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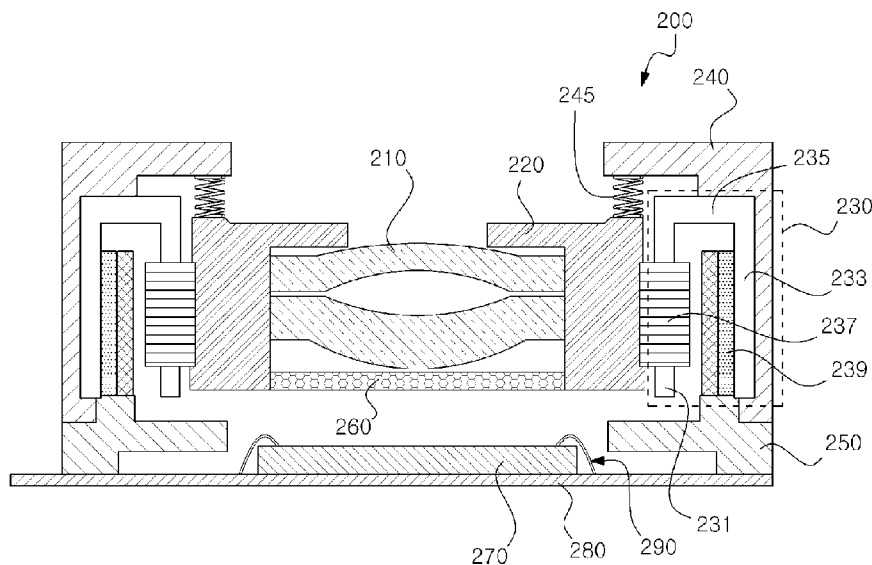
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(54) Title: CAMERA MODULE

[Fig. 2]



(57) Abstract: The present invention relates to a camera module having an auto focus function, the module including a lens unit having at least one lens, a barrel into which the lens unit is inserted, and connected by a VCM (Voice Coil Motor) actuator, and an image sensor discretely positioned from the lens unit to convert light having passed the lens unit to an electrical signal, where the VCM actuator includes a gap of a reference distance position value which is a position of an object catering to a lens focal length according to the camera module, and information on a focus-met lens position value, and adjusts an initial position of the lens by using the gap of reference distance position value of the lens position value during operation of the camera module.

WO 2011/078614 A3

A. CLASSIFICATION OF SUBJECT MATTER***H04N 5/232(2006.01)i, G02B 7/09(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 5/232; G02B 7/28; G02B 7/34; H04N 5/225; G03B 13/00; G02B 15/15

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: auto focus, actuator, lens position, coil, magnet, yoke.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2007-0242152 A1 (Ga-Lane Chen) 18 October 2007 See abstract; paragraphs [0016]-[0030]; claims 1-9; figures 4.	1-20
Y	JP 2005-308960 A (CANON INC) 04 November 2005 See abstract; paragraphs [0011]-[0069], [0042]-[0071]; claims 1-5.	1-20
A	KR 10-2009-0118178 A (SAMSUNG ELECTRO-MECHANICS CO., LTD.) 18 November 2009 See abstract; paragraphs [0020]-[0049]; claim 1; figures 1-4.	1-20
A	KR 10-2004-0039913 A (SAMSUNG ELECTRONICS CO., LTD.) 12 May 2004 See abstract; page 2, line 23 - page 4, line 38; claim 1 and figures 1-3.	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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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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KR 10-2004-0039913 A	12.05.2004	None	