
INTRODUCTION OF GLASS

Low-Emissivity Coated Glass

Low-Emissivity (or commonly known as Low-E glass) coatings are manufactured with Vacuum Sputtering technology.

Product Features

- Highly prevent solar infrared thermal transmittance, and provide ideal summer heat-insulation performance.
- Higher visible light transmittance ensures adequate natural light indoor.
- Lower heat transfer coefficient, a better heat preservation in winter.

Insulating Glass

Clear glass, tinted glass, tempered glass, Low-E glass, laminated glass and enameled glass can be composed into planar insulated glass.

Product Features

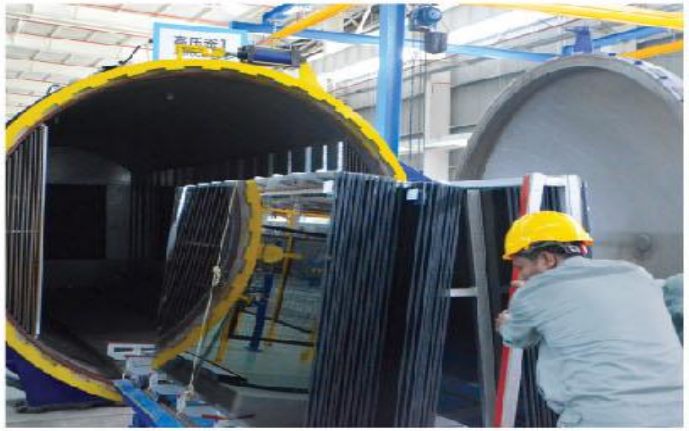
- Optical Properties: The visible light transmittance of insulating glazing systems is in the range of 7 - 80% and the visible light reflectance is in the range of 10 - 48%
- Thermal Properties: The U-value is effectively lowered by insulating glazing and can be further reduced by filling of inert gases
- Acoustical Insulation: Insulating glazing can reduce noise by more than 30 dB
- Condensation: The dew point of insulating glazing system is below -65 degree which guarantees no condensation formation under normal applications
- Sealing: Aluminum spacer is automatically curved and formed with the fewest joints and dual seals are applied, which ensures excellent sealing characteristics and long application lifetime

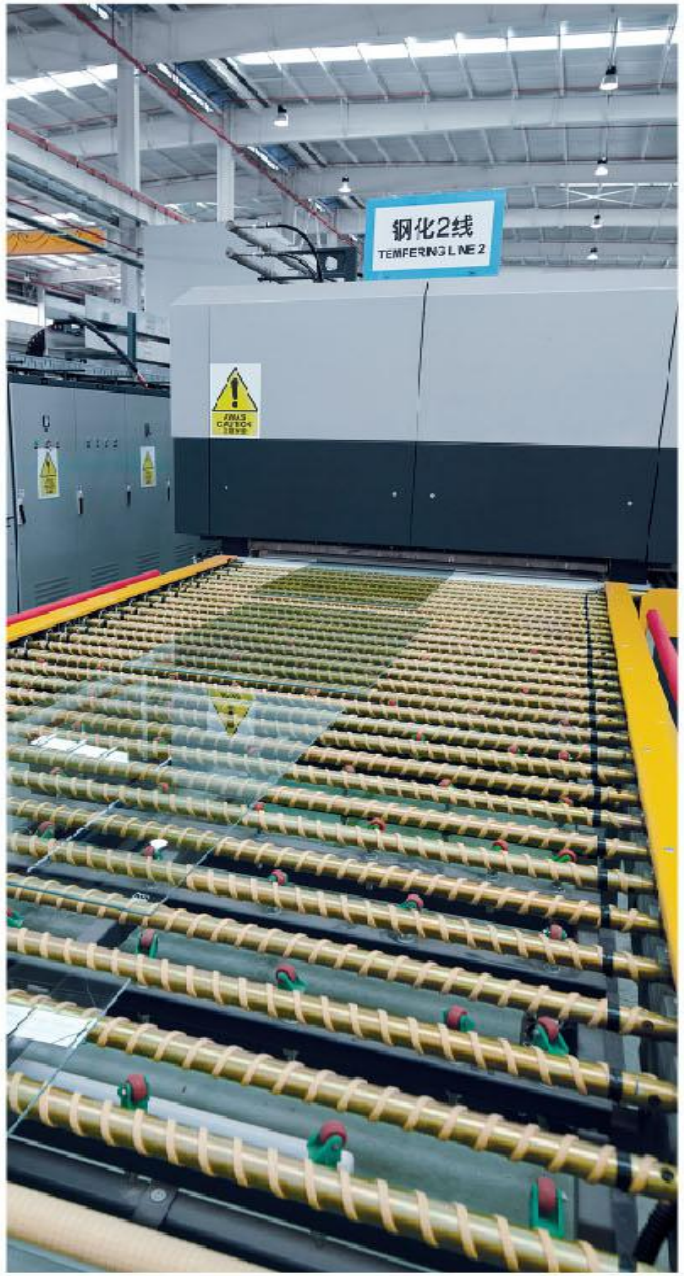
Laminated Glass

Laminated glass is made of two or more sheets of glass laminate with a polyvinyl butyral (PVB) based inter-layer.

Product Features

- Safety: When impacted by any external force and cracked, laminated glass still completely remains in the original frame
- Hurricane and earthquake resistance: Even if the glass is broken, it will not fall to the ground in whole. Rather, it will stay where it was before it becomes broken
- Explosion and bullet resistance: When many inter-layers are adopted, different grades of bullet/ explosion-proof glass can be produced
- Anti-ultraviolet radiation and thermal insulation: It can very effectively block ultraviolet rays in the sunlight to avoid ultraviolet radiation and reduce thermal transmittance
- Acoustical Reduction: PVB film can reduce transmission of noise





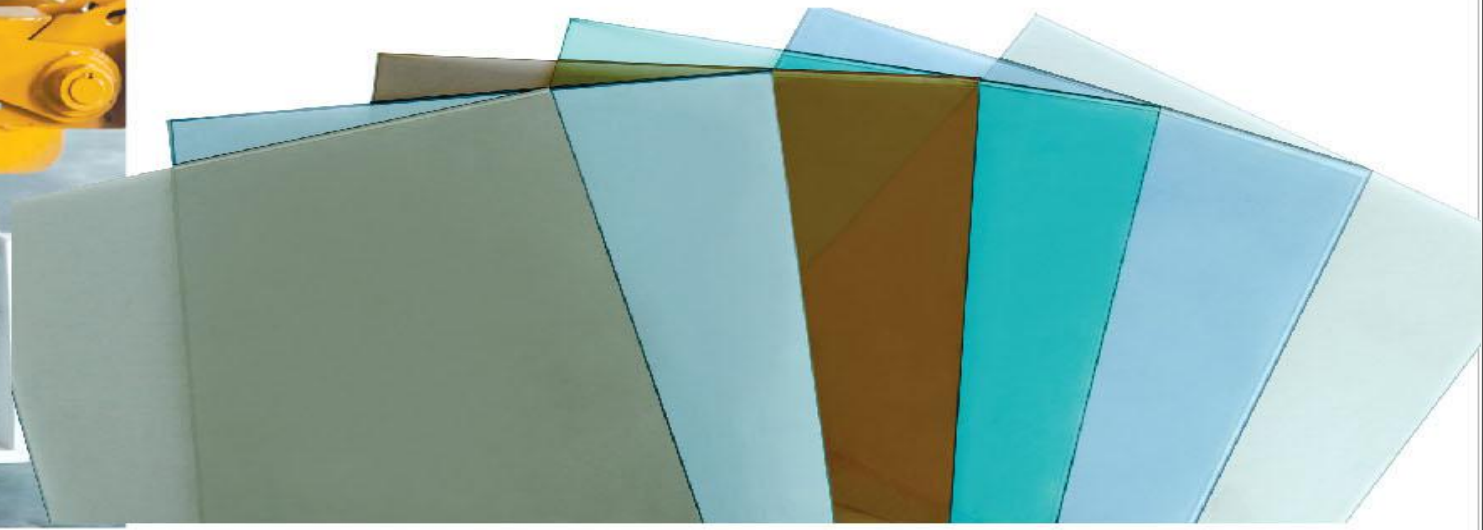
Heat Treated Glass

Tempered & Heat-Strengthened Glass

Tempered and heat-strengthened glass are obtained by heating ordinary glass to its softening point and follow by cooling down to form compression in the surface layer of the glass, thus the mechanical strength is increased by times.

Product Features

- Safety: When broken, tempered glass becomes small granules, which prevent substantial hurt to human body
- High strength: The strength of tempered glass is 4 to 5 times of annealed glass or surface compression excess than 10,000 psi
- Thermal stability: Tempered glass has excellent thermal stability, which can withstand up to 300°C thermal shock




PRODUCT &
PERFORMANCE

Low-Emissivity Coated Glass

1 Single Silver Low-E

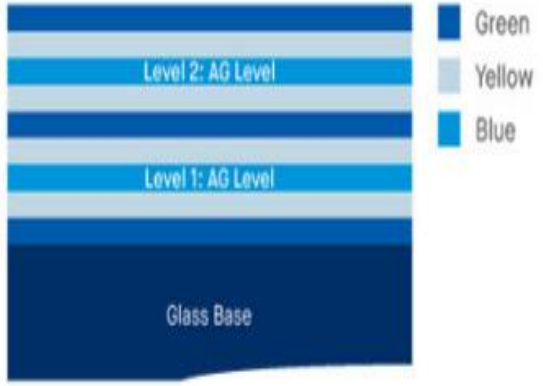
Series of Single Silver Low-E

Type		Reflective Color	Visible Light(%)			Solar Energy(%)			ASHRAE				Emissivity
			Transmittance	Reflectance		Transmittance	Reflectance		U-Value(W/m²,K)		Sharding Coefficient	SHGC	
				Out	In		Out	In	Winter Night	Summer Day			
Single Silver Low-E	*Light Blue *Blue Grey *Neutral Grey	Light Blue	53	20	10	34	25	22	1.75	1.73	0.46	0.40	0.100
		Blue Grey	40	23	11	26	25	21	1.88	1.89	0.37	0.33	0.120
		Neutral Grey	43	29	13	26	34	27	1.74	1.71	0.36	0.31	0.070
		Light Blue	70	9	13	45	27	18	1.81	1.80	0.58	0.51	0.105
		Blue Grey	75	12	12	49	20	21	1.77	1.74	0.64	0.56	0.082

2 Double Silver Low-E

Series of Double Silver Low-E

Type		Reflective Color	Visible Light(%)			Solar Energy(%)			ASHRAE				Emissivity
			Transmittance	Reflectance		Transmittance	Reflectance		U-Value(W/m²,K)		Sharding Coefficient	SHGC	
				Out	In		Out	In	Winter Night	Summer Day			
Double Silver Low-E	*Neutral Grey *Light Blue *Deep Blue *Bright Silvery	Transparency	69	11	12	35	30	31	1.67	1.61	0.46	0.40	0.034
		Neutral Grey	51	14	11	24	36	33	1.66	1.60	0.33	0.29	0.030
		Blue Grey	47	23	14	21	43	37	1.66	1.61	0.28	0.24	0.031
		Silver Grey	45	21	12	20	40	35	1.66	1.60	0.28	0.24	0.031
		Blue Grey	41	13	10	20	30	30	1.68	1.64	0.29	0.25	0.041
		Neutral Grey	44	13	12	21	32	29	1.68	1.62	0.30	0.26	0.039
		Sky Blue	44	25	13	19	45	38	1.64	1.58	0.26	0.22	0.021
		Ocean Blue	43	20	14	19	37	35	1.65	1.59	0.26	0.23	0.025
		Dark Blue	41	12	12	19	29	34	1.67	1.62	0.28	0.25	0.035
		Grey	31	19	12	15	36	29	1.68	1.63	0.22	0.19	0.040

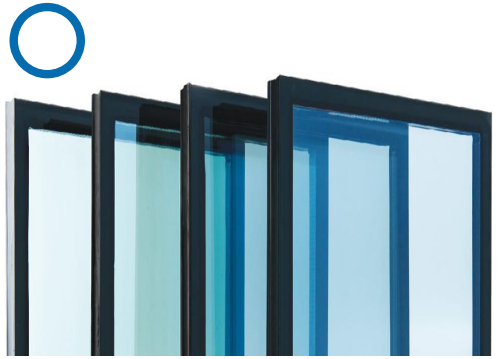


3 Triple Silver Low-E

Series of Triple Silver Low-E												
Type		Reflective Color	Visible Light(%)			Solar Energy(%)			ASHRAE			Emissivity
			Transmittance	Reflectance		Transmittance	Reflectance		U-Value(W/m²,K)		Sharding Coefficient	SHGC	
				Out	In		Out	In	Winter Night	Summer Day			
Triple Silver Low-E	*Neutral Blue	Neutral Blue	65	11	13	26	39	40	1.62	1.55	0.33	0.29	0.011
	*Neutral Grey	Neutral Grey	49	13	11	19	42	39	1.65	1.59	0.26	0.23	0.027
	*Silver Grey	Silver Grey	41	18	13	16	42	35	1.65	1.58	0.23	0.20	0.018

4 Hard Coating Low-E

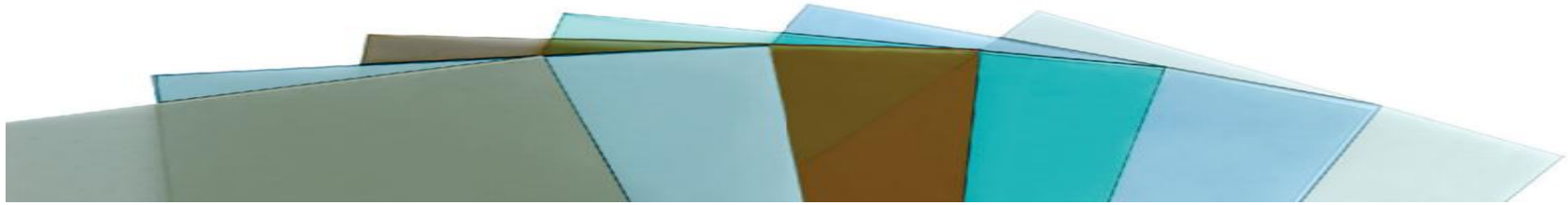
Hard Coating Low-E												
Type		Reflective Color	Visible Light(%)			Solar Energy(%)			ASHRAE			
			Transmittance	Reflectance		Transmittance	Reflectance		U-Value(W/m²,K)		Sharding Coefficient	SHGC
				Out	In		Out	In	Winter Night	Summer Day		
Hard Coating Low-E	*Hard Coating	Light Green	70	10	8	59	10	9	3.93	3.08	0.74	0.64



Solar Reflective Glass

Series of Solar Reflective

Type	Reflective Color	Visible Light(%)			Solar Energy(%)			ASHRAE			
		Transmittance	Reflectance		Transmittance	Reflectance		U-Value(W/m²,K)		Sharding Coefficient	SHGC
			Out	In		Out	In	Winter Night	Summer Day		
Solar Reflect	Silver Grey	31	19	20	24	18	28	5.01	4.35	0.44	0.38
	Blue Grey	35	24	9	26	20	21	5.03	4.37	0.45	0.39
	Grey	37	17	14	29	16	22	5.59	4.98	0.51	0.44
	Ocean Blue	37	18	13	28	13	27	5.02	4.35	0.49	0.43
	Light Blue	46	17	16	41	12	17	5.63	5.03	0.62	0.54
	Neutral Grey	60	8	14	54	6	14	5.27	4.64	0.73	0.64
	Gold	24	20	21	26	18	17	5.04	5.38	0.46	0.40
	Euro Grey	40	6	22	39	6	22	5.55	4.94	0.61	0.53
	Champagne	42	9	16	36	10	19	5.44	4.82	0.58	0.50
	Bright Silver	20	33	23	16	27	32	4.76	4.06	0.33	0.29
	Bright Silver Grey	22	27	27	19	22	32	4.97	4.29	0.38	0.33
	Tranparency with Slight Blue	68	19	19	65	14	16	5.98	5.40	0.82	0.71
	Tranparency	74	7	11	67	6	10	5.97	5.39	0.86	0.75



Comparison Parameter of Saving Glass

Product Name	Structure	Transmittance (%)	Shading Coefficient (SC)	U Value (W/m^2k)	Selection Factor (r)
Clear Glass	6mm	89	0.96	5.40	0.93
Solar Reflection	6mm	60	0.73	4.64	0.82
Insulating Glass	6+12A+6	80	0.84	2.88	0.95
Single Silver Low-E DGU	6+12A+6	53	0.46	1.73	1.15
Double Silver Low-E DGU	6+12A+6	47	0.28	1.60	1.68
Triple Silver Low-E DGU	6+12A+6	50	0.26	1.54	1.92