



(11) **EP 2 219 418 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
09.09.2015 Bulletin 2015/37

(51) Int Cl.:
H05B 33/08 (2006.01)

(43) Date of publication A2:
18.08.2010 Bulletin 2010/33

(21) Application number: **10000707.9**

(22) Date of filing: **25.01.2010**

(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 RS

- **Kadotani, Kazuyoshi**
Osaka (JP)
- **Tanaka, Kenichiro**
Osaka (JP)
- **Tanimura, Itirou**
Osaka (JP)
- **Takuya, Nobuta**
Nara (JP)

(30) Priority: **28.01.2009 JP 2009017108**

(71) Applicant: **Panasonic Intellectual Property Management Co., Ltd.**
Osaka 540-6207 (JP)

(74) Representative: **Rüger, Barthelt & Abel**
Postfach 10 04 61
73704 Esslingen a.N. (DE)

(72) Inventors:
• **Maehara, Minoru**
Osaka (JP)

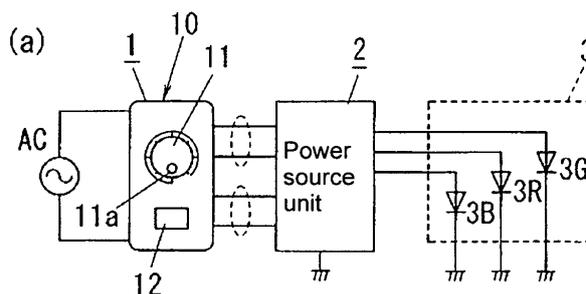
(54) **LED illumination device**

(57) [Object] To enable an adjustment of a light color and an illumination intensity of illumination light with a characteristic proximate to an incandescent lamp even in the case of using a light emitting diode as a light source.

[Means for Settlement] Determination means (a control signal generating part of a controller 1, and a control signal input part 20 and a drive signal converting part 23 of a power source unit 2) determines light amounts of the light emitting diodes 3R, 3G and 3B of the illumination light source 3, corresponding to an operation input received at operation input receiving means (an operating part 11 of the controller 1, a variable resistor, and a A/C

converter), so that a color temperature and a light amount of the illumination light increases and decreases in conjunction with each other within a range lower than a color temperature at the time of rated lighting of the illumination light source 3 (about 2,800K), and chromaticity of illumination light varies approximately along a blackbody locus, as well as a change in a color temperature when the light amount is relatively small is larger than a change in a color temperature when the light amount is relatively large. Therefore, the light color and the illumination intensity of the illumination light can be adjusted with the characteristic proximate to the incandescent lamp.

Figure 1



EP 2 219 418 A3



EUROPEAN SEARCH REPORT

Application Number
EP 10 00 0707

5

10

15

20

25

30

35

40

45

50

55

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	US 2004/105261 A1 (DUCHARME ALFRED D [US] ET AL) 3 June 2004 (2004-06-03) * paragraphs [0087] - [0125]; figures 4, 11 *	1	INV. H05B33/08
A	----- US 7 186 003 B2 (DOWLING KEVIN J [US] ET AL) 6 March 2007 (2007-03-06) * paragraphs [0053] - [0067]; figures 3-5 *	1	
A	----- WO 2008/129485 A1 (KONINKL PHILIPS ELECTRONICS NV [NL]; DIEDERIKS ELMO M A [NL]; VAN DE S) 30 October 2008 (2008-10-30) * the whole document *	1	
A	----- US 2005/225264 A1 (KEMP WILLIAM H [CA]) 13 October 2005 (2005-10-13) * the whole document *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			H05B
Place of search		Date of completion of the search	Examiner
Munich		22 July 2015	Hunckler, José
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone		T : theory or principle underlying the invention	
Y : particularly relevant if combined with another document of the same category		E : earlier patent document, but published on, or after the filing date	
A : technological background		D : document cited in the application	
O : non-written disclosure		L : document cited for other reasons	
P : intermediate document		& : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (F04C01)

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

EP 10 00 0707

5

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.

22-07-2015

10

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004105261 A1	03-06-2004	US 7014336 B1	21-03-2006
		US 2004105261 A1	03-06-2004
		US 2005030744 A1	10-02-2005
		US 2006109649 A1	25-05-2006
		US 2006285325 A1	21-12-2006
		US 2007258240 A1	08-11-2007

US 7186003 B2	06-03-2007	NONE	

WO 2008129485 A1	30-10-2008	NONE	

US 2005225264 A1	13-10-2005	NONE	

15

20

25

30

35

40

45

50

55

EPO FORM P459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82