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Holmes

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- (54) **OPTICAL PROCESSING**
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Related U.S. Application Data

- (60) Continuation of application No. 11/978,258, filed on Oct. 29, 2007, which is a continuation of application No. 11/515,389, filed on Sep. 1, 2006, now Pat. No. 7,612,930, which is a division of application No. 10/487,810, filed as application No. PCT/GB02/04011 on Sep. 2, 2002, now Pat. No. 7,145,710.

- (30) **Foreign Application Priority Data**
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- (51) **Int. Cl.**
G02F 1/01 (2006.01)
G03H 1/08 (2006.01)
- (52) **U.S. Cl.** **359/279**; 359/9; 359/11; 359/238; 359/615; 369/103; 356/326
- (58) **Field of Classification Search** 359/3, 9, 359/11, 237-239, 279, 556, 558, 559, 566, 359/24, 29; 385/15-18, 22, 31, 43, 129, 385/133, 146, 147, 901; 356/326, 328; 362/26, 362/602; 369/103, 44.29, 100; 398/49, 79
See application file for complete search history.

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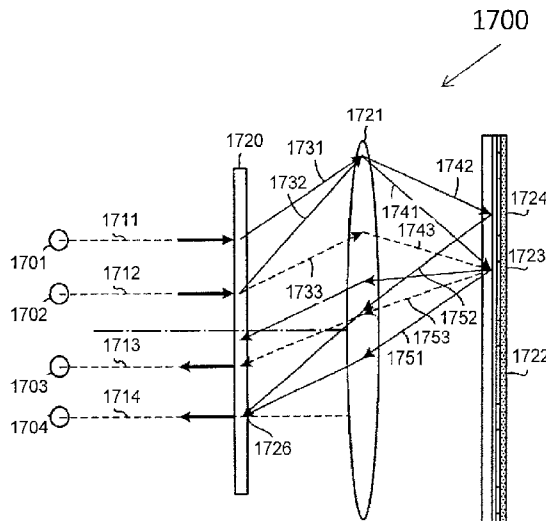
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- (57) **ABSTRACT**
A modular routing node includes a single input port and a plurality of output ports. The modular routing node is arranged to produce a plurality of different deflections and uses small adjustments to compensate for wavelength differences and alignment tolerances in an optical system. An optical device is arranged to receive a multiplex of many optical signals at different wavelengths, to separate the optical signals into at least two groups, and to process at least one of the groups adaptively.

91 Claims, 36 Drawing Sheets



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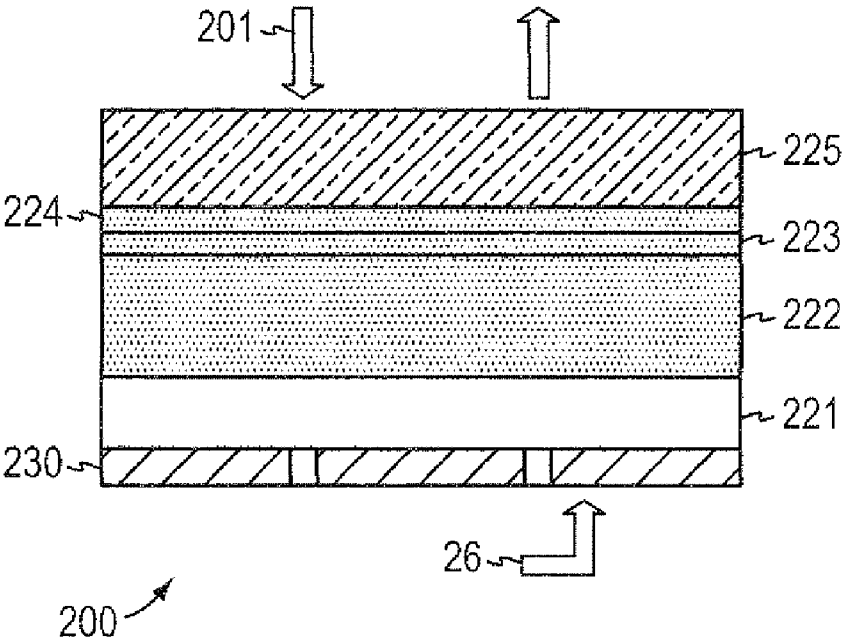


FIG. 1

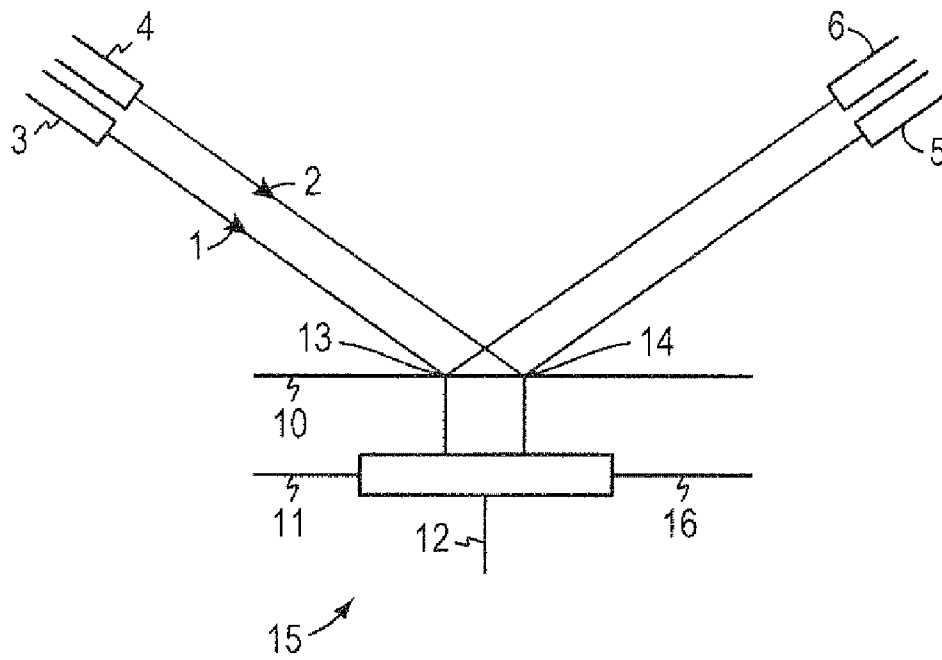


FIG. 2

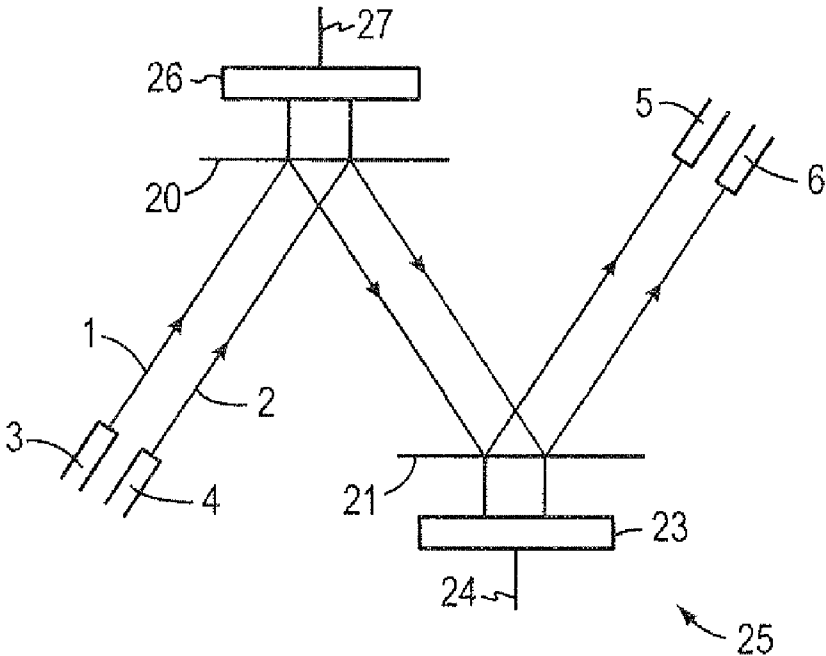


FIG. 3

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