

INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2019/084751

A. CLASSIFICATION OF SUBJECT MATTER

H01L 51/52(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)

H01L

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)

VEN, CNABS, CNTXT, CNKI, USTXT: 半导体, 第一电极, 第二电极, 阻隔层, 隔离层, 阻挡层, 绝缘层, 保护层, semiconductor, first electrode, second electrode, separate layer, insulation layer, isolation layer, protect+ layer

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 1499904 A (HANSUNG ELCOMTEC CO., LTD.) 26 May 2004 (2004-05-26) description, page 1, line 12 to page 6, line 17, and figures 1-2	1-11
Y	CN 1499904 A (HANSUNG ELCOMTEC CO., LTD.) 26 May 2004 (2004-05-26) description, page 1, line 12 to page 6, line 17, and figures 1-2	12-13
Y	CN 107438775 A (TRINAMIX GMBH) 05 December 2017 (2017-12-05) description, paragraphs [0143]-[0651], and figures 1-12D	12-13

 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

Date of the actual completion of the international search

18 July 2019

Date of mailing of the international search report

09 August 2019

Name and mailing address of the ISA/CN

China National Intellectual Property Administration
No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing
100088
China

Facsimile No. (86-10)62019451

Authorized officer

Telephone No.

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.

PCT/CN2019/084751

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	1499904	A	26 May 2004	TW	200408312	A	16 May 2004
				TW	I260948	B	21 August 2006
				KR	478274	B	25 March 2005
				KR	20040039795	A	12 May 2004
				JP	2004158451	A	03 June 2004
				US	7106000	B2	12 September 2006
				US	2004085013	A1	06 May 2004
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CN	107438775	A	05 December 2017	US	2018017679	A1	18 January 2018
				EP	3251152	A1	06 December 2017
				WO	2016120392	A1	04 August 2016
				JP	2018513980	A	31 May 2018
				KR	20170136502	A	11 December 2017
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