

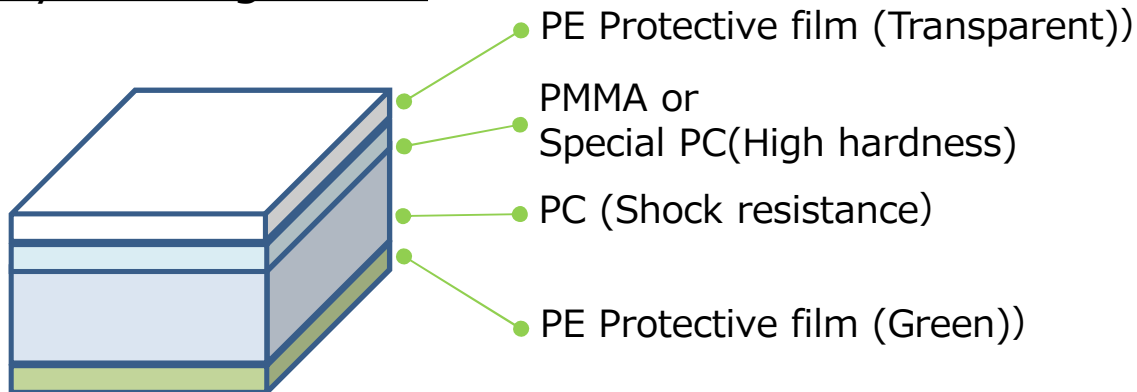
High transparent double layers sheet
ShineTech®

Shine Techno co., Ltd.
Sales Dpt.

Features

Double layers sheet by laminating Polycarbonate and PMMA(or Special PC) which has different characteristics from PC can satisfy both surface hardness and shock resistance although they are conflicting in properties. Besides, their excellent optical performance is suitable for cover lens of LCDs and touch panels.

Layer configuration



Standard Size

Width : 1,270mm

Length : 1,720mm

Thickness: 0.125~1.5mm
(~0.4; Roll supply is available)

ShineTech® Double layers Sheet Line Up

✓ **AW-10 [Standard Grade]**

PMMA/PC Double layers Sheet

✓ **AW-10U [Light resistant Grade]**

Equivalent to AW-10 in characteristics, The weakness of PC of turning yellowish color due to the degradation by ultra-violet is reduced.

✓ **AW-10SU [Ultra light resistant Grade]**

Maintaining the properties of PMMA/PC double layers sheet, the light resistance, UV-resistance are greatly improved.

✓ **PW-10U [Low warp/High shock resistance]**

The weakness of PC of warp/distortion due to moisture absorption is minimized by applying special PC at the front layer.

ShineTech® Single Layer Sheet Line Up

- ✓ **PC-10 [Standard grade]**

Polycarbonate single layer sheet

- ✓ **PC-10U [Light resistant grade]**

The weakness of PC of turning yellowish color due to the degradation by ultra violet is reduced.

Sheet Thickness and Characteristics

Test Items		Test Method	Unit	ShineTech® AW-10U								
Sheet specification			mm	0.125	0.2	0.3	0.4	0.5	0.8	1.0	1.2	1.5
PMMA thickness			μm	30	30	35	60	60	60	60	60	60
Surface hardness [@PMMA]		JIS K5600	-	F	F	F	2H	2H	2H	2H	2H	2H
Light Transmission		JIS K7361	%	91.5	91.4	91.3	91.3	91.3	91.2	91.0	91.0	91.0
Haze		JIS K7361	%	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Tensile Strength		JIS K7161	MPa	57~67								
Tensile Fracture Distortion			%	7	7	8	9	9	11	12	12	13
Tensile Elasticity			MPa	1670	1990	2020	2030	2050	1560	1380	1140	990
Shock Resistance	28gIron ball	Internal method (Height at 50%breakage)	mm	-	402	696	735	-	-	-	-	-
	67gIron ball			-	-	-	-	407	1160	-	-	-
	100gIron ball			-	-	-	-	-	546	867	-	-
	226gIron ball			-	-	-	-	-	-	-	607	1021
Dimension change by heat	140°C	JIS K7133	%	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1	-0.2	-0.1

※ Data above is typical value and is not under guarantee.

Variation of Functional Hard coating

Coating Variation	Surface hardness	Light transmission	Haze	Features
	JIS K5600	JIS K7105	JIS K7105	
Standard	5H	≥91%	≤0.3	Good cost performance. The most popular coating type in various application.
Anti-Fingerprint	4H	≥91%	≤0.3	Inconspicuous finger prints and easy to wipe stain out. Legible display by reducing the glare of the finger print.
Anti-Scratch	5H	≥91%	≤0.3	No scratch after 1000 times scratch test by steel wool #0000 (@1kg load)
Ultra Hard	6H	≥91%	≤0.3	Very high surface hardness
Anti-Glare	4H	-	-	Reducing glare of the display. Two types (Filler and Pattern) are available based on customer's request.
Anti-Reflection	5H	-	-	More than 98% light transmission, less than 1% surface reflection.
AG+AR	4H	-	-	Applying both AG and AR makes LCD legible and clear in outdoors. Useful for car-navigation display.

※ Data above is typical value of the hard coating based on ShineTech®AW-10 and is not under guarantee.