

[New Product] July 15, 2010

Commercialization of Optical Elasticity Resins for Large Flat Panel Displays with Superior Image Reproduction

–Effective for creating lower-profile and higher-contrast HDTVs, 3D televisions and other displays–

NEWS_no 10-003

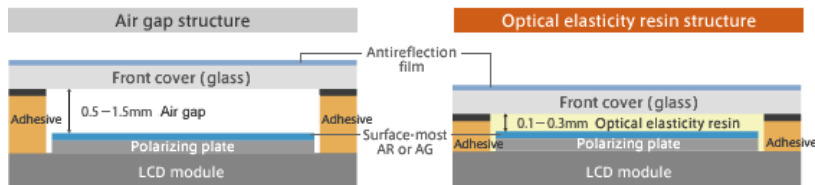
In addition to its SVR1000 series of optical elasticity resins for small-to-medium-sized flat panel displays, such as those used in mobile phones and digital still cameras, Sony Chemical & Information Device has commercialized and commenced mass production on its new SVR7000 series of optical elasticity resins, which is designed for large flat panel displays of 40 inches or more.

The SVR7000 series is equipped on the OptiContrast panel of the already-released Sony BRAVIA LX900 series and HX900 series, where the resins boost the contrast level of displays.

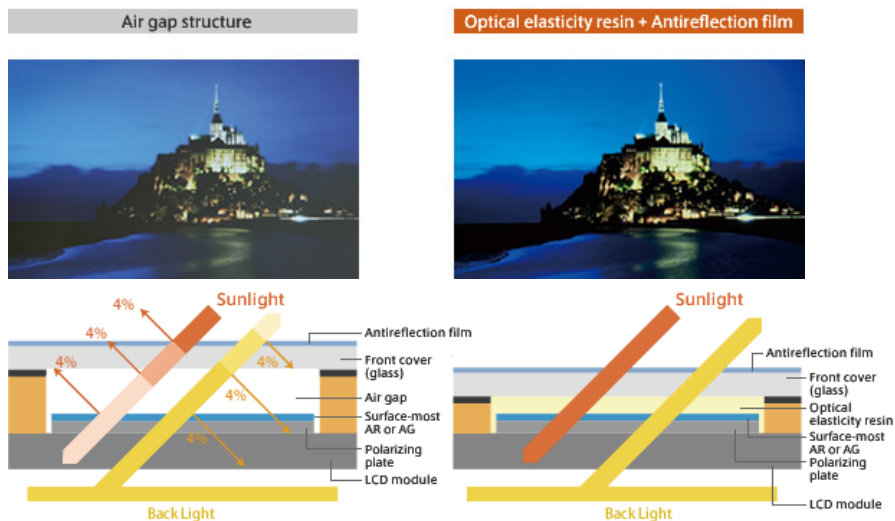
<Main Characteristics of Optical Elasticity Resin>

Inserting optical elasticity resin, which is regulated by the same refractive index as the front cover, between the front cover and the display results in faithful image reproduction with higher contrast and a greater feeling of depth even in bright rooms compared with the air gap structure, because the resin minimizes reflection from sunlight, fluorescent light, or other exterior light, and also minimizes the scattering of the image light inside the panel so as not to impair the actual performance of the LCD module. Moreover, imparting the inserted resin itself with elasticity softens any shocks from outside and protects the front cover and display module from damage. Even if the cover is damaged, the resin prevents the glass from shattering. Hence the resin reinforces the panel and achieves a thinner profile simultaneously. Applying antireflection film to the front cover at the same time inhibits reflection of exterior light, thereby enabling even higher contrast levels.

<Comparison of Panel Structures in Large LCD Televisions>



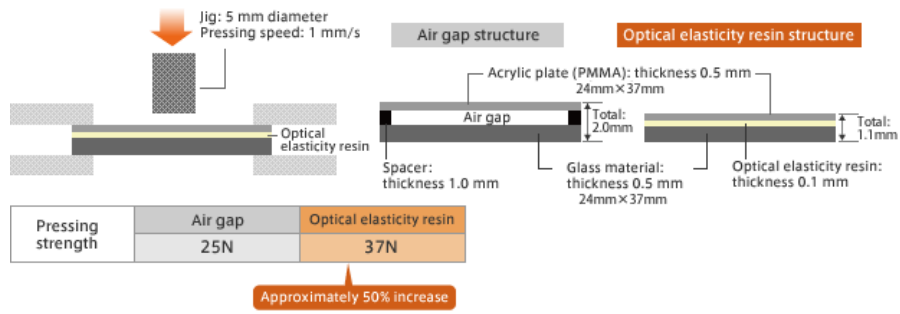
<Comparison of Screens of Air Gap Structure vs Optical Elasticity Resin with Antireflection Film Structure>



<Comparison of Panel Strength>

(Research by Sony Chemical & Information Device Corporation)

“Achieved an increase in strength of approximately 1.5 times” compared with the air gap structure under the following test conditions.



■ SVR7000 Series, Suited for Large Flat Panel Displays

Compared with conventional products, this latest SVR7000 series of optical elasticity resins have low viscosity for shorter spread time that enables excellent air dissipation and a large UV irradiated area so that even when antireflection film is applied the resins harden quickly with rapid curing under UV light. These characteristics enable the resins to be used in large flat panel displays.

<Comparison of Specifications of Conventional Resins vs the SVR7000 Series>

Product Name		SVR1100	SVR7000 Series	Remarks
Application		Small-to-medium-sized display panel	Large display panel	-
Refraction index	Liquid state	1.52	1.52	Abbe @25°C
Viscosity(mPa·s)		3,500	700 to 2,000	Rheo-meter @25°C
Hardness		9	6 to 18	Durometer (Code E)
Curing shrinkage rate (%)		1.6	1.2 to 2.2	Density meter
Curing conditions (mJ/cm ²)	Through glass	5,000	2,000 to 5,000	Metal halide lamp
	Through AR	Over 15,000	4,000 to 7,000	

Main component: Acrylic UV curable resin

Color: Clear

■ Corporate Outline

Sony Chemical & Information Device Corporation

Representative: Takashi Ichinose, Representative Director and President

Headquarters: Gate City Osaki, East Tower 8th Floor, 1-11-2 Osaki, Shinagawa-ku, Tokyo, Japan

Principal operations: Manufacturing and sales of electronics parts, adhesive materials and optical materials, manufacturing of magnetic disks, magnetic devices, print media and LAMINATE

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