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United States Patent

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US009803846B2

(12) **United States Patent**
Chung

(10) **Patent No.:** **US 9,803,846 B2**
(45) **Date of Patent:** **Oct. 31, 2017**

(54) **CIRCUIT SUBSTRATE FOR CARRYING AT LEAST ONE LIGHT-EMITTING DIODE AND LIGHT-EMITTING STRUCTURE FOR PROVIDING ILLUMINATION**

(58) **Field of Classification Search**
CPC F21V 29/50; F21V 23/005; F21V 23/004;
F21V 23/003; H01L 33/647; H05K
1/0204; H05K 1/0206

(Continued)

(71) Applicant: **PARAGON SEMICONDUCTOR LIGHTING TECHNOLOGY CO., LTD.**, New Taipei (TW)

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(72) Inventor: **Chia-Tin Chung**, Miaoli County (TW)

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(73) Assignee: **PARAGON SEMICONDUCTOR LIGHTING TECHNOLOGY CO., LTD.**, New Taipei (TW)

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 279 days.

Primary Examiner — Anh Mai

Assistant Examiner — Matthew Peerce

(74) *Attorney, Agent, or Firm* — Li & Cai Intellectual Property (USA) Office

(21) Appl. No.: **14/605,388**

(22) Filed: **Jan. 26, 2015**

(65) **Prior Publication Data**

US 2016/0109071 A1 Apr. 21, 2016

(30) **Foreign Application Priority Data**

Oct. 15, 2014 (TW) 103218273 U

(51) **Int. Cl.**
F21S 4/00 (2016.01)
F21V 29/50 (2015.01)
H05K 1/02 (2006.01)

(52) **U.S. Cl.**
CPC *F21V 29/50* (2015.01); *H05K 1/0207*
(2013.01); *H05K 1/0206* (2013.01); *H05K*
2201/09027 (2013.01); *H05K 2201/10106*
(2013.01)

(57) **ABSTRACT**

A circuit substrate for carrying at least one light-emitting diode and a light-emitting structure for providing illumination are disclosed. The circuit substrate includes an insulation base layer, a conductive heat-dissipating layer, an insulation covering layer, a conductive circuit structure and a conductive through structure. The conductive heat-dissipating layer is disposed on the insulation base layer. The insulation covering layer is disposed on the conductive heat-dissipating layer. The conductive circuit structure includes a first electrode conductive layer and a second electrode conductive layer that are disposed on the insulation covering layer. The conductive through structure passes through the insulation covering layer and is connected between the conductive heat-dissipating layer and one of the first electrode conductive layer and the second electrode conductive layer. One of the first electrode conductive layer and the second electrode conductive layer is electrically connected to the conductive heat-dissipating layer through the conductive body.

12 Claims, 3 Drawing Sheets

