FINESET

Clear view film for FPD

FINESET [TE-X1B series]

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FINESET

1. Properties

1) a table of properties

Item			Unit	TE-X1B series						Note
Thickness			μm	100	125	150	175	200	250	Micrometer
Transmittance			%	≥97						Haze meter
Optical properties【Cst】	L* a* b*	L*	%	≥97						C Light Source view angle 10°
		a*	-	0.0±0.4						
		b*	-	0.2±0.4						
	Haze		%	≤0.9%						Haze meter
Peeling strength【Cst】	Glass	25℃	N/10 mm	≥6	≥6	≥7	≥7	≥8	≥8	180°,300mm/min
		85℃		≥3	≥3	≥3	≥3	≥3	≥4	
separator peel strength【Bst】	Light liner		N/25 mm 25℃	0.02-0.2						
	Heavy liner			0.2-0.4						
Elastic Moudlus [shearing]【Bst】	Storage	25℃	Pa	7.0E+04						Dynamic viscoelastic measurement 1Hz
		45℃		3.8E+04						
		85℃		1.7E+04						
	Loss	25℃		4.3E+04						
		45℃		1.9E+04						
		85℃		8.9E+03						
Dielectric constant		100KHZ	-	4.2						LCR meter (25℃)
		1MHZ		3.5						
Refractive index			nD/25℃	1.48						Abbe refractometer
Resistance on ITO			%	104						60℃，90%RH 500h

above mentioned contents and figures are based on examinations implemented by our company with great precision, but not granted figures.

FINESET

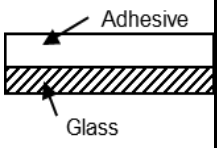
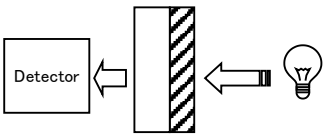
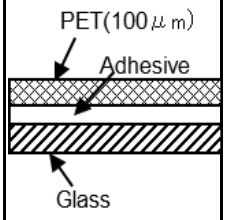
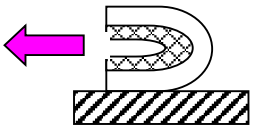
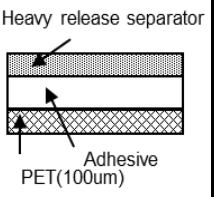
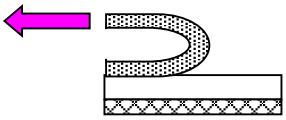
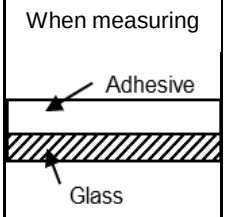
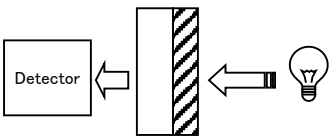
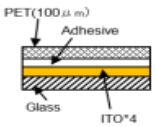
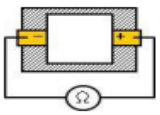
2) A table of Reliability

Item			Unit	TE-X1B series		Note
				Bst	Cst	
Thickness			μm	150		Micrometer
Structure FINESET Glass	Initial	Y	-	100	100	-
		x		0.311	0.311	
		y		0.32	0.32	
		L*		100	100	
		a*		0.00	0.00	
		b*		0.1	0.2	
	Heat resistance test	⊿Y		0.4	0.4	80℃,500h
		⊿x		0.001	0.001	
		⊿y		0.001	0.001	
		⊿L*		0.4	0.4	
		⊿a*		0.1	0.1	
		⊿b*		0.3	0.3	
	High Temp.High humidity test	⊿Y		0.4	0.4	60℃90%RH,500h
		⊿x		0.001	0.001	
		⊿y		0.001	0.001	
		⊿L*		0.4	0.4	
		⊿a*		0.1	0.1	
		⊿b*		0.1	0.1	
	Low Temp. resistance Test	⊿Y		0.00	0.00	-30℃，500h
		⊿x		0.00	0.00	
		⊿y		0.00	0.00	
		⊿L*		0.1	0.1	
		⊿a*		0.00	0.00	
		⊿b*		0.00	0.00	
	Thermal cycle test	⊿Y		0.30	0.30	-40℃⇔100℃ 100cycle
		⊿x		0.00	0.00	
		⊿y		0.001	0.001	
		⊿L*		0.30	0.30	
		⊿a*		0.10	0.10	
		⊿b*		0.30	0.30	

3) A table of Reliability for Automotive

Item			Unit	TE-X1B series		Note
				Bst	Cst	
Thickness			μm	150		Micrometer
Structure FINESET Glass	Initial	Y	—	100	100	—
		x		0.311	0.311	
		y		0.32	0.32	
		L*		100	100	
		a*		0.00	0.00	
		b*		0.1	0.2	
	Heat resistance test	⊿Y		0.4	0.4	100℃,500h
		⊿x		0.001	0.001	
		⊿y		0.001	0.001	
		⊿L*		0.4	0.4	
		⊿a*		0.1	0.1	
		⊿b*		0.4	0.4	
	High Temp.High humidity test	⊿Y		0.4	0.4	85℃85%RH,500h
		⊿x		0.001	0.001	
		⊿y		0.001	0.001	
		⊿L*		0.4	0.4	
		⊿a*		0.1	0.1	
		⊿b*		0.2	0.2	

2. Test method

No.	Item	Test piece	Test method	Equipment
1	Optical properties (chromaticity*1) (haze*2)			*1 Spectral colorimeter Minolta,CM-508 C light source, View angle 10° (Reference:Glass) *2 Haze turbidimeter Nippon Denshoku,NDH2000 D65 light source
2	Peel strength		 · Sample width : 10mm · Peel angle : 180° · Peel speed : 300mm/min · Condition : 23±3℃ , 50±10%RH	·Tensile testing machine A&D,RTE-1210 *Test is done 30 minutes after making the test piece
3	Separator peel strength (Heavy release liner)		 · Sample width : 25mm · Peel angle : 180° · Peel speed : 300mm/min · Condition :23±3℃ , 50±10%RH	·Tensile testing machine A&D,RTE-1210
4	Reliability (chromaticity*3)			*3 Spectral colorimeter Minolta,CM-508 C light source, View angle 10° (Reference:Glass)
5	Resistance on ITO			Noncrystalline Film (surface resistance:300Ω)

3. The content of acrylic acid

Acrylic acid is not intentionally used for TE-X1B series

4. Autoclave condition (recommendation condition)

45℃,0.3-0.5MPa, 15-40min;

Metal Halide Lamp energy: > 2500mJ/cm^2 or LED Lamp energy: > 3000mJ/cm^2.

5.Storage

6 months from the date of manufacture when stored in the original carton under room temperature.

Recommend: -10℃ ~ 30℃and 50% Relative Humidity. Keep avoiding sunshine.