

Title (en)

Optical module cooling device for automobile headlight

Title (de)

Vorrichtung zum Abkühlen eines optischen Moduls für einen Kraftfahrzeugscheinwerfer

Title (fr)

Dispositif de refroidissement d'un module optique pour projecteur automobile

Publication

EP 2199669 A1 20100623 (FR)

Application

EP 09178310 A 20091208

Priority

FR 0807166 A 20081218

Abstract (en)

The device has an optical module (2) equipped with a cooling unit (5) having a thermal exchange surface, where the optical module has an LED (3) i.e. power LED, that is thermally contacted with the cooling unit. A heat conductor (8) e.g. heat pipe, has an end (9) that is placed at a distance from the cooling unit, where the end is equipped with deflectors. A space between the deflectors constitutes an air flow guiding channel (11), where the channel is opened on a passage (7) defined between vanes (6).

Abstract (fr)

L'invention a pour objet un dispositif d'éclairage et/ou de signalisation comprenant au moins un module optique (2) équipé d'un organe de refroidissement (5), comprenant au moins un conducteur de chaleur (8) dont une extrémité (9) est placée à distance de l'organe de refroidissement (5) et est munie d'une pluralité de déflecteurs (10) canalisant un flux d'air froid (F) vers la surface d'échange thermique (6) de l'organe de refroidissement (5).

IPC 8 full level

F21V 29/00 (2006.01); **F21S 8/12** (2006.01); **F21W 107/10** (2018.01); **F21Y 101/02** (2006.01)

CPC (source: EP US)

F21S 41/143 (2017.12 - EP US); **F21S 41/153** (2017.12 - EP US); **F21S 43/14** (2017.12 - EP US); **F21S 45/48** (2017.12 - EP US); **F21V 29/51** (2015.01 - EP US); **F21V 29/717** (2015.01 - EP US); **F21V 29/745** (2015.01 - EP US); **F21V 29/76** (2015.01 - EP US); **F21V 29/763** (2015.01 - EP US); **F21V 29/83** (2015.01 - EP US); **F28D 15/0275** (2013.01 - EP US); **F21S 45/43** (2017.12 - EP US); **F21V 29/67** (2015.01 - EP US); **F21V 29/85** (2015.01 - EP US); **F21Y 2115/10** (2016.07 - EP US)

Citation (search report)

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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

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

EP 2199669 A1 20100623; **EP 2199669 B1 20130424**; FR 2940407 A1 20100625; FR 2940407 B1 20131122; US 2010157606 A1 20100624; US 8297805 B2 20121030

DOCDB simple family (application)

EP 09178310 A 20091208; FR 0807166 A 20081218; US 64024509 A 20091217