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## Characteristics of AlNd thin film for TFT-LCD bus line

Dong-Sik Kim, Sung Kwan Kwak, Kwan Soo Chung  
Department of Electronics Kyunghee University

Recently low resistance of bus line is required for large screen size TFT-LCD panels. As a result, lower resistance Al-alloy is currently reviewed extensively. The resistivity is required smaller than  $10 \mu \Omega \text{cm}$ . In this paper, Al-Nd thin film were deposited on glass substrates by D.C. magnetron sputtering system under various condition. Its properties were characterized by SEM, AFM, XRD, 4-point-probe. The optimal condition of Al-Nd was  $120^\circ\text{C}$ , 125W, 0.4Pa, 30 sccm(Ar) and  $350^\circ\text{C}$ , 20 min. annealing. At that condition the resistivity of Al-Nd(2 wt.%) was about  $4 \mu \Omega \text{cm}$ . The minimum contact resistance of ITO/Nd was about  $110 \mu \Omega \text{cm}$  in the condition of  $300^\circ\text{C}$ , Ar 30sccm,  $\text{O}_2$ .