

Plastic Substrate for Flexible Displays

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Flat panel displays (FPD) have settled as a major display trend recent years. As for the FPD, the future lies on the new mode of displays including OLEDs and flexible displays. The flexible displays will enable the roll-able display as it has been suggested and roll-to-roll display manufacturing processes as a futuristic manufacturing process. For the future, new display substrates are required to replace the current glass substrate. Plastic is one key candidate as it ensures flexibility however there are a lot more required than the flexibility. The temperature stability, chemical resistance, dimensional stability, and gas barrier property are the major ones. Some of the characteristics depend on the material's inherent properties however; others can be improved by proper treatment as well as coating of proper materials. In this paper, outline of the plastic substrate will be given with proper emphasis on the relation with display manufacturing processes. Our development on the poly(ethersulfone) (PES) film and the display substrate will be introduced.