

## PI와 유기 절연막 과의 전기광학 특성 비교에 관한 연구

김병용, 김종환, 한정민, 김영환, 강동훈, 김종연, 옥철호, 서대식  
연세대학교

### Study on Electro-Optical Specific of Polyimide and Organic Overcoat

Byoung-Yong Kim, Jong-Hwan Kim, Jeong-Min Han, Young-Hwan Kim, Dong-Hoon Kang, Jong-Yeon Kim, Chul-Ho Ok, and Dae-Shik Seo  
Yonsei Univ.

**Abstract :** In Liquid Crystal Display (LCD) manufacturing, the organic over coat materials over coat materials for insulation layer of color filter with acryl ate was widely used. Therefore, we approach that the organic overcoat material can use to insulation layer for color filter and liquid crystal (LC) alignment layer in this research. The LC aligning capabilities was successful stuided for the first time. The organic overcoat layer and polymer layer was coated by spin-coating. In order to characterize the LC alignment, electric optic and residual DC and atomic force microscopy (AFM) image was used. The good LCD aligning capabilities treated on the organic overcoat thin film surfaces with ion beam exposure of 45 ° above ion beam energy density of 1200 eV can be achieved. Also the good LCD alignment capabilities treated polymer on surfaces with ion beam exposure of 45 ° above ion beam energy density of 1800 eV can be achieved. Comparing electro-optical characteristics between the Polyimide (PI) and the overcoat, the resultant transmittance of the overcoat considerably matched that of the PI and the residual DC also exhibited similar features with the PI.

**Key Words :** Organic overcoat, ion beam, LC alignment, pretilt angle