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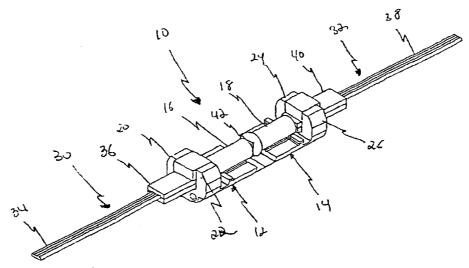
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[Continued on next page]

(54) Title: IMPROVED OPTICAL ADD/DROP FILTER AND METHOD OF MAKING SAME



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(57) Abstract: The invention is an optical ADD/DROP filter suitable for dense wavelength division multiplexing/demultiplexing. It comprises an optical bench having a longitudinal V-groove into which the optical components of the ADD/DROP filter are passively aligned and bonded. The bench further includes first and second pairs of opposed, spaced, vertical members at each end between which a fiber array block is inserted. In the method of constructing the ADD/DROP filter, an interference filter is bonded to a first collimating lens. Then, the first collimating lens with the interference filter attached thereto and a second collimating lens are placed in the V-groove of the bench where they are passively aligned. The two collimating lenses are then bonded to the bench. Fiber array substrates are inserted between the pairs of opposed, spaced, vertical members and a UV transparent block is inserted on top of each fiber array between the corresponding pair of opposed, spaced, vertical members. The fiber arrays are actively aligned. After proper alignment is achieved, adhesive is wicked into the spaces between the fiber array, the block and the vertical members. The adhesive is then cured.

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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G02B6/293 G02B 602B6/34According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system tollowed by classification symbols) G<sub>02</sub>B IPC 7 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Flectronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal, PAJ, WPI Data C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No 1-8, WO 99 24854 A (MELCHIOR LUTZ ; SIEMENS AG Υ 10-22 (DE)) 20 May 1999 (1999-05-20) 24 - 27.29 - 479,28 abstract 1-8,10, PATENT ABSTRACTS OF JAPAN Υ 13 - 17vol. 006, no. 265 (P-165), 24 December 1982 (1982-12-24) -& JP 57 158824 A (NIHON ITA GLASS KK), 30 September 1982 (1982-09-30) abstract; figures 12,13 9,28 Α 11,12 US 4 836 638 A (FINZEL LOTHAR) Υ 6 June 1989 (1989-06-06) abstract -/--Patent family members are listed in annex. Further documents are listed in the continuation of box C. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the 'A' document defining the general state of the art which is not considered to be of particular relevance invention \*E\* earlier document but published on or after the international \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date involve an inventive step when the document is taken alone \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled in the art. other means \*P\* document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of the actual completion of the international search Date of mailing of the international search report 14/12/2001 30 November 2001 Authorized officer Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Verbandt, Y Fax: (+31-70) 340-3016

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