

Title (en)
Decorative lamps

Title (de)
Dekorative Lampen

Title (fr)
Lampes décoratives

Publication
EP 0822371 A3 19990616 (EN)

Application
EP 97202322 A 19970730

Priority
JP 20457396 A 19960802

Abstract (en)
[origin: EP0822371A2] The present invention aims at providing a durable power-saving decorative lamp whose light can be easily seen and whose light color can be easily set. The decorative lamp is a hollow and transparent glass or hard resin bulb with a frosted surface containing a plurality of LED lamps. Each of the LED lamps is connected to a metal base forming an electrode by being fixed to the base portion of the decorative lamp through an appropriate resistance, capacitor, or small circuit substrate. The LED lamps are connected individually, in series, or in parallel. The surfaces of the LED lamps are processed with various treatments to have frosted-glass surfaces, irregular diamond-cut surfaces, etc. Thus, each LED lamp emits light in all directions except backward from the base of the lamp, and the light can be seen from all directions, thereby providing desired decorative lamps. Furthermore, the color of light can be easily set by appropriately selecting a light emitting element of the LED lamp.
<IMAGE>

IPC 1-7
F21P 3/00

IPC 8 full level
G09F 9/33 (2006.01); **F21S 10/00** (2006.01); **F21V 3/04** (2006.01); **F21V 5/00** (2006.01); **H01L 33/48** (2010.01)

CPC (source: EP US)
F21K 9/232 (2016.07 - EP US); **F21S 10/00** (2013.01 - EP); **F21V 3/02** (2013.01 - EP); **F21V 3/04** (2013.01 - EP); **F21V 3/049** (2013.01 - EP);
F21V 5/00 (2013.01 - EP US); **F21W 2121/00** (2013.01 - EP); **F21Y 2103/33** (2016.07 - EP); **F21Y 2107/00** (2016.07 - EP US);
F21Y 2115/10 (2016.07 - EP US)

Citation (search report)
• [A] US 4211955 A 19800708 - RAY STEPHEN W [US]
• [A] US 4727289 A 19880223 - UCHIDA AKIO [JP]
• [A] US 3821590 A 19740628 - KOSMAN K, et al
• [A] US 5140220 A 19920818 - HASEGAWA YASUO [JP]

Cited by
FR2911038A1; ES2193877A1; EP1215735A1; FR2944854A1; GB2372136A; GB2372136B

Designated contracting state (EPC)
AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)
EP 0822371 A2 19980204; EP 0822371 A3 19990616; CN 1172921 A 19980211; JP H1049077 A 19980220; TW 350031 B 19990111

DOCDB simple family (application)
EP 97202322 A 19970730; CN 97115319 A 19970801; JP 20457396 A 19960802; TW 86110899 A 19970730