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[Continued on next page]

(54) Title: LOW PROFILE CAMERA MODULE PACKAGING

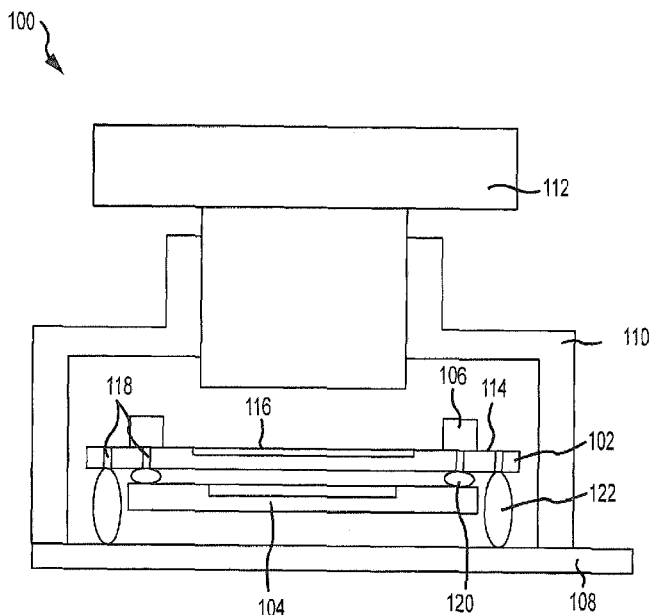


FIG. 1

(57) Abstract: A camera module including an image sensor and a circuit substrate that are each attached to a bottom surface of a glass substrate. The image sensor is positioned between the circuit substrate and the glass substrate. This arrangement allows passive components normally associated with the image sensor to be mounted to a top surface of the glass substrate rather than to the image sensor, thus reducing the necessary size of the top surface of the image sensor, which in turn can reduce the overall size of the image sensor. A lens assembly, including a housing and a lens, is attached to the circuit substrate to position the image sensor and the glass substrate within a cavity provided in the housing.

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**A. CLASSIFICATION OF SUBJECT MATTER*****H04N 5/225(2006.01)i***

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)

H04N 5/225; G02B 11/02; G01P 15/125; G02B 11/34; H01L 31/0232; 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) &amp; Keywords:circuit substrate,glass substrate,top,bottom,lens,image sensor

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2007-0040932 A1 (WEN-CHING CHEN) 22 February 2007 See abstract;See paragraphs [0027]-[0038];figure 1.	1-20
A	US 2008-0028856 A1 (KATSUYA KIKUIRI et al.) 07 February 2008 See abstract;See paragraphs [0025]-[0031];figure 1B.	1-20
A	US 2010-0118420 A1 (DENG JAU-JAN et al.) 13 May 2010 See abstract;See paragraphs [0012]-[0016];claim 1 and figures 1A-2A.	1-20
A	US 2010-0025791 A1 (OGAWA MASAOKI et al.) 04 February 2010 See abstract;See paragraphs [0028]-[0041];claim 1 and figures 1-2.	1-20

 Further documents are listed in the continuation of Box C. See patent family annex.

\* Special categories of cited documents:

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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

"&amp;" document member of the same patent family

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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