Title (en)

GRATING ASSISTED COUPLER DEVICES

Title (de)

KOPPLERBAUELEMENTE MIT GITTERN

Title (fr)

DISPOSITIFS DE COUPLAGE PAR RESEAU DE DIFFRACTION

Publication

EP 1002248 A1 20000524 (EN)

Application

EP 98937997 A 19980804

Priority

- US 9815328 W 19980804
- US 5515797 P 19970804

Abstract (en)

[origin: WO9906864A1] An add/drop filter (10) for optical wave energy incorporates a Bragg grating (27) in a very narrow waist region (12) defined by merged lengths of elongated optical fibers (30, 31, 34, 35). Light is propagated into the waist region via adiabatically tapered fibers (20, 21, 24, 25) and is tranformed from two longitudinally adjacent fibers into two orthogonal modes within the air-glass waveguide of the waist and reflected off the grating from one fiber into the other. The geometry of the waist region (12) is such that the reflected drop wavelength is polarization independent, without lossy peaks in the wavelength band of interest. Back reflections are shifted out of the wavelength band of interest. High strength gratings are written by photosensitizing the waist region fibers. Narrow spectral bandwidth gratings are apodized by both a.c. and d.c. variations in writing beams. A coupler device employing these is precisely arranged in a support structure which provides temperature compensation.

IPC 1-7

G02B 6/14; G02B 6/34

IPC 8 full level

G02B 6/14 (2006.01); **G02B 6/293** (2006.01); **G02B 6/34** (2006.01); G02B 6/28 (2006.01)

CPC (source: EP)

G02B 6/02114 (2013.01); **G02B 6/02138** (2013.01); G02B 6/02085 (2013.01); G02B 6/02109 (2013.01); G02B 6/02152 (2013.01); G02B 6/0218 (2013.01); G02B 6/2835 (2013.01); G02B 6/29334 (2013.01)

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DOCDB simple family (publication)

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