

Title (en)

Method of assembling an airtight LED light bulb

Title (de)

Verfahren zur Montage einer luftdichten LED-Glühlampe

Title (fr)

Procédé pour assembler une ampoule d'éclairage à DEL étanche à l'air

Publication

EP 2416056 A2 20120208 (EN)

Application

EP 10192415 A 20101124

Priority

TW 99126083 A 20100805

Abstract (en)

A method of assembling an airtight LED light bulb has steps of: connecting a stem device with an LED device, drying the LED device, connecting the stem device with a bulb envelope, extracting air in the bulb envelope via a pipe, filling the bulb envelope with nitrogen or inert gas via the pipe, sealing an opening of the pipe which is located outside the bulb envelope to make the bulb envelope completely airtight and connecting a cap with the bulb envelope. Because the bulb envelope is airtight, the moisture in the environment can not damage the LED device and the steps of extracting air in the bulb envelope via the pipe and filling the bulb envelope with nitrogen or inert gas via the pipe are feasible. Consequently, the LED device will not easily be oxidized or dampened, so the lifespan of the airtight LED light bulb can be prolonged.

IPC 8 full level

F21K 99/00 (2010.01); **F21Y 101/02** (2006.01)

CPC (source: EP US)

F21K 9/232 (2016.07 - EP US); **F21K 9/90** (2013.01 - EP US); **F21Y 2107/00** (2016.07 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Cited by

DE102015206797A1; CN107743566A; CN103307464A; CN103353064A; CN103292193A; CN103672531A; EP3450820A3; CN103322465A; EP2827046A4; US9310065B2; US10072826B2; US9395074B2; US9395051B2; US9951909B2; US9310028B2; WO2018086109A1; WO2013154932A1; WO2016198448A1; WO2013135153A1; US8591062B2; US9810379B2; US9052093B2; US9651239B2; US8752983B2; US8757839B2; USRE48489E; EP2535640B2

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

EP 2416056 A2 20120208; **EP 2416056 A3 20120711**; **EP 2416056 B1 20140305**; ES 2458793 T3 20140507; JP 2012038704 A 20120223; JP 5255665 B2 20130807; TW 201207315 A 20120216; TW I372842 B 20120921

DOCDB simple family (application)

EP 10192415 A 20101124; ES 10192415 T 20101124; JP 2011035316 A 20110222; TW 99126083 A 20100805