

Title (en)

AN INTEGRATED PLANAR WAVEGUIDE, AND A METHOD OF MANUFACTURING IT

Title (de)

INTEGRIERTER PLANARER WELLENLEITER UND VERFAHREN ZU SEINER HERSTELLUNG

Title (fr)

GUIDE D'ONDES PLAN INTEGRE ET SON PROCEDE DE FABRICATION

Publication

EP 1196805 A1 20020417 (EN)

Application

EP 00929323 A 20000525

Priority

- DK 0000280 W 20000525
- DK PA199900679 A 19990527

Abstract (en)

[origin: WO0073838A1] In an integrated optical waveguide and a method of manufacturing it, a section for changing polarization state is formed as an independent rotatable unit. The rotation is performed by arranging the independent section on an actuator mechanism consisting of a flap with a sheet (4) on whose upper side the section is arranged. The integrated optical waveguide is formed of a silicon substrate (7) so that the flap is freely movable. The underside of the flap (6) forms an electrode which co-operates with a gold electrode formed on a glass substrate (8), said electrodes constituting the movable parts of the actuator mechanism itself. When a voltage is applied between the electrodes, the integrated optical waveguide will rotate about the axis which is drawn by the direction of light propagation. In an embodiment, the integrated optical waveguide has several sections. The invention provides a polarization controller allowing desired polarization states to be controlled in an optical waveguide, such as in an optical fibre. Also provided is an integrated compensator for use for first order compensation of polarization mode dispersion (PMD) in a wavelength division multiplexing system (WDM).

IPC 1-7

G02B 26/00; **G02B 6/12**

IPC 8 full level

G02B 6/10 (2006.01); **G02B 6/12** (2006.01); **G02B 6/126** (2006.01); **G02B 6/34** (2006.01); **G02B 6/35** (2006.01)

CPC (source: EP)

G02B 6/105 (2013.01); **G02B 6/12004** (2013.01); **G02B 6/126** (2013.01); **G02B 6/2706** (2013.01); **G02B 6/2766** (2013.01); **G02B 6/29395** (2013.01); **G02B 6/3594** (2013.01); **G02B 2006/12038** (2013.01); **G02B 2006/12142** (2013.01); **G02B 2006/12157** (2013.01); **G02B 2006/12176** (2013.01)

Citation (search report)

See references of WO 0073838A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

WO 0073838 A1 20001207; AU 4745100 A 20001218; CA 2375096 A1 20001207; EP 1196805 A1 20020417

DOCDB simple family (application)

DK 0000280 W 20000525; AU 4745100 A 20000525; CA 2375096 A 20000525; EP 00929323 A 20000525