

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventors: Michael Miskin and Robert L. Kottritsch
Applicant: Lynk Labs, Inc.
Title: MULTI-VOLTAGE AND MULTI-BRIGHTNESS LED LIGHTING
DEVICES AND METHODS OF USING SAME
Appln. No.: 15/685,429 Filing Date: August 24, 2017
Examiner: Lee, Don P. Group Art Unit: 2844
Docket No.: 53998.14US04 Confirmation No. 4750
(LYN-091109CO03)

Costa Mesa, California
June 10, 2018

VIA EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO NON-FINAL OFFICE ACTION

Dear Examiner:

Applicant submits this response in reply to the Non-Final Office Action dated January 11, 2018 in the above-identified patent application.

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IN THE CLAIMS

The following are claims 1 to 20:

1. (Currently Amended) An LED lighting device comprising:
a first LED circuit and a second at least two LED circuit[[s]], each of the first LED circuit and the second LED circuit having opposing ends and including at least two LEDs connected in either series or parallel; and
a switch that is selectable by a user and capable of independently connecting an AC voltage power source to or disconnecting the AC voltage power source from each of the first LED circuit and the second LED circuit,
wherein the LED lighting device is configured to connect to the AC voltage power source.
~~at least four voltage input electrical contacts, the at least four voltage input electrical contacts being configured so that each opposing end of each of the at least two circuits has one voltage input electrical contact connected thereto;~~
~~wherein, each of the at least two LED circuits are electrically unconnected from each other.~~
2. (Currently Amended) The LED lighting device of claim 1 wherein ~~each of the at least two LED circuits include~~ the at least two LEDs of each of the first LED circuit and the second LED circuit are connected in series.
3. (Currently Amended) The LED lighting device of claim 1 wherein ~~each of the at least two LED circuits are~~ first LED circuit and the second LED circuit is arranged in a bridge circuit having at least one LED connected across the outputs.
4. (Currently Amended) The LED lighting device of claim 1 wherein the at least two LEDs in each of the first LED circuit and the second LED circuit at least two LED circuits are connected in parallel ~~an anti-parallel manner.~~
5. (Currently Amended) The LED lighting device of claim [[4]] 1 further comprising:

at least four voltage input electrical contacts, the at least four voltage input electrical contacts being configured so that opposing ends of each of the first LED circuit and the second LED circuit has one voltage input electrical contact connected thereto, wherein the at least four voltage input electrical contacts are configured such that

a first voltage input electrical contact is connected to

an anode of one LED in ~~[[a]] the first of the at least two~~ LED circuit[[s]];

and

a cathode of one LED in the first ~~of the at least two~~ LED circuit[[s]];

a second voltage input electrical contact is connected to

an anode of one LED in the first ~~of the at least two~~ LED circuit[[s]]; and

a cathode of one LED in the first ~~of the at least two~~ LED circuit[[s]];

a third voltage input electrical contact is connected to

an anode of one LED in ~~[[a]] second of the at least two~~ LED circuit[[s]]; and

a cathode of one LED in the second ~~of the at least two~~ LED circuit[[s]];

a fourth voltage input electrical contact is connected to

an anode of one LED in the second ~~of the at least two~~ LED circuit[[s]]; and

a cathode of one LED in the second ~~of the at least two~~ LED circuit[[s]];

wherein the first voltage input electrical contact is connected to a different anode and a different cathode than the second voltage input electrical contact, and the third voltage input electrical contact is connected to a different anode and a different cathode than the fourth voltage input electrical contact.

6. (Currently Amended) The LED lighting device of claim 5 wherein the first and second LED at least two circuits are ~~may be~~ connected in:

a series relationship₁ by connecting the first voltage input electrical contact to a first output of a power supply, connecting the third voltage input electrical contact to a second output of a power supply, and connecting the second voltage input electrical contact and the fourth voltage input electrical contact to each other; or

a parallel relationship₂ by connecting the first voltage input electrical contact and the third voltage input electrical contact to a first output of a power supply, ~~[[and]]~~ and the second voltage input electrical contact and the fourth voltage input electrical contact to a

second output of a power supply.

7. (Original) The LED lighting device of claim 1 wherein the LED lighting device is an LED package.

8. (Original) The LED lighting device of claim 7 wherein the at least two LED circuits are connected in series or parallel utilizing the at least four voltage electrical input contacts within the LED package.

9. (Original) The LED lighting device of claim 1 wherein the at least two LEDs forming each of the at least two LED circuits are discrete die integrated on a substrate.

10. (Original) The LED lighting device of claim 1 wherein the LED lighting device is an LED assembly of discretely packaged LEDs.

11. (Currently Amended) A multi-brightness LED lighting device comprising:
at least two a plurality of LED circuits, each comprising at least two LEDs, the at least two LEDs in each circuit being connected in a either a series[,] or parallel; and or opposing parallel relationship to each other,
a switch controllable by a user to independently connect an AC voltage power source to or disconnect the AC voltage power source from each of the at least two plurality of LED circuits being independently controllable so that more than one level of brightness can be provided by the at least two plurality of LED circuits.

12. (Currently Amended) The multi-brightness lighting device of claim 11 wherein the plurality of LED circuits includes a first LED circuit independently controllable by the switch and a second LED circuit independently controllable by the switch to thereby control a level of brightness output by the multi-brightness LED lighting device being connected to a switch.

13. (Currently Amended) The multi-brightness lighting device of claim [[12]] 11

wherein the switch is connected to each of the ~~at least two~~ plurality of LED circuits such that each of the ~~at least two~~ plurality of LED circuits ~~[[are]]~~ is independently controlled by the switch.

14. (Currently Amended) The multi-brightness lighting device of claim ~~[[12]]~~ 1 wherein the switch is connected to each of the ~~at least two~~ plurality of LED circuits such that the switch can electrically connect ~~each of the at least two~~ plurality of LED circuits in either ~~[[a]]~~ series or parallel ~~connection~~.

15. (Currently Amended) The multi-brightness LED lighting device of claim 11, wherein the ~~at least two~~ plurality of LED circuits are integrated into a lamp.

16. (New) The LED lighting device of claim 1 further comprising:
at least one additional LED circuit having at least two LEDs connected in series or parallel, wherein the switch is controllable by the user to independently connect the at least one additional LED circuit to or disconnect the at least one additional LED circuit from the AC voltage power source.

17. (New) The LED lighting device of claim 1 wherein the first LED circuit, the second LED circuit, and the switch are integrated into a lamp.

18. (New) The multi-brightness LED lighting device of claim 11 wherein the plurality of LED circuits and the switch are integrated into a lamp.

19. (New) A system comprising the multi-brightness LED device of claim 11 and the AC voltage power source.

20. (New) A multi-brightness LED lighting device comprising:
a plurality of LED circuits, each LED circuit of the plurality of LED circuits including a plurality of LEDs; and
a single switch connected to each of the plurality of LED circuits and configured to

connect to an AC voltage power source, the single switch being operable by a user to independently connect each of the plurality of LED circuits to or disconnect each of the plurality of LED circuits from the AC voltage power source, to thereby provide multiple levels of brightness using the plurality of LED circuits.

REMARKS

Applicant submits the above amendments and these remarks in reply to the Office Action dated January 11, 2018.

Summary of Office Action

In the Office Action, claims 1, 2, and 7-15 stand rejected under pre-AIA 35 U.S.C. § 102(b) over U.S. Patent Publication No. 2007/0115248 ("Roberts"). Claims 3-6 stand rejected under pre-AIA 35 U.S.C. § 103(a) over Roberts in view of U.S. Patent Publication No. 2008/0203936 ("Mariyama"). Claims 1-10 stand rejected under 35 U.S.C. § 101 as claiming the same invention as that of claims 1-10 of prior U.S. Patent No. 9,750,098. Applicant respectfully traverses all rejections for at least the reasons set forth herein.

Claim Amendments

Claims 1-6 and 11-15 have been amended. Claims 16-20 have been added. Support for the present amendments is provided by at least the following portions of Applicant's disclosure: paragraphs [0055] through [0058]. No new subject matter has been added.

Discussion of Rejections Under 35 U.S.C. § 103

Applicant notes that independent claim 1 has been amended.

Independent Claim 1:

An LED lighting device comprising:

a first LED circuit and a second LED circuits, each of the first LED circuit and the second LED circuit including at least two LEDs connected in either series or parallel; and

a switch that is selectable by a user and capable of independently connecting an AC voltage power source to or disconnecting the AC voltage power source from each of the first LED circuit and the second LED circuit,

wherein the LED lighting device is configured to connect to the AC voltage power source.

Applicant respectfully submits that Roberts does not teach or suggest the above-emphasized features of claim 1. The Office Action points to driver 220 in Figure 7 of Roberts as allegedly teaching a switch. *Office Action*, page 7. But the driver 220 described

in Roberts is not a switch that is selectable by a user and capable of independently connecting the AC voltage power source to or disconnecting the AC voltage power source from each of the first LED circuit and the second LED circuit. Rather, Roberts discloses a controller 230 in communication with a plurality of bar driver circuits 320A-320D that make up the driver 220. *Roberts*, [0081]; Fig. 7. Each of the plurality of bar driver circuits 320A-320D is connected to a corresponding bar assembly 30. *Roberts*, Fig. 7. Thus, Roberts does not teach or suggest a switch that is selectable by a user and capable of independently connecting an AC voltage power source to or disconnecting the AC voltage power source from each of a first LED circuit and an second LED circuit.

Mariyama fails to cure the deficiencies of Roberts. Mariyama is relied on to teach a bridge and an anti-parallel connection. *Office Action*, pages 4-5. Without acquiescing to this interpretation of Mariyama, Applicant respectfully submits that Mariyama does not teach or suggest at least the above-emphasized features of claim 1.

Thus, neither Roberts, nor Mariyama, alone or in combination, teaches or suggests the above-emphasized features of claim 1. Accordingly, claim 1, and claims 2-10, which depend from and include the subject matter of claim 1, are allowable.

Independent claim 11 has been amended to include features analogous to the above-emphasized features of claim 1. Specifically, claim 11 has been amended to recite “***a switch controllable by a user to independently connect an AC voltage power source to or disconnect the AC voltage power source from each of the plurality of LED circuits*** so that more than one level of brightness can be provided by the plurality of LED circuits.”

Neither Roberts, nor Mariyama, alone or in combination, teaches or suggests the above-emphasized features of claim 11. Therefore, claim 11, and claims 12-15, which depend from and include the subject matter of claim 11, are allowable.

For all of the foregoing reasons, Applicant respectfully requests that the rejections of claims 1, 2, and 7-15 under § 103 over Roberts and claims 3-6 over Roberts in view of Mariyama be withdrawn.

Double Patenting Rejection

Applicant respectfully submits that the claims as amended include different language than the claims of U.S. Patent No. 9,750,098 and therefore, overcome the statutory double patenting rejection based on § 101. Accordingly, Applicant respectfully requests that the double patenting rejection of claims 1-10 be withdrawn.

New Claims

New claims 16 and 17 depend from and include the subject matter of claim 1. Accordingly, claims 16 and 17 are allowable for at least the same reasons as those discussed above with respect to claim 1.

New claims 18 and 19 depend from and include the subject matter of claim 11. Accordingly, claims 18 and 19 are allowable for at least the same reasons as those discussed above with respect to claim 11.

New claim 20 is an independent claim that includes features analogous to the above-emphasized features of claims 1 and 11. Accordingly, claim 20 is allowable for at least the same reasons as those discussed above with respect to claims 1 and 11.

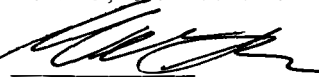
Conclusion

Applicant respectfully submits that all pending claims are in proper form for allowance. Reconsideration and withdrawal of all objections and rejections are respectfully requested and a timely Notice of Allowance is solicited.

Authorization is given to charge any fees due or credit any overpayments in regards to this communication to deposit account 08-1394. If the Examiner has any questions or concerns, a telephone call to the undersigned at (949) 202-3013 is welcomed and encouraged.

Certificate of Transmission

I hereby certify that this correspondence is being electronically transmitted via EFS Web to the Commissioner for Patent, Alexandria, VA on the date shown below.


Nidia Linares July 10, 2018

Respectfully submitted,



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