



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
04.04.2012 Bulletin 2012/14

(51) Int Cl.:
H01J 61/36^(2006.01)

(43) Date of publication A2:
17.11.2010 Bulletin 2010/46

(21) Application number: **10161680.3**

(22) Date of filing: **30.04.2010**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR
Designated Extension States:
AL BA ME RS

(30) Priority: **15.05.2009 JP 2009118853**
17.09.2009 JP 2009216091

(71) Applicant: **Toshiba Lighting & Technology Corporation**
Yokosuka-shi
Kanagawa (JP)

(72) Inventors:
• **Honma, Takuya**
Yokosuka-shi Kanagawa (JP)
• **Kamata, Hiroshi**
Yokosuka-shi Kanagawa (JP)
• **Watanabe, Miho**
Yokosuka-shi Kanagawa (JP)
• **Matsuda, Ryotaro**
Yokosuka-shi Kanagawa (JP)

(74) Representative: **O'Connell, David Christopher**
Haseltine Lake LLP
Redcliff Quay
120 Redcliff Street
Bristol BS1 6HU (GB)

(54) **High-pressure discharge lamp**

(57) A high-pressure discharge lamp comprises a translucent ceramics airtight vessel (1) including an envelopment portion (1a) and a small-diameter cylindrical portion (1b) connected to the envelopment portion (1a) and having a sealing portion (SP). A current introducing conductor (2) is inserted in the inside of the small-diameter cylindrical portion (1b) including a sealing metal portion (2a) and a halogen-resistant portion (2b) connected each other. An electrode (3) is arranged at one end of the halogen-resistant portion (2b). The sealing portion (SP) is sealed by a fusion of melted poly-crystalline alumina ceramics of the small-diameter cylindrical portion (1b) at the sealing metal portion (2a) of the current introducing conductor (2), and the melted alumina ceramics includes aluminum grain growth control additives.

tion (2a) and a halogen-resistant portion (2b) connected each other. An electrode (3) is arranged at one end of the halogen-resistant portion (2b). The sealing portion (SP) is sealed by a fusion of melted poly-crystalline alumina ceramics of the small-diameter cylindrical portion (1b) at the sealing metal portion (2a) of the current introducing conductor (2), and the melted alumina ceramics includes aluminum grain growth control additives.

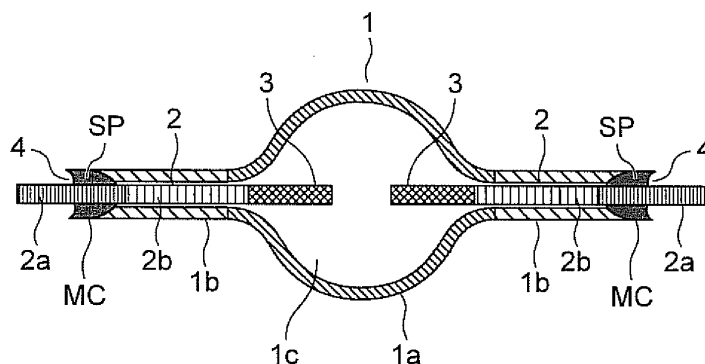


FIG. 1



EUROPEAN SEARCH REPORT

Application Number
EP 10 16 1680

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	WO 2008/020406 A2 (KONINKL PHILIPS ELECTRONICS NV [NL]; GELDERLAND SIGRID M R [NL]; KAPPE) 21 February 2008 (2008-02-21) * page 3, line 29 - page 10, line 34; claim 1; figure 2 *	1-13	INV. H01J61/36
X	US 5 725 827 A (RHODES WILLIAM H [US] ET AL) 10 March 1998 (1998-03-10) * column 3, line 15 - column 6, line 67; example I *	1,5,6	
A	DE 10 2006 024238 A1 (PATRA PATENT TREUHAND [DE]) 29 November 2007 (2007-11-29) * paragraphs [0008] - [0011], [0018], [0019], [0024], [0040], [0042]; claims 1,2 *	2-4,7-13	
A	US 2007/120491 A1 (BEWLAY BERNARD [US] ET AL) 31 May 2007 (2007-05-31) * paragraphs [0009], [0051] *	1-13	
A	US 2008/203916 A1 (HECKER ARLENE [US]) 28 August 2008 (2008-08-28) * paragraphs [0001] - [0009], [0014] - [0016]; claims 1,4-9 *	1-13	TECHNICAL FIELDS SEARCHED (IPC) H01J
A	EP 0 341 749 A2 (GTE PROD CORP [US]) 15 November 1989 (1989-11-15) * examples 1-3 *	1-13	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 February 2012	Examiner But, Gabriela-Ileana
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document</p>			

1
EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 10 16 1680

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

28-02-2012

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 2008020406	A2	21-02-2008	CN 101506932 A	12-08-2009
			EP 2054920 A2	06-05-2009
			JP 2010501968 A	21-01-2010
			US 2010164379 A1	01-07-2010
			US 2011260610 A1	27-10-2011
			WO 2008020406 A2	21-02-2008

US 5725827	A	10-03-1998	CA 2106156 A1	17-03-1994
			DE 69303489 D1	08-08-1996
			DE 69303489 T2	30-01-1997
			EP 0660810 A1	05-07-1995
			HU 218226 B	28-06-2000
			JP H08501270 A	13-02-1996
			US 5426343 A	20-06-1995
			US 5725827 A	10-03-1998
			WO 9406727 A1	31-03-1994

DE 102006024238	A1	29-11-2007	AT 450884 T	15-12-2009
			CA 2653037 A1	29-11-2007
			CN 101449358 A	03-06-2009
			DE 102006024238 A1	29-11-2007
			EP 2020018 A1	04-02-2009
			JP 2009537962 A	29-10-2009
			US 2009153052 A1	18-06-2009
			WO 2007135012 A1	29-11-2007

US 2007120491	A1	31-05-2007	US 2007120491 A1	31-05-2007
			US 2008211410 A1	04-09-2008

US 2008203916	A1	28-08-2008	US 2008203916 A1	28-08-2008
			WO 2008106000 A2	04-09-2008

EP 0341749	A2	15-11-1989	DE 68927594 D1	13-02-1997
			DE 68927594 T2	24-07-1997
			EP 0341749 A2	15-11-1989
			JP 2065047 A	05-03-1990
