

Title (en)

Cooling element for a semiconductor light source of a motor vehicle lighting device

Title (de)

Kühlelement für eine Halbleiterlichtquelle einer Beleuchtungseinrichtung eines Kraftfahrzeugs

Title (fr)

Élément de refroidissement pour une source d'éclairage semi-conductrice d'un dispositif d'éclairage d'un véhicule automobile

Publication

EP 2275738 B2 20190612 (DE)

Application

EP 10002907 A 20100319

Priority

DE 102009033949 A 20090713

Abstract (en)

[origin: EP2275738A2] The element (32) has a cooling body (38) provided for delivering heat to environment, and a flange plate (36) for thermal coupling of a semiconductor light source and for fastening the element to a lighting device of a motor vehicle. A composite part is made from a cast part and an insertion part that is inserted into a casting mold during casting of the cast part, where the flange plate is provided as the cast part and the cooling body is provided as the insertion part. The cooling body is made from aluminum, copper or magnesium alloy. An independent claim is also included for a method for manufacturing a cooling element for a for semiconductor light source of a motor vehicle.

IPC 8 full level

F21V 29/00 (2015.01)

CPC (source: EP US)

F21S 41/153 (2017.12 - EP US); **F21S 45/47** (2017.12 - EP US); **F21V 29/74** (2015.01 - EP); **F21V 29/75** (2015.01 - EP US); **F21V 29/763** (2015.01 - EP US); **F21V 29/80** (2015.01 - EP); **F21Y 2115/10** (2016.07 - EP US)

Citation (opposition)

Opponent :

- US 6085830 A 20000711 - MASHIKO KOICHI [JP], et al
- DE 102007002838 A1 20080327 - BOSCH GMBH ROBERT [DE]
- US 6045240 A 20000404 - HOCHSTEIN PETER A [US]
- US 2009016074 A1 20090115 - DOLSON MICHEAL D [CA], et al
- DE 202007016052 U1 20080214 - HELLA KGAA HUECK & CO [DE]
- US 2001022414 A1 20010920 - MCCULLOUGH KEVIN A [US]
- US 2009086474 A1 20090402 - CHOU DER JEOU [US]

Cited by

CN105371119A; CN111570774A; CN103162207A; AT518543A4; AT518543B1; EP2730837A1; FR2998034A1

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

EP 2275738 A2 20110119; EP 2275738 A3 20120523; EP 2275738 B1 20141022; EP 2275738 B2 20190612; DE 102009033949 A1 20110120

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