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*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.*

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**United States Patent**

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*Director of the United States Patent and Trademark Office*



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

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(54) **ALTERNATING CURRENT LIGHT  
EMITTING DEVICE**

(56) **References Cited**

U.S. PATENT DOCUMENTS

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patent is extended or adjusted under 35  
U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

Disclosed is an AC light emitting device. The AC light emitting device is electrically connected to an AC power, and the AC power is rectified by a rectification module and inputs an input voltage. The AC light emitting device comprises a buck module, a switching unit, a control module and an AC lighting emitting module. The buck module is electrically connected to the rectification module. The switching unit is electrically connected to the rectification module and the buck module. The control module is electrically connected to the switching unit and the buck module. The AC lighting emitting module is electrically connected to the switching unit. The control module outputs a pulse waveform signal to the switching unit according to the input voltage and a dimming signal, and the switching unit turns on or off the AC lighting emitting module according to the pulse waveform signal.

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See application file for complete search history.

**10 Claims, 6 Drawing Sheets**

