

INTERNATIONAL SEARCH REPORT

International application No. PCT/JP2020/009042

A. CLASSIFICATION OF SUBJECT MATTER
 Int. Cl. G03B21/14 (2006.01) i, B60K35/00 (2006.01) i, G03B21/00 (2006.01) i, G03B21/62 (2014.01) i
 FI: G03B21/14 Z, G03B21/62, G03B21/00 D, B60K35/00 A
 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)
 Int. Cl. G03B21/00-21/64, G09G3/00-5/42, B60K35/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
 Published examined utility model applications of Japan 1922-1996
 Published unexamined utility model applications of Japan 1971-2020
 Registered utility model specifications of Japan 1996-2020
 Published registered utility model applications of Japan 1994-2020

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	JP 2013-67209 A (YUPITERU CORP.) 18 April 2013, paragraphs [0035]-[0064]	1, 4-8, 16-17 2-3, 9-12 13-15
Y	JP 2018-526258 A (CORNING INC.) 13 September 2018, paragraphs [0011]-[0046]	2-3, 9-12
Y	JP 2015-184642 A (CANON INC.) 22 October 2015, paragraphs [0035]-[0042]	10
A	WO 2017/134865 A1 (MAXELL, LTD.) 10 August 2017, entire text	1-17
A	US 10059238 B1 (FORD GLOBAL TECHNOLOGIES, LLC) 28 August 2018, entire text	1-17

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 "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
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Date of the actual completion of the international search 30.04.2020	Date of mailing of the international search report 02.06.2020
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Name and mailing address of the ISA/ Japan Patent Office 3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Authorized officer Telephone No.
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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/JP2020/009042

Patent Documents referred to in the Report	Publication Date	Patent Family	Publication Date
JP 2013-67209 A	18.04.2013	(Family: none)	
JP 2018-526258 A	13.09.2018	US 2018/0147985 A1 paragraphs [0013]- [0048] WO 2016/196544 A1 TW 201710113 A KR 10-2018-0015669 A CN 107848419 A	
JP 2015-184642 A	22.10.2015	US 2015/0281418 A1 paragraphs [0045]- [0051]	
WO 2017/134865 A1	10.08.2017	US 2019/0025580 A1 CN 108473054 A CN 108473055 A	
US 10059238 B1	28.08.2018	DE 202018103005 U1 CN 208896962 U	