

Transmissive Interferometric Modulation Display with Single-Layer Fabry-Pérot Filter

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Abstract — We present a transmissive-type interferometric modulation display featuring a single layer of Fabry-Pérot filter using blue phase liquid crystal (BPLC) in tandem with a quantum-dot backlight. With this design, no polarizers and color filters are needed. The intensity modulation is implemented by electrically controlling BPLC's *Kerr* effect, while the color modulation employs a sequential color scheme. Based on numerical simulations, device performance has been studied in depth.

Keywords — *interferometric modulation display; Fabry-Pérot filter; blue phase liquid crystal; quantum dot.*