

Title (en)

Solid light-emitting element lighting device and illumination fixture using the same

Title (de)

Feste LED-Beleuchtungsanordnung und Beleuchtungsbefestigung damit

Title (fr)

Dispositif d'éclairage à éléments électroluminescents solides et accessoire d'éclairage l'utilisant

Publication

EP 2519079 A1 20121031 (EN)

Application

EP 12159970 A 20120316

Priority

JP 2011060866 A 20110318

Abstract (en)

[Object] To provide a solid light-emitting element lighting device and an illumination fixture using the same that are able to smoothly change an optical output in sweeping of a PWM signal for dimming. [Means for Settlement] A LED lighting device includes: a series circuit of an inductor L1 and a switching element Q1 that are connected between output terminals of a direct-current power source 1 via a LED module 4; a diode D 1 for regenerating energy accumulated in the inductor L1 to the LED module 4; and a control circuit part 3 for controlling on and off of the switching element Q1. The control circuit part 3 includes a drive signal generation part 34 for generating a drive pulse whose pulse width varies in accordance with amplitude of a load current, and controls on and off of the switching element Q1 due to the drive pulse in an on-period of the PWM signal whose on-duty varies in accordance with a dimming level, the PWM signal being a lower frequency than the drive pulse. An output voltage of the direct-current power source 1 is set to be larger than the load voltage applied to the LED module 4 and to be 2.5 times as large as the load voltage or less.

IPC 8 full level

H05B 44/00 (2022.01)

CPC (source: EP US)

H05B 45/37 (2020.01 - EP US)

Citation (applicant)

JP 2006511078 A 20060330

Citation (search report)

- [IY] US 2007188112 A1 20070816 - KANG JEONG-IL [KR], et al
- [IY] US 2003085749 A1 20030508 - XU PENG [US], et al
- [I] WO 2010046065 A1 20100429 - TRIDONICATCO SCHWEIZ AG [CH], et al
- [Y] US 2009189587 A1 20090730 - WEI QI CUI [CN]

Cited by

CN107333358A; US9723665B2; US9775202B2; US10880964B2

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

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

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DOCDB simple family (application)

EP 12159970 A 20120316; CN 201210059376 A 20120308; JP 2011060866 A 20110318