

OLED Encapsulation Process Using Low Melting Point Alloy and Epoxy Mixture by Instantaneous Discharge

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Abstract : In this study we are to develop a sealing process using a mixture of a LMPA and an epoxy for the atmospheric OLED sealing process as a substitute for the thin-film process. Electrode lines were formed on the substrates, which were covered with insulating layers and sacrificial layers. A mixture of a LMPA and an epoxy was screen printed between the two electrodes. In order to generate a heat for the melting of the mixture, Joule heating method was used. We used instantaneous discharge process for generating Joule heating. Experimental conditions such as voltage, time and constituent of the electrode were varied to optimize the heating conditions. As a result, the mixture structure of this study showed a great potential for a low-cost, low-temperature, atmospheric OLED sealing process as a substitute for the thin-film process.

Keywords : organic light emitting diode, encapsulation, low melting point alloy, joule heat

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