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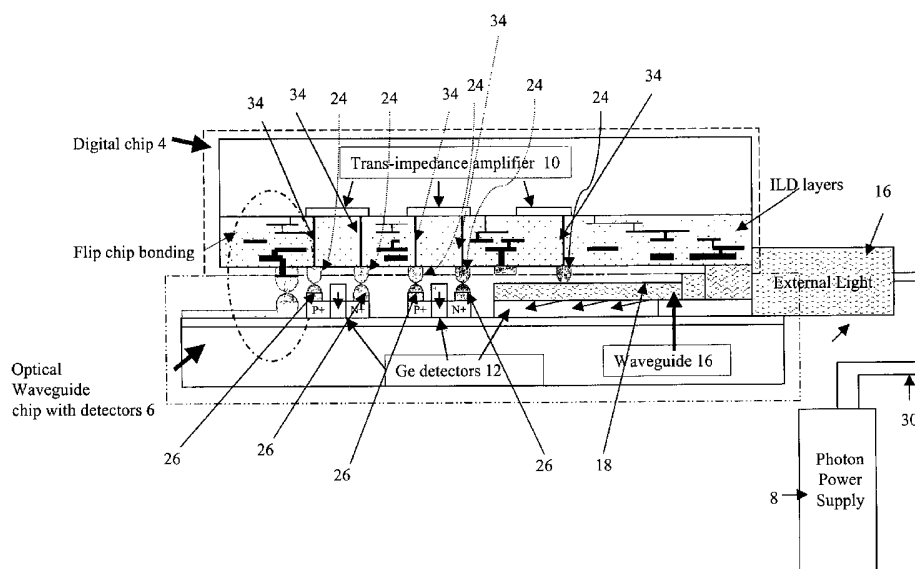
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(54) Title: HYBRID INTEGRATION OF ELECTRICAL AND OPTICAL CHIPS



(57) Abstract: A system of integrating electronic and optical functions includes an electronic chip that also includes monolithic IC electronics for performing electronic functions. Furthermore, the electronic chip includes a plurality of solder bumps for receiving input for processing. An optical chip receives an optical signal and performs optical functions on the signal, and outputs electrical signals indicative of the optical functions performed on the signal. Moreover, the optical chip includes a plurality of solder bumps for sending the electrical signals as input to the electronic chip. The solder bumps of the electronic chip and optical chip are bonded together so that a hybrid integration is formed that separates the yield of the optical and electrical circuits forming the electronic and optical chip.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L25/16

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 H01L

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)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Y	column 5, line 53 -column 6, line 62; figures 1,2	4-7, 18-21
Y	US 4 514 748 A (KASTALSKY ALEXANDER ET AL) 30 April 1985 (1985-04-30) Abstract; Fig. 1	4, 5, 18, 19
Y	US 6 222 951 B1 (HUANG FENGYI) 24 April 2001 (2001-04-24) Abstract, Figs. 1-5	6, 20
Y	EP 1 128 197 A (MARCONI COMM LTD) 29 August 2001 (2001-08-29) Abstract	7, 21
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Patent family members are listed in annex.

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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.
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