

Development of Yellow and Blue Phosphor and its Emission Properties

청색 및 황색 형광체 개발 및 두 가지 형광체의 발광특성 연구

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Electroluminescence(EL) come from the light emission obtained by electrical excitation energy passing through a phosphor layer under applied high electrical field(10^6V/cm). The preparation of white and blue phosphor, characterizations of light emitting ACPELD(alternating-current powder electroluminescent device) was investigated.

In this work, we fabricated two kinds of ELD, that is, YELD(yellow electroluminescent device), BELD(blue electroluminescent device). Basic structure of ELD1 and ELD2 is ITO/Phosphor/Insulator/Al electrode. ITO/Phosphor/insulator /Carbon electrode, respectively. Another structure of ELD is ITO/Phosphor and Insulator mixture/ Backelectrode.

EL spectra and Luminance of two types ELD were measured by changing voltage at fixed frequency 400Hz, 1.5kHz, 1.8kHz. In case of each blue phosphor and yellow phosphor prepared in this work. more than 50cd/m^2 and 30cd/m^2 luminance was acquired at 400Hz, 150V.

Reference

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