

Title (en)
SHORT FABRY-PEROT FILTER WITH METALLIC LAYERS

Title (de)
KURZER FABRY-PEROT-FILTER MIT METALLISCHEN SCHICHTEN

Title (fr)
FILTRE FABRY-PEROT COURT A COUCHES METALLIQUES

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Application
EP 01907709 A 20010206

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Abstract (en)
[origin: WO0159415A1] The invention concerns a tuneable optical filter (1) of the short Fabry-Perot interferometer type with metal layers, designed to filter an electromagnetic radiation passing through it along a transverse direction ZZ' and whereof the wavelength spectrum is centred on a wavelength λ_0 comprising two parallel plates (2, 4; 12, 14) separated from each other by at least one spacer (3; 10) such that there exists between said plates an air gap having a thickness e of the order of λ_0 . The surfaces of the two plates facing each other respectively receive a lower (6) and an upper (7) metal layer. Tunability means (8, 9; 10, 18 19) designed to modify the air gap e are arranged between the plates to tune the filter. To obtain maximum transmission T_{\max} higher than 1 % and a width at mid-height $\Delta\lambda$ less than 80 nm in the wavelength domain ranging between 1.55 and 1.85 μm centred on the wavelength λ_0 substantially equal to 1.7 μm , the metal layers (6, 7) are made from a metal selected among the group comprising tantalum and gold.

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