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(54) Title: POLARIZATION INSENSITIVE FABRY-PEROT WAVELENGTH TUNABLE FILTER WITH NEMATIC LIQUID CRYSTAL

(57) Abstract

There is provided a polarization insensitive Fabry-Perot wavelength tunable filter with a nematic liquid crystal, in which transparent electrodes (2) are respectively formed on the inner surfaces of two substrates (1), reflecting layers (3) are respectively coated on the transparent electrodes (2), one reflecting layer (3) having a homeotropic alignment layer (4) coated thereon to homeotropically align a liquid crystal, the other reflecting layer (3) having a homogeneous alignment layer (5) coated thereon and being processed to axially align the liquid crystal, and a nematic liquid crystal is inserted between the two substrates (1), to tune the wavelength of incident light depending on the magnitude of the voltage applied thereto. This Fabry-Perot filter has the transmission property completely insensitive to the polarization direction of the incident light in the whole operating voltage range.

