

Precision Inkjet Printing of Polymer Light Emitting Diode Displays

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Abstract

Solution processing by inkjet printing offers a cheap, flexible, scalable and highly accurate processing route for the manufacturing of PolyLED (Polymer Light Emitting Diode) displays. Such a display consists of a large number of small sized LED's integrated with driving electronics on a thin glass plate.

For small displays mounted in e.g. mobile telephones and PDA's the trend is towards 200 pixels per inch (pixel size 127 microns square). For large displays mounted in television sets the pixel size goes up to 700 microns square.

During the presentation the PolyLED technology will be outlined and the process requirements listed. A number of results will be shown.

Biography

J. Frits Dijksman obtained his MSc degree in Mechanical Engineering in 1973 at the Delft University of Technology, the Netherlands. In 1979 he obtained a PhD in Engineering Mechanics at the same university. In 1978, he joined the Philips Research Laboratories in the Netherlands to work on ink jet printing and the rheology of polymers. From 1984 on has occupied several management functions within Philips. He is now research fellow in group Large Area Devices & Instrumentation. In this group all the inkjet related research to print PolyLED displays has been carried out.