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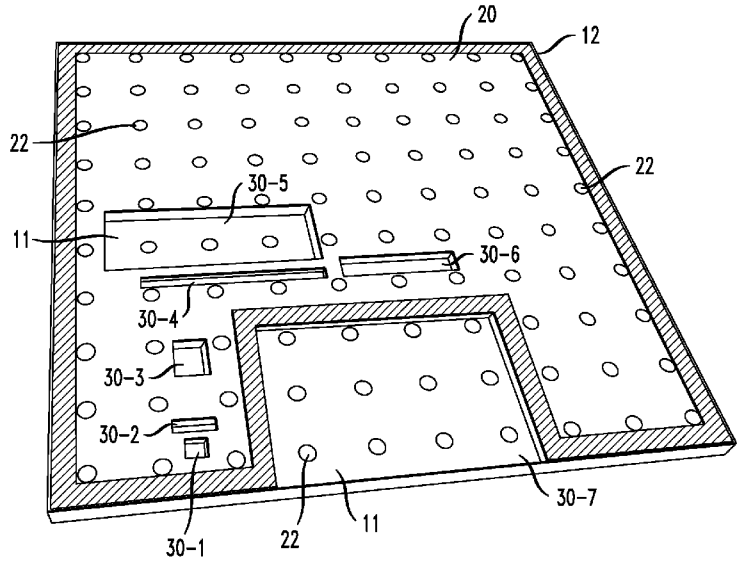
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[Continued on next page]

(54) Title: WAFER SCALE PACKAGING PLATFORM FOR TRANSCEIVERS

FIG. 5



(57) Abstract: A wafer scale implementation of an opto-electronic transceiver assembly process utilizes a silicon wafer as an optical reference plane and platform upon which all necessary optical and electronic components are simultaneously assembled for a plurality of separate transceiver modules. In particular, a silicon wafer is utilized as a "platform" (interposer) upon which all of the components for a multiple number of transceiver modules are mounted or integrated, with the top surface of the silicon interposer used as a reference plane for defining the optical signal path between separate optical components. Indeed, by using a single silicon wafer as the platform for a large number of separate transceiver modules, one is able to use a wafer scale assembly process, as well as optical alignment and testing of these modules.

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

H01L 25/16; H01L 23/52; H01L 21/46; H01L 21/30; H01L 23/48; H01L 23/12; H01L 21/00

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

Korean utility models and applications for utility models
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: wafer scale packaging, transceiver, silicon wafer, and opto-electronic

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2006-0258120 A1 (VANDENTOP GILROY et al.) 16 November 2006 See the abstract, figure 1, paragraphs [0018]-[0021], and claims 1, 11.	1-18
A	US 2004-0036135 A1 (JUN YOUNG YANG et al.) 26 February 2004 See the abstract, figure 1, paragraphs [0020]-[0026], and claim 1.	1-18
A	US 6856014 B1 (JOHN C. EHMKE et al.) 15 February 2005 See the abstract, figure 1, columns 2-3, and claim 1.	1-18
A	US 6639313 B1 (MARTIN; JOHN R. et al.) 28 October 2003 See the abstract, figure 1, column 5, and claim 1.	1-18

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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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
"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 documents,such combination being obvious to a person skilled in the art
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Information on patent family members

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US 6639313 B1	28.10.2003	None	