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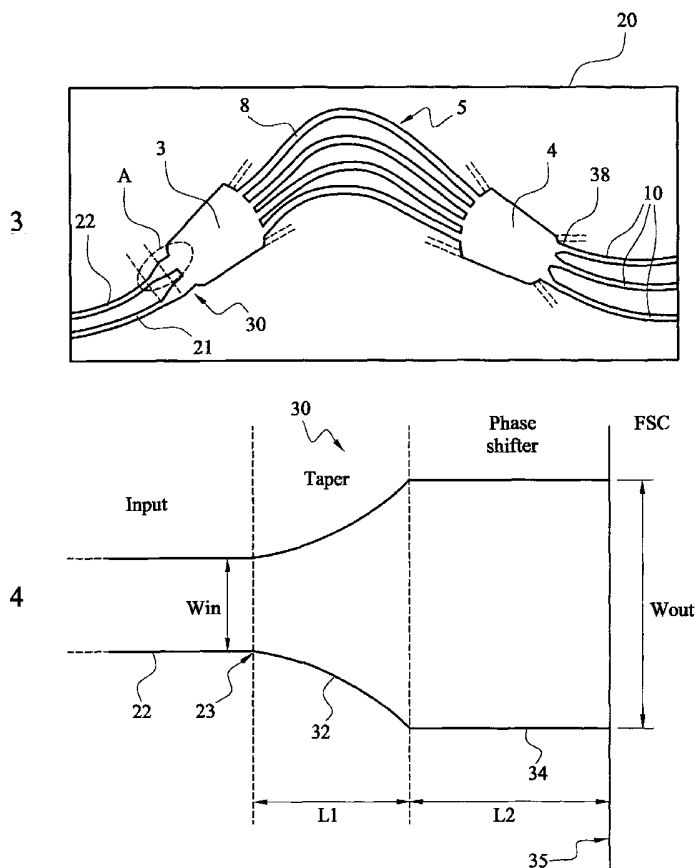
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: PASSBAND FLATTENING IN AN ARRAYED WAVEGUIDE GRATING



(57) Abstract: An AWG having a passband flattening feature disposed between at least one of the input and output waveguides and an adjacent one of the first and second free space couplers in which the passband flattening feature comprises a non-adiabatic tapered waveguide which widens in width towards the respective free space coupler. The passband flattening feature merges smoothly with the or each input and output waveguide, and is shaped to minimize radiation losses and thus insertion loss of the device. In one embodiment, the passband flattening feature consists of an exponentially tapered waveguide followed by a phase shifting waveguide. In another embodiment the feature is a curvilinear waveguide having a shape defined by a perturbed cosine function.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G02B6/34

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, WPI Data, INSPEC, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 444 817 A (AMERICAN TELEPHONE & TELEGRAPH) 4 September 1991 (1991-09-04)	1,16-22
Y	column 3, line 51 -column 5, line 12; figures 1,2	2-6,8-14
Y	EP 0 881 512 A (LUCENT TECHNOLOGIES INC) 2 December 1998 (1998-12-02) column 1, -line 20 - line 34 column 2, line 11 - line 36 column 3, line 12 - line 50 column 8, line 51 -column 9, line 11 figure 2C	2-6,8-14



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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P document published prior to the international filing date but later than the priority date claimed

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X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T	WO 02 101435 A (LANKER MICHAEL WILLIAM ;ALCATEL OPTRONICS UK LTD (GB); VAN DER VLI) 19 December 2002 (2002-12-19) cited in the application page 8 -page 17	6-10,15
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