

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2019/085946

A. CLASSIFICATION OF SUBJECT MATTER		
<i>H01S 5/183</i> (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)		
H01S		
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)		
EPO-Internal, WPI Data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 102005016052 A1 (AGILENT TECHNOLOGIES INC [US]) 02 March 2006 (2006-03-02) paragraph [0053]; figures 4, 7	1-16
X	WO 2018134086 A1 (OSRAM OPTO SEMICONDUCTORS GMBH [DE]) 26 July 2018 (2018-07-26) page 31 - page 32; figure 15E	1,9
A	WO 2012031932 A1 (OSRAM OPTO SEMICONDUCTORS GMBH [DE]; GEBUHR TOBIAS [DE] ET AL.) 15 March 2012 (2012-03-15) figure 4A	1-16
<input 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
13 March 2020		23 March 2020
Name and mailing address of the ISA/EP		Authorized officer
European Patent Office p.b. 5818, Patentlaan 2, 2280 HV Rijswijk Netherlands Telephone No. (+31-70)340-2040 Facsimile No. (+31-70)340-3016		Flierl, Patrik Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

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Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
DE	102005016052	A1	02 March 2006	CN	1738117	A	22 February 2006
				DE	102005016052	A1	02 March 2006
				JP	2006060204	A	02 March 2006
				TW	1357191	B	21 January 2012
				US	2006039434	A1	23 February 2006

WO	2018134086	A1	26 July 2018	CN	110192312	A	30 August 2019
				DE	102017100997	A1	19 July 2018
				DE	112018000431	A5	26 September 2019
				JP	2019536287	A	12 December 2019
				TW	201832434	A	01 September 2018
				US	2019245326	A1	08 August 2019
				WO	2018134086	A1	26 July 2018

WO	2012031932	A1	15 March 2012	CN	103098248	A	08 May 2013
				DE	102010044560	A1	08 March 2012
				EP	2614538	A1	17 July 2013
				JP	5639271	B2	10 December 2014
				JP	2013539604	A	24 October 2013
				KR	20130079530	A	10 July 2013
				US	2014131739	A1	15 May 2014
				WO	2012031932	A1	15 March 2012
