Abstracts

Microwave band demonstration of a reflective geometry fiber and free-space binary photonic delay line

N.A. Riza and N. Madamopoulos. "Microwave band demonstration of a reflective geometry fiber and free-space binary photonic delay line." 1997 Microwave and Guided Wave Letters 7.4 (Apr. 1997 [MGWL]): 103-105.

For the first time, a modulated 2-b, one-channel binary switched, photonic time delay system (PTDS) is demonstrated that is based on a compact reflective optical delay path geometry that consists of one free-space delay line and one non-polarization-maintaining (PM) fiber delay line. Polarization switching using birefringent-mode nematic liquid crystals and a polarization noise-reduction technique are used to minimize the optical noise when using the cube polarization beamsplitters (PBSs) required in the reflective geometry delay. This gives the high electrical signal-to-noise ratios measured from 52 to 89 dB for the four settings of the delay line.

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