

(19) World Intellectual Property Organization  
International Bureau



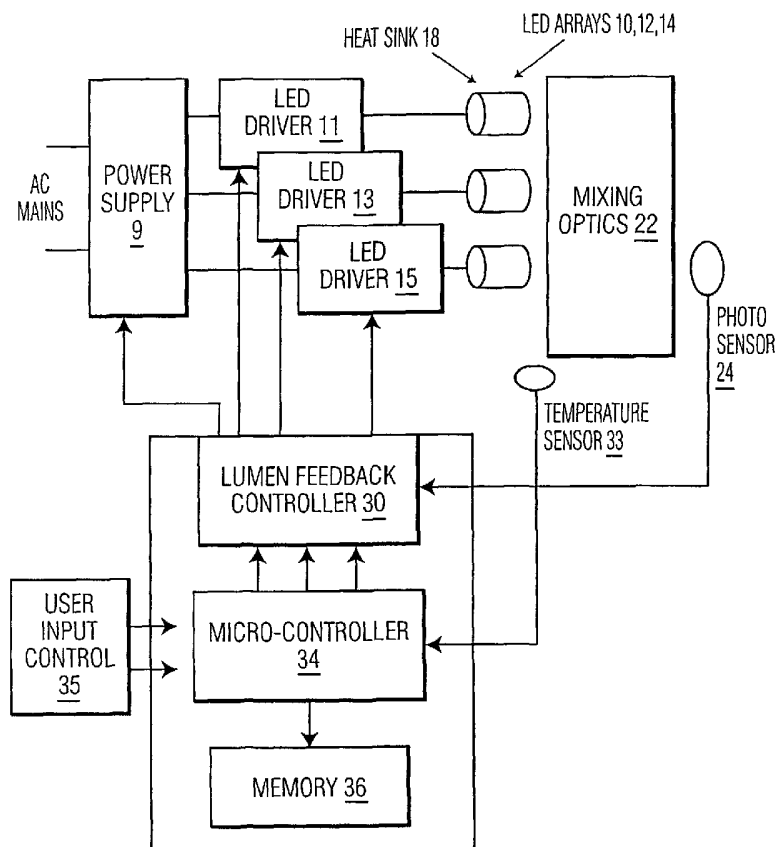
(43) International Publication Date  
4 July 2002 (04.07.2002)

PCT

(10) International Publication Number  
WO 02/052901 A3

- (51) International Patent Classification<sup>7</sup>: G01J 3/46, H05B 33/08
  - (74) Agent: MULDER, Cornelis, A., M.; Internationaal Octroibureau B.V., Prof Holstlaan 6, NL-5656 AA Eindhoven (NL).
  - (21) International Application Number: PCT/IB01/02519
  - (81) Designated States (national): CN, JP, KR.
  - (22) International Filing Date: 12 December 2001 (12.12.2001)
  - (84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).
  - (25) Filing Language: English
  - (26) Publication Language: English
  - (30) Priority Data: 09/749,170 27 December 2000 (27.12.2000) US
  - Published: — with international search report
  - (71) Applicant: KONINKLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
  - (88) Date of publication of the international search report: 10 April 2003
  - (72) Inventor: MUTHU, Subramanian; Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: TEMPERATURE DEPENDENT COLOR CONTROL FOR A LUMINAIRE WITH A MULTICOLORED ARRAY OF LEDS



(57) Abstract: The present invention describes a method and luminaire for driving an array of LEDs with at least one LED in each of a plurality of colors in a luminaire. This method controls the light output and color of the LEDs by measuring color coordinates for each LED light source for different temperatures, storing the expressions of the color coordinates as a function of the temperatures, deriving equations for the color coordinates as a function of temperature, calculating the color coordinates and lumen output fractions on-line, and controlling the light output and color of said LEDs based upon the calculated color coordinates and lumen output fractions.



WO 02/052901 A3

**INTERNATIONAL SEARCH REPORT**

International Application No  
PCT/IB 01/02519

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 G01J3/46 H05B33/08

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)  
IPC 7 G01J H05B

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, PAJ, INSPEC

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 812 105 A (VAN DE VEN ANTONY PAUL) 22 September 1998 (1998-09-22) abstract	1,6
A	US 5 851 063 A (DOUGHTY DOUGLAS ALLEN ET AL) 22 December 1998 (1998-12-22) cited in the application abstract	1,6

Further documents are listed in the continuation of box C.

Patent family members are listed in 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

4 November 2002

Date of mailing of the international search report

11/11/2002

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

De Buyzer, H

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IB 01/02519

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5812105	A	22-09-1998	AT 196209 T	15-09-2000
			AT 219274 T	15-06-2002
			AU 1337297 A	28-07-1997
			CA 2241555 A1	10-07-1997
			DE 1139325 T1	17-10-2002
			DE 69610224 D1	12-10-2000
			DE 69610224 T2	26-04-2001
			DE 69621853 D1	18-07-2002
			DE 69621853 T2	02-10-2002
			DK 870294 T3	02-01-2001
			EP 1139325 A1	04-10-2001
			EP 0870294 A2	14-10-1998
			EP 0989539 A1	29-03-2000
			ES 2169712 T1	16-07-2002
			ES 2150706 T3	01-12-2000
			HK 1015922 A1	23-03-2001
			JP 2000503133 T	14-03-2000
WO 9724706 A2	10-07-1997			
US 5851063	A	22-12-1998	CN 1185042 A	17-06-1998
			EP 0838866 A2	29-04-1998
			JP 10209504 A	07-08-1998