



SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 17 88 99 71

Classification of the application (IPC):
F21S 45/00, F21V 7/04, F21S 41/255, F21S 41/33, F21S 41/275

Technical fields searched (IPC):
F21S

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	EP 2664841 A2 (OSRAM SYLVANIA INC [US]) 20 November 2013 (2013-11-20) * the whole document *	1-18
X A	DE 102015202011 A1 (HYUNDAI MOBIS CO [KR]) 01 October 2015 (2015-10-01) * paragraph [0033] - paragraph [0053] * * figure 4 *	1-9, 11, 17, 18 10, 12-16
X	CN 204404000 U (ZHENGZHOU KEYI TECHNOLOGY TRADE CO LTD) 17 June 2015 (2015-06-17) * the whole document *	1-9, 17
X	FR 2979971 A1 (VALEO VISION [FR]) 15 March 2013 (2013-03-15) * page 6, line 10 - page 13, paragraph 25 * * figure 5 *	1, 10, 17
X	KR 200449756 Y1 (KOITO) 06 August 2010 (2010-08-06) * the whole document *	1-9, 17
X	KR 20150068118 A (SL CORP [KR]; SL SEOBONG CORP [KR]) 19 June 2015 (2015-06-19) * the whole document *	1-9, 17
X	US 2003086277 A1 (HAYAKAWA MICHIIHIKO [JP] ET AL) 08 May 2003 (2003-05-08) * paragraph [0037] - paragraph [0062] * * figure 6 *	18-24
X	US 2006171161 A1 (OYAMA HIROO [JP]) 03 August 2006 (2006-08-03) * paragraph [0038] - paragraph [0070] * * figure 5 *	19-24

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 15 February 2021	Examiner Schulz, Andreas
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CATEGORY OF CITED DOCUMENTS

- | | |
|---|--|
| X: particularly relevant if taken alone | P: intermediate document |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention |
| A: technological background | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure | D: document cited in the application |
| &: member of the same patent family, corresponding document | L: document cited for other reasons |

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DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	GB 1015365 A (CIBIE PIERRE) 31 December 1965 (1965-12-31) * the whole document *	19-24
X	US 2009257240 A1 (KOIKE TERUO [JP]) 15 October 2009 (2009-10-15) * paragraph [0047] - paragraph [0074] *	25
A	US 5055981 A (NINO NAOHI [JP]) 08 October 1991 (1991-10-08) * the whole document *	19-24
X	WO 2014119980 A1 (TERÁN BALAGUER LUIS FAUSTO [MX]) 07 August 2014 (2014-08-07) * paragraph [0023] *	25
X	JP H03122902 A (KOITO MFG CO LTD) 24 May 1991 (1991-05-24) * the whole document *	25
A	JP 2015035337 A (KOITO MFG CO LTD) 19 February 2015 (2015-02-19) * paragraph [0083] *	25
A	EP 2792938 A2 (VALEO VISION [FR]) 22 October 2014 (2014-10-22) * paragraph [0032] *	25

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 15 February 2021	Examiner Schulz, Andreas
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LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 1-18

A lighting system with a low beam and high beam system and specifies the low beam system having a condenser lens, a cut-off screen and reflector.

2. claims: 19-24

A head lamp with a specific reflector having multiple reflecting surfaces to create a wide angle light distribution on a road surface.

3. claim: 25

A head lamp with a specific condenser lens with an optical surface to eliminate blue light run-off.

All further search fees have been paid within the fixed time limit. The present (supplementary) European search report has been drawn up for all claims.

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

Place of search Munich	Date of completion of the search 15 February 2021	Examiner Schulz, Andreas
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ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:
EP 17 88 99 71

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 15-02-2021.
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 2664841 A2	20-11-2013	CN 103423685 A	04-12-2013
		EP 2664841 A2	20-11-2013
		JP 6239265 B2	29-11-2017
		JP 2013243130 A	05-12-2013
		KR 20130129133 A	27-11-2013
		US 2013308328 A1	21-11-2013
DE 102015202011 A1	01-10-2015	CN 204437916 U	01-07-2015
		DE 102015202011 A1	01-10-2015
		KR 20150111086 A	05-10-2015
		US 2015276161 A1	01-10-2015
CN 204404000 U	17-06-2015	NONE	
FR 2979971 A1	15-03-2013	NONE	
KR 200449756 Y1	06-08-2010	NONE	
KR 20150068118 A	19-06-2015	NONE	
US 2003086277 A1	08-05-2003	DE 10252071 A1	12-06-2003
		FR 2831944 A1	09-05-2003
		JP 3995919 B2	24-10-2007
		JP 2003151319 A	23-05-2003
		US 2003086277 A1	08-05-2003
US 2006171161 A1	03-08-2006	CN 1811268 A	02-08-2006
		DE 102006003796 A1	21-09-2006
		JP 2006210169 A	10-08-2006
		KR 20060087415 A	02-08-2006
		US 2006171161 A1	03-08-2006
GB 1015365 A	31-12-1965	NONE	
US 2009257240 A1	15-10-2009	JP 5212785 B2	19-06-2013
		JP 2009199938 A	03-09-2009
		US 2009257240 A1	15-10-2009
US 5055981 A	08-10-1991	NONE	
WO2014119980 A1	07-08-2014	NONE	
JP H03122902 A	24-05-1991	JP H0817045 B2	21-02-1996
		JP H03122902 A	24-05-1991
JP 2015035337 A	19-02-2015	JP 6232225 B2	15-11-2017
		JP 2015035337 A	19-02-2015



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Patent document cited in search report		Publication date	Patent family member(s)		Publication date
EP 2792938	A2	22-10-2014	CN	104110627 A	22-10-2014
			EP	2792938 A2	22-10-2014
			FR	3004786 A1	24-10-2014
			JP	2014212115 A	13-11-2014