

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
8 July 2010 (08.07.2010)

(10) International Publication Number  
**WO 2010/077367 A3**

(51) International Patent Classification:  
*G02F 1/13357* (2006.01) *G02B 6/00* (2006.01)

(21) International Application Number:  
PCT/US2009/006763

(22) International Filing Date:  
31 December 2009 (31.12.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
12/319,171 2 January 2009 (02.01.2009) US  
12/319,172 2 January 2009 (02.01.2009) US

(72) Inventor; and

(71) Applicant : RICHARDSON, Brian Edward [US/US];  
1506-B Dell Avenue, Campbell, California 95008 (US).

(74) Agents: KLINE, Keith et al.; 2200 Geng Road, Palo Alto, California 94303 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,

HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:  
28 October 2010

(54) Title: LIGHT GUIDE SYSTEM FOR EXTRACTING LIGHT WITH CONTROLLED OUTPUT

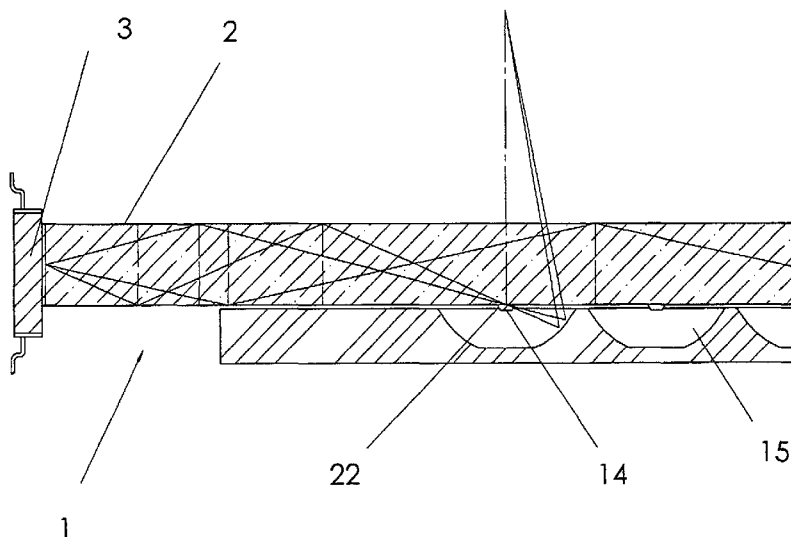


Fig. 6

(57) Abstract: A light guide with optics guides light exiting the guide. The device achieves accurate control of the reflected light by extracting light from a limited area of the light guide. The configuration of the reflectors used for the selective extraction determines the nature of the output light. The reflectors may be located on a side of the light guide opposite to an output side of the light guide.

WO 2010/077367 A3

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/US2009/006763

**A. CLASSIFICATION OF SUBJECT MATTER**  
INV. G02F1/13357 G02B6/00  
ADD.

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)  
G02F G02B G09G

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 practical, 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	EP 1 291 833 A2 (NGK INSULATORS LTD [JP]) 12 March 2003 (2003-03-12)  * abstract; figure 3 paragraphs [0025] - [0026]	1,2, 4-29,31, 35-38
X	EP 1 215 526 A1 (MITSUBISHI CHEM CORP [JP]; YUKADENSHI CO LTD [JP]) 19 June 2002 (2002-06-19)  * abstract; figures 2,6,9,21,22,30 paragraph [0016] paragraph [0021] paragraphs [0026] - [0030] paragraph [0080] paragraph [0087]	1,3-14, 16-24, 26,27, 29-38
	----- -/--	

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 document 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

17 August 2010

Date of mailing of the international search report

13/09/2010

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040,  
Fax: (+31-70) 340-3016

Authorized officer

Hylla, Winfried

## INTERNATIONAL SEARCH REPORT

International application No  
PCT/US2009/006763

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2007/133224 A1 (PARKER JEFFERY R [US] ET AL PARKER JEFFREY R [US] ET AL) 14 June 2007 (2007-06-14) the whole document -----	1-38

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No

PCT/US2009/006763

Patent document cited in search report	Publication date	Patent family member(s)	Publication date	
EP 1291833	A2	12-03-2003	JP 2003076286 A	14-03-2003
			US 2003043091 A1	06-03-2003
EP 1215526	A1	19-06-2002	WO 0205022 A1	17-01-2002
			US 2002135996 A1	26-09-2002
US 2007133224	A1	14-06-2007	NONE	