

[54] **INTEGRATED QUANTUM WELL LASERS FOR WAVELENGTH DIVISION MULTIPLEXING**

[75] **Inventors:** James K. Carney, Eden Prairie; Robert M. Kolbas, Bloomington, both of Minn.
 [73] **Assignee:** Honeywell Inc., Minneapolis, Minn.
 [21] **Appl. No.:** 759,798
 [22] **Filed:** Jul. 29, 1985

Related U.S. Application Data

[62] Division of Ser. No. 533,187, Sep. 19, 1983, Pat. No. 4,577,321.
 [51] **Int. Cl.⁴** H01L 21/18; H01L 21/20
 [52] **U.S. Cl.** 29/569 L; 29/576 E; 148/175; 148/DIG. 66; 148/DIG. 95; 148/DIG. 72
 [58] **Field of Search** 29/569 L, 576 E; 357/17; 372/46, 47, 48, 50; 148/DIG. 65, DIG. 66, DIG. 72, DIG. 95, 174, 175; 727/38

References Cited

U.S. PATENT DOCUMENTS

4,318,058 3/1982 Mito et al. 372/50
 4,476,563 10/1984 Van Ruyven 372/50

4,547,956 10/1985 Bouadma et al. 29/569 L
 4,558,336 12/1985 Chang et al. 357/17
 4,573,161 2/1986 Sakai et al. 372/45

OTHER PUBLICATIONS

Aiki et al., "A Frequency Multiplexing Light Source with Monolithically Integrated Distributed-Feedback Diode Lasers", IEEE Jr. of Quan. Elect., vol. QE13, No. 4, Apr. 1973, pp. 220-223.
 Alferov et al., "Wavelength Multiplexing DH AlGaAs Injection Laser Source with a Graded Composition Along the Active Layer", Jr. of Quant. Elect., vol. QE-17, No. 8, Aug. 1981, pp. 1530-1533.
 Tsang, "CW Multiwavelength Transverse Junction Stripe Lasers Grown by Molecular Beam Epitaxy Operating Predominantly in Single-Longitudinal Modes", App. Phys. Letters, 36(6), Mar. 15, 1980, pp. 441-443.

Primary Examiner—Brian E. Hearn
Assistant Examiner—John T. Callahan
Attorney, Agent, or Firm—Omund R. Dahle

[57] **ABSTRACT**

An integrated quantum well laser structure which has a plurality of quantum well lasers for providing a plurality of light beams each having a different wavelength for use in wavelength division multiplexing.

2 Claims, 3 Drawing Figures

