiView™** Anti-Reflective Glass Outer Lite and Inner Lite \*

<b>OptiView Anti-Reflective</b>	1/4	6	84	2.9	2.9	54	5	<1	0.32	0.29	0.33	0.29	1.9	1.7	0.66	0.76
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Pilkington **OptiView™** Anti-Reflective Glass - Insulating Glass fabricated with two layers of Laminated Glass\*

\* 2 lites of Laminates Glass - each 1/8" **OptiView™** + pvb layer + 1/8" **OptiView™** (coating on all 4 glass to air surfaces)

Insulating units constructed of equal glass thicknesses and 1/2" (12.7mm) airspace

\*\* Note: Pilkington **Eclipse Advantage™** Low-E products are not intended for use in #1 surface installations. It is generally preferable to glaze **Eclipse Advantage™** Low-E products with the coating on the #2 surface.

# Pilkington TEC Glass Performance Data

## Pilkington TEC Glass™ Product Properties

Product	Thickness (mm)	Visible Transmittance (%)	Sheet Resistance (Ohms/sq.)	Haze (%)	Hemispherical Emittance
TEC 7	2.2, 3.0, 4.0	80 - 82	6 - 8	5	0.12
TEC 8	2.2, 3.2	80 - 81.5	6 - 9	12	0.12
TEC 15	2.2, 3.0, 3.2, 4.0, 5.0, 6.0	82 - 84.5	12 - 14	≤ 0.74	0.15
TEC 35	3.2, 6.0	82 - 84	32 - 48	≤ 0.65	0.34
TEC 70	3.2, 4.0	82 - 84	58 - 72	0.5	0.45
TEC 250	3.2, 4.0	84 - 85	260 - 325	0.7	0.67
TEC 1000	3.2	88	≤	0.5	0.78
Clear	3.2	90	-	-	0.84

Notes: Nominal values shown. Specifications subject to change.  
Substrate = Clear soda lime glass.

## Pilkington TEC Glass™ Refrigerator Door Passive Applications\*\*\*

Glazing (Room/Cool side)	Airspaces (Number)	U-Value (W/m <sup>2</sup> ·°C)	Room-Side Glass Temp. (°C)	Condensation RH** (%)	RH Improvement (%)	Heat Flow Through Glass (W/m <sup>2</sup> )	Heat Flow Reduction (%)	Power Density (W/m <sup>2</sup> )
Clear/Clear	1	2.8	19	62	Base Case	64	Base Case	0
Clear/Clear/Clear	2	2.2	20	67	8	52	19	0
TEC 15/Clear	1	1.9	22	72	16	43	33	0

\*Room-side temperature = 27°C, refrigeration temperature = 4°C.

## Pilkington TEC Glass™ Freezer Door Power Applications\*

Glazing (Room/Cool side)	Airspaces (Number)	U-Value (W/m <sup>2</sup> ·°C)	Room-Side Glass Temp. (°C)	Condensation RH** (%)	RH Improvement (%)	Heat Flow Through Glass (W/m <sup>2</sup> )	Heat Flow Reduction (%)	Power Density (W/m <sup>2</sup> )
Triple Clear***	2	2.1	15	47	Base Case	101	Base Case	0
TEC 70/Clear/Clear	2	2.0	23	77	64	94	7	82
TEC 70/TEC 15	1	1.8	24	81	72	86	14	82
TEC 70/TEC 15/Clear	2	1.7	25	86	83	82	19	82

\*Room-side temperature = 27°C, freezer temperature = -20°C.

\*\*Condensation along the room-side glass surface away from the frame when the relative humidity (RH) within the room is greater than the value noted.

\*\*\*No power.

Notes:

All glass 3.2mm.

Airspace 12mm for doubles, 6mm for triples.

Airspaces filled with air.

All simulations utilizing LBNL Window 5.2

Demist heater power of 100 Watts (82 W/m<sup>2</sup>). Input voltage = 120 volts.

Unit 800 mm x 1,700 mm, bus bars along 800 mm dimensions.

## Performance Data Notes

### Technical Bulletins

ATS 129  
Properties

ATS 171  
Optics and Window 5  
Procedures

1. Some combinations or installations may require heat treating to prevent glass breakage from thermal stress.
2. Visible, Solar and UV data are based on laboratory spectrophotometric measurements weighted by an appropriate weighting function(s) using LBNL Window 5.2 software. Wave length ranges of the sun's energy used to calculate properties: Visible from 0.38 to 0.78 microns, Solar from 0.30 to 2.5 microns and UV from 0.30 to 0.38 microns.
3. Transmittance – Percentage of normally incident visible light or solar energy passing directly through the glazing.
4. Reflectance – Percentage of normally incident visible light or solar energy reflected away from the glazing.
5. U-Factor (Btu/hr.sq ft. °F) – Measure of the heat gain or loss through glazing due to environmental differences between the outdoor and indoor air. U-Factors given are center-of-glass values calculated using LBNL Windows 5.2. Winter U-Factors are based on an outdoor temperature of 0°F (-18°C), an indoor temperature of 70°F (21°C) and a 12.3mph (5.5m/s) wind velocity with no sun. Summer U-Factors are based on an outdoor temperature of 90°F (32°C), an indoor temperature of 75°F (24°C), a solar intensity of 248 Btu/hr.sq ft. °F (783 W/sq m) and a 6.3mph (2.8m/s) wind. To obtain metric U-Factor (W/sq m. °C), multiply by 5.678. "U-Factor" is identical to the previously known term of "U-Value".
6. European U-Factor (W/sq m.K) is based on EN 410/673 (CEN) standard.
7. Solar Heat Gain Coefficient or SHGC – The ratio of the total solar heat gain through the glass relative to the incident solar radiation. The solar heat gain includes both the solar energy directly transmitted through the glass, plus the solar energy absorbed by the glass and subsequently convected and thermally radiated inward.
8. Shading Coefficient or SC – The ratio of solar heat gain through the glass relative to that through 1/8" (3mm) clear glass at normal incidence. Note that Relative Heat Gain or RHG (Btu/hr.sq ft.), which is the amount of heat gained through the glass at assumed summer conditions, can be calculated using the following equation:  $RHG = SC \times 200 + U_s \times 14$ . To obtain metric RHG (W/sq m), multiply by 3.154.
9. Use of Pilkington **Energy Advantage™** Low-E, **Eclipse Advantage™** or **Solar-E™** Glass with the coating on the exposed interior surface may increase the possibility of condensation formation during winter conditions.
10. Typical values of Pilkington production are provided.

### Design and Uniform Static Loads

ASTM Standard Practice E 1300 contains design load evaluation procedures for different glass thickness and failure probabilities. For a copy of this standard visit [www.ASTM.org](http://www.ASTM.org) or write to:

### ASTM

100 Bar Harbor Drive  
West Conshohocken, PA 19428

For design and comprehensive technical data, please visit the Pilkington Web site:

[www.pilkington.com/na](http://www.pilkington.com/na)