

Title (en)

COMBINED TYPE THREE-DIMENSIONAL HEAT RADIATION STRUCTURE AND METHOD FULLY UTILIZING HEAT RADIATION SPACE FOR LED LAMP

Title (de)

KOMBINIERTE DREIDIMENSIONALE WÄRMESTRAHLUNGSSTRUKTUR UND VERFAHREN MIT VOLLSTÄNDIGER NUTZUNG DES WÄRMESTRAHLUNGSSAUMS FÜR EINE LED-LAMPE

Title (fr)

STRUCTURE À RAYONNEMENT DE CHALEUR TRIDIMENSIONNELLE DE TYPE COMBINÉ ET PROCÉDÉ UTILISANT PLEINEMENT L'ESPACE DE RAYONNEMENT DE CHALEUR POUR LAMPE À DEL

Publication

**EP 2899459 A4 20160210 (EN)**

Application

**EP 12877464 A 20120607**

Priority

- CN 201210163324 A 20120523
- CN 2012076602 W 20120607

Abstract (en)

[origin: EP2899459A1] The present invention relates to the technical field of LED lamp manufacturing, more particularly to an LED lamp combined three-dimensional radiating structure with full use of radiating space. The LED lamp combined three-dimensional radiating structure is formed by combining an external radiating body with an internal radiating body, the bottom of the internal radiating body is connected with an LED display panel, the top of the external radiating body is connected with a lamp interface and power supply box, a combined and discontinuous multilayer three-dimensional radiating structure consisting of a plurality of radiating fins is disposed on the top of the internal radiating body, and a hollow cavity is formed between the adjacent radiating fins. In the present invention, the combined three-dimensional radiating structure is employed at the center with the most concentrated heat, thus increasing the total radiating area, maximizing the effective radiating area and effectively solving the defects like low utilization rate of radiating space and non-permeable internal space structure; in addition, compared with traditional LED lamps, both the radiating effect and the output brightness are doubled.

IPC 8 full level

**F21V 29/00** (2015.01)

CPC (source: EP US)

**F21K 9/23** (2016.07 - EP US); **F21V 29/71** (2015.01 - EP); **F21V 29/78** (2015.01 - EP); **F21V 29/83** (2015.01 - EP US);  
**F21V 29/773** (2015.01 - EP); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)

- [XA] US 2010283369 A1 20101111 - CHEN CHIN-YI [TW]
- [XA] WO 2009067558 A2 20090528 - NEXXUS LIGHTING INC [US], et al
- [XA] CN 201284930 Y 20090805 - BAOFU WANG [CN]
- [X] US 2011204790 A1 20110825 - ARIK MEHMET [US], et al
- See references of WO 2013174039A1

Cited by

WO2020234241A1; CN105202404A; CN105240792A; CN105240790A; CN105240690A; CN105240707A; CN105202463A; US11828447B2

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

DOCDB simple family (publication)

**EP 2899459 A1 20150729; EP 2899459 A4 20160210; CN 102721020 A 20121010; CN 102721020 B 20151014; WO 2013174039 A1 20131128**

DOCDB simple family (application)

**EP 12877464 A 20120607; CN 2012076602 W 20120607; CN 201210163324 A 20120523**