

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2018/100967

A. CLASSIFICATION OF SUBJECT MATTER		
G02B 13/00(2006.01)i; G02B 13/18(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)		
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 practicable, search terms used)		
CNABS, CNTXT, EPODOC, WPI, USTXT, TWABS, CNKI: 透镜, 四透镜, 五透镜, 六透镜, 透镜组, 镜片组, 光圈, 遮光, 最大, 最小, 距离, 通光口径, 通光孔径, 镜头, 弯月, 双凹, 双凸, 凹凸, 焦距, 曲率半径, 屈光力, 屈折力, 反射, optical, lens, objective side, image side, refractive power, refracting power, fourth lens, fifth lens, sixth lens, aperture, convex, aspheric, focus, reflect+		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 202256842 U (LARGAN PRECISION CO., LTD.) 30 May 2012 (2012-05-30) description, paragraphs [0109]-[0153], and figures 1-4	1, 2, 5, 6, 8, 14
Y	CN 202256842 U (LARGAN PRECISION CO., LTD.) 30 May 2012 (2012-05-30) description, paragraphs [0109]-[0153], and figures 1-4	15, 24
Y	CN 204359995 U (LARGAN PRECISION CO., LTD.) 27 May 2015 (2015-05-27) description, paragraphs [0201]-[0209], and figures 12D and 12E	15, 24
X	CN 102375213 A (LARGAN PRECISION CO., LTD.) 14 March 2012 (2012-03-14) description, paragraphs [0144]-[0170], and figures 2A-2B and 9	1-4, 14
X	CN 101604065 A (E-PIN OPTICAL INDUSTRY CO., LTD.) 16 December 2009 (2009-12-16) description, page 5, line 10 to page 9, line 4, and figures 1-4	1, 2, 4
X	CN 104345434 A (GENIUS ELECTRONIC OPTICAL (XIAMEN) CO., LTD.) 11 February 2015 (2015-02-11) description, paragraphs [0157]-[0165], and figures 11-15	1
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> 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 "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "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 "&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
10 October 2018		13 November 2018
Name and mailing address of the ISA/CN		Authorized officer
State Intellectual Property Office of the P. R. China No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088 China		
Facsimile No. (86-10)62019451		Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2018/100967

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 102466863 A (HONGFUJIN PRECISION INDUSTRY (SHENZHEN) CO., LTD. ET AL.) 23 May 2012 (2012-05-23) entire document	1-24
A	US 5835288 A (FUJI PHOTO OPTICAL CO., LTD.) 10 November 1998 (1998-11-10) entire document	1-24

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2018/100967

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	202256842	U	30 May 2012	US	2012327520	A1	27 December 2012
				US	8456757	B2	04 June 2013
				TW	I411830	B	11 October 2013
				CN	102841431	A	26 December 2012
				CN	102841431	B	28 January 2015
				TW	201300869	A	01 January 2013
CN	204359995	U	27 May 2015	TW	M502181	U	01 June 2015
				US	9341813	B1	17 May 2016
				US	9823447	B2	21 November 2017
				US	9513454	B2	06 December 2016
				US	2018039047	A1	08 February 2018
				US	2016231526	A1	11 August 2016
				US	2016139359	A1	19 May 2016
				US	2017038561	A1	09 February 2017
CN	102375213	A	14 March 2012	CN	102375213	B	15 May 2013
CN	101604065	A	16 December 2009	CN	101604065	B	25 January 2012
CN	104345434	A	11 February 2015	US	9488804	B2	08 November 2016
				US	2015043091	A1	12 February 2015
				TW	201510566	A	16 March 2015
				TW	I490534	B	01 July 2015
				CN	104345434	B	28 September 2016
CN	102466863	A	23 May 2012	CN	102466863	B	09 March 2016
US	5835288	A	10 November 1998	JP	H09304695	A	28 November 1997