

Abstract

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Electrical and Optical Characterization of SMOLED and PLED

Organic Light-Emitting Diode (OLED) is one of the most interesting areas of scientific research in the field of optoelectronic devices. The aim of this paper is to model the two types of Organic LED which are polymer LEDs (PLED) and OLEDs made with small molecules (SMOLED). The electrical and optical characteristics of the two devices are studied. The simulation tool used is ATLAS-SILVACO. Some parameters are swept in the device to optimize the OLED performance, such as thickness of layers and number of layers. PLED has higher luminance and current density than SMOLED.