

Title (en)  
COOLING DEVICE AND COOLING METHOD FOR LIGHTING MODULES

Title (de)  
KÜHLVORRICHTUNG UND VERFAHREN ZUR KÜHLUNG EINER LEUCHTMODUL

Title (fr)  
DISPOSITIF DE REFROIDISSEMENT ET PROCÉDÉ DE REFROIDISSEMENT D'UN MODULE D'ÉCLAIRAGE

Publication  
**EP 3153771 B1 20180613 (EN)**

Application  
**EP 15188358 A 20151005**

Priority  
**EP 15188358 A 20151005**

Abstract (en)  
[origin: EP3153771A1] The present invention describes a cooling device (100) for lighting modules, in particular LED lighting modules. Said cooling device (100) at least comprises a fluid jet generating unit (104), wherein the fluid jet generating unit (104) comprises a housing (202) and a fluid jet generating means (209) arranged in said housing (202) for generating fluid jets, wherein the housing (202) comprises at least two separated outlets (220, 222) for outputting said fluid jets, wherein the outlets (220, 222) are fluidly connected to said fluid jet generating means (209), and a heat-dissipating unit (102) attached to the housing (104) of said fluid jet generating unit (104), wherein the heat-dissipating unit (102) comprises at least one heat-dissipating element (103) having an outer surface (220) and an inner surface (224), wherein the heat-dissipating element (103) comprises at least one fluid communication element (108), in particular a plurality of holes or slits, for establishing a fluid communication between fluid adjacent the inner surface (224) and fluid adjacent the outer surface (220) for eliminating pressure differences between fluid adjacent the inner surface (224) and fluid adjacent the outer surface (220), wherein a first one of said outlets (222) is located adjacent the inner surface (224) of the heat-dissipating element and a second one of said outlets (218) is located adjacent the outer surface (220) of said heat-dissipating element (103) for causing pressure differences between fluid adjacent the inner surface (224) and fluid adjacent the outer surface (220).

IPC 8 full level  
**F21V 29/63** (2015.01); **F21V 29/77** (2015.01); **F21V 29/83** (2015.01); **F21Y 101/00** (2016.01); **F21Y 115/10** (2016.01)

CPC (source: EP)  
**F21V 29/63** (2015.01); **F21V 29/773** (2015.01); **F21V 29/83** (2015.01); **F21Y 2101/00** (2013.01); **F21Y 2115/10** (2016.07)

Cited by  
CN109386761A

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 3153771 A1 20170412; EP 3153771 B1 20180613**

DOCDB simple family (application)  
**EP 15188358 A 20151005**