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Device Degradation Studies of MEHPPV based polymer light emitting diodes

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Abstract

Polymer light emitting diodes (PLEDs) technology is being used in commercial applications such as small screens for mobile phones and portable digital music players, car radios and digital cameras and also in high resolution micro displays for head mounted displays. But the main challenge has been the life time of the PLEDs. Although life time of in excess of 10000 hours have been reported for some materials, there is not enough information relating the processing and structure of device to its life time. In this paper, we report I-V, L-V and degradation behaviour of single layer MEHPPV-PLEDs as a function of various processing parameters including pixelization.