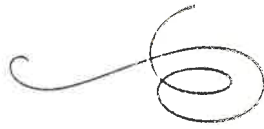


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The Director

of the United States Patent and Trademark Office has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this United States

Patent

grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

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(12) **United States Patent**
Chung et al.

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(54) **TWO-WIRE DIMMING LIGHTING DEVICE**

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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 0 days.

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H05B 47/185 (2020.01)
H05B 45/10 (2020.01)
H05B 45/20 (2020.01)
H05B 47/19 (2020.01)

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CPC **H05B 47/185** (2020.01); **H05B 45/10** (2020.01); **H05B 45/20** (2020.01); **H05B 47/19** (2020.01)

(58) **Field of Classification Search**
CPC H04W 84/12; H04W 4/80; H05B 39/086;
H05B 39/088; H05B 47/115; H05B 47/19
See application file for complete search history.

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(57) **ABSTRACT**
A two-wire dimming lighting device includes an encoding circuit, a decoding circuit, a light source driving circuit, and an LED light emitting circuit. The encoding circuit wirelessly receives the dimming instruction, encodes an AC power according to the dimming instruction, and then outputs an encoded AC power. The decoding circuit receives the encoded AC power and then decodes the encoded AC power to obtain a light source driving instruction. The light source driving circuit receives the light source driving instruction and controls the changes of light emission of the LED light emitting circuit according to the light source driving instruction. The encoding circuit transmits the encoded AC power to the decoding circuit through a two-wire AC transmission wire.

8 Claims, 3 Drawing Sheets

