

High resolution 5" full color field emission displays with new aging technique

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Abstract

High resolution field emission display (FED) devices of 5 inch diagonal in size are fully developed for the applications of near-future flat panel displays. Under the unique gate-switching drive scheme, electron trajectory profiles are simulated and tested by considering leakage effects of each pixel. Uniquely-printed spacer with high aspect ratio are fabricated on real ITO glass for high vacuum packaging. In addition, new gas aging scheme of stabilizing field emitting array are extensively investigated during the sealing and exhausting process in order to prevent oxidation effects on the micro tip. Finally, full color images of 64 gray scale will be demonstrated.