

Title (en)

LED module with cooling bodies containing mounting elements

Title (de)

LED-Modul mit Montagemittel umfassenden Kühlkörpern

Title (fr)

Module à DEL doté de corps de refroidissement comprenant un moyen de montage

Publication

EP 2096685 A1 20090902 (DE)

Application

EP 08102125 A 20080228

Priority

EP 08102125 A 20080228

Abstract (en)

The LED-module (1) has LED-components (3) mounted on a printed circuit board (2) such that the LED-components are directly or indirectly connected with a heat sink (4) through an opening of the circuit board. The heat sink includes a recess, an elastically resilient holding region and an opening for mounting at a common heat sink (10) of a lighting unit of a motor vehicle headlight and of a plastic optics of the LED-module in a form-fit and force-fit manner. The heat sink is formed with a tapered wall (5) by a bushing, which is closed by a base (6). An independent claim is also included for a method for mounting a LED-module.

Abstract (de)

Die vorliegende Erfindung betrifft ein insbesondere für Kraftfahrzeuge einsetzbares LED-Modul (1, 1b, 1c) zum Einbau in ein Leuchtaggregat, wobei das LED-Modul (1, 1b, 1c) mehrere LED-Bauelemente (3, 3b, 3c) umfasst, die auf einer Leiterplatte (2, 2b, 2c) derart montiert sind, dass sie unmittelbar oder mittelbar mit einem Kühlkörper (4, 4b, 4c) verbunden sind, wobei das LED-Modul (1, 1b, 1c) mindestens einen Kühlkörper (4, 4b, 4c) umfasst, der mit mindestens einem LED-Bauelement (3, 3b, 3c) verbunden ist, und der Montagemittel (8, 14, 15) für eine formschlüssige und/oder kraftschlüssige Montage an einem anderen Element (10, 16) des LED-Moduls (1, 1b, 1c) oder des Leuchtaggregats aufweist.

IPC 8 full level

H01L 33/00 (2006.01); **F21V 29/00** (2006.01)

CPC (source: EP US)

F21K 9/00 (2013.01 - EP US); **F21S 41/153** (2017.12 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Citation (applicant)

- DE 19922176 A1 20001123 - OSRAM OPTO SEMICONDUCTORS GMBH [DE]
- US 2005212439 A1 20050929 - ZAMPINI THOMAS L [US], et al

Citation (search report)

- [X] US 2001030866 A1 20011018 - HOCHSTEIN PETER A [US]
- [X] WO 2006122392 A1 20061123 - TIR SYSTEMS LTD [CA], et al
- [XA] US 2007007540 A1 20070111 - HASHIMOTO TAKUMA [JP], et al
- [X] US 2006131602 A1 20060622 - OUDERKIRK ANDREW J [US], et al

Cited by

GB2461151A; GB2461151B; US2013170145A1; DE102012112070A1; US8929077B2; US9267659B2; WO2022048954A1; WO2011147644A3; WO2017008643A1; WO2020011452A1; DE102018211528A1

Designated contracting state (EPC)

FR GB IT

Designated extension state (EPC)

AL BA MK RS

DOCDB simple family (publication)

EP 2096685 A1 20090902

DOCDB simple family (application)

EP 08102125 A 20080228