

Title (en)
MACH-ZEHNDER SWITCH

Title (de)
MACH-ZEHNDER-SCHALTER

Title (fr)
COMMUTATEUR DE MACH-ZEHNDER

Publication
EP 0873532 A1 19981028 (EN)

Application
EP 96916609 A 19960523

Priority
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• US 48909095 A 19950609

Abstract (en)
[origin: WO9642027A1] A compact monolithic Mach-Zehnder switch is formed such that one of the waveguide paths (69, 70) between the input and output couplers (67, 68) contains a material which exhibits a resonant nonlinearity, whereby its refractive index changes when pump power propagates through it. Each of the waveguide paths (69, 70) has a different propagation constant whereby signal light is subjected to a different delay in each path when no pump power is propagating through the rare nonlinear path. An input signal applied to the input (71, 72) of the switch appears at a first output terminal (73, 74) when the pump power does not propagate through the nonlinear path, and it appears at a second output terminal (73, 74) when the pump power is applied to the nonlinear path. Switching occurs at relatively low levels of pump power.

IPC 1-7
G02B 6/26; G02B 6/10

IPC 8 full level
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