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Attorneys for Plaintiff LedComm LLC

UNITED STATES DISTRICT COURT

FOR THE CENTRAL DISTRICT OF CALIFORNIA

LEDCOMM LLC, Plaintiff, v. TP-LINK TECHNOLOGIES CO., LTD., and TP-LINK USA CORPORATION, Defendants.	Case No. 8:20-cv-00424 **COMPLAINT FOR PATENT INFRINGEMENT** **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

1. Plaintiff LedComm LLC ("LedComm" or "Plaintiff") hereby asserts the following claims for patent infringement against Defendants TP-Link Technologies Co. Ltd. and TP-Link USA Corporation (collectively, "TP-Link" or "Defendants"), and alleges as follows:

SUMMARY

2. LedComm owns United States Patent Nos. 6,803,606, 7,012,277, and 7,301,176 (collectively, the "Patents-in-Suit").

3. TP-Link infringes the Patents-in-Suit by implementing, without authorization, LedComm's proprietary technologies in a number of its commercial products, including, *inter alia*, Kasa smart lighting products (e.g., the "Kasa Smart Light Bulb, Multicolor" (KL130), the "Kasa Smart Light Bulb, Tunable White" (KL120), the "Kasa Smart Light Bulb, Dimmable" (KL110), the "Kasa Smart Wi-Fi LED Bulb with Multicolor" (LB130), the "Kasa Smart Light Bulb" (KB100), and the "Kasa Smart Wi-Fi LED Bulb" (LB100) (collectively, the "Accused Products"). These Accused Products are marketed, offered and distributed throughout the United States, including in this District.

4. By this action, LedComm seeks to obtain compensation for the harm LedComm has suffered as a result of TP-Link's infringement of the Patents-in-Suit.

NATURE OF THE ACTION

5. This is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*.

6. TP-Link has infringed and continues to infringe, and at least as early as the filing and/or service of this Complaint, has induced and continues to induce infringement of, and has contributed to and continues to contribute to infringement of, one or more claims of LedComm's Patents-in-Suit at least by making, using, selling, and/or offering to sell the Accused Products in the United States, including in this District, and/or by importing the Accused Products into the United States.

7. LedComm is the legal owner by assignment of the Patents-in-Suit, which were duly and legally issued by the United States Patent and Trademark Office ("USPTO"). LedComm seeks monetary damages for TP-Link's infringement of the Patents-in-Suit.

THE PARTIES

8. Plaintiff LedComm LLC is a Texas limited liability company with its principal place of business at 17330 Preston Rd., Dallas, Texas 75252. LedComm is the owner of intellectual property rights at issue in this action.

9. On information and belief, Defendant TP-Link Technologies Co. Ltd. is a corporation duly organized and existing under the laws of China, with a principal place of business at South Building 5 Keyuan Road, Central Zone Science & Technology Park, Nanshan, Shenzhen, People's Republic of China, Postcode: 518057.

10. On information and belief, Defendant TP-Link USA Corporation is a California corporation and has a principal place of business at 145 South State College Blvd., Suite 400, Brea, CA 92821. TP-Link USA Corporation is a subsidiary of TP-Link Technologies Co. Ltd.

11. On information and belief, TP-Link USA Corporation, under the control and direction of TP-Link Technologies Co. Ltd., directly and/or indirectly distributes, markets, offers to sell, and/or sells the Accused Products in the United States and/or imports the Accused Products into the United States, including in the Central District of California, and otherwise directs infringing activities to this District in connection with the Accused Products. *See, e.g.,* https://www.kasasmart.com/1/legal/us/terms-of-use (disclosing TP-Link USA Corporation as the U.S. entity contact for Kasa Smart products).

JURISDICTION AND VENUE

12. As this is a civil action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, this Court has subject matter

jurisdiction over the matters asserted herein under 28 U.S.C. §§ 1331 and 1338(a).

13. This Court has personal jurisdiction over TP-Link because TP-Link has (i) availed itself of the rights and benefits of the laws of the State of California, (ii) transacted, conducted, and/or solicited business and engaged in a persistent course of conduct in the State of California (and in this District), (iii) derived substantial revenue from the sales and/or use of products, such as the Accused Products, in the State of California (and in this District), (iv) purposefully directed activities (directly and/or through intermediaries), such as shipping, distributing, offering for sale, selling, and/or advertising the Accused Products, at residents of the State of California (and residents in this District), (v) delivered Accused Products into the stream of commerce with the expectation that the Accused Products will be used and/or purchased by consumers in the State of California (and in this District), and (vi) committed acts of patent infringement in the State of California (and in this District).

14. This Court also has personal jurisdiction over TP-Link USA Corporation because it is incorporated in the State of California, it is registered to do business in the State of California, and it has a regular and established place of business in the State of California (and in this District).

15. Venue is proper in this District under 28 U.S.C. §§ 1391(b) and (c) and 28 U.S.C. § 1400(b).

PATENTS-IN-SUIT

U.S. Patent No. 6,803,606

16. U.S. Patent No. 6,803,606 (the "'606 Patent") is titled "Light Emitting Device and Manufacturing Method Thereof" and was issued on October 12, 2004. A true and correct copy of the '606 Patent is attached as Exhibit A.

17. The '606 Patent was filed on March 18, 2003 as U.S. Patent Application No. 10/390,180, which in turn claims priority to Japanese Patent Application No. 2002-078119 that was filed on March 20, 2002.

18. LedComm is the owner of all rights, title, and interest in and to the '606 Patent, with the full and exclusive right to bring suit to enforce the '606 Patent, including the right to recover for past infringement.

19. The '606 Patent is valid and enforceable under United States Patent Laws.

20. The '606 Patent recognized problems with existing light emitting devices of the time of the invention of the '606 Patent.

21. For instance, the '606 Patent recognized that a traditional light emitting device was prone to malfunction due to poor adherence between the light-emitting device's constituent parts. *See, e.g.*, '606 Patent at 1:24-2:17. In this respect, the '606 Patent recognized that a resin disposed between a light emitting element and reflector of the light emitting device adhered poorly to the reflector, which in turn could lead to the reflector detaching from the resin "due to heat generated in mounting the light emitting device or heat generated in operating the light emitting device." *See id.* at 1:24-31. Such detachment could further result in the destruction of an electrical connection provided by a bonding wire between the light emitting element and electrode of the light emitting device and/or result in creating a space in which water could enter the light emitting device, thereby causing the device to malfunction. *See, e.g.*, *id.* at 1:31-39.

22. In view of the foregoing, the '606 Patent sought to "provide a light emitting device capable of preventing detachment of a reflector from a resin." *Id.* at 1:43-45. In this respect, the '606 Patent discloses forming a face of the light emitting device's reflector into a rough surface, "so that adherence between the reflector and the resin through the rough surface of the reflector becomes relatively larger." *Id.* at 1:57-61. Advantageously, as a result of this configuration, "the reflector is hardly detached from the resin even if, for example, the light emitting device receives heat during mounting the light emitting device on the substrate or during operating the light emitting device," which helps to "ensure[] avoidance of

such disadvantage as the [light emitting device's] substrate being detached from the resin, a bonding wire connected to the light emitting element being disconnected due to the detachment of the substrate from the resin, and water entering through a detachment portion between the reflector and the resin, thereby causing malfunction of the light emitting device." *Id.* at 1:62-2:5.

U.S. Patent No. 7,012,277

23. U.S. Patent No. 7,012,277 (the "'277 Patent") is titled "Semiconductor Light Emitting Device" and was issued on March 14, 2006. A true and correct copy of the '277 Patent is attached as Exhibit B.

24. The '277 Patent was filed on December 23, 2003 as U.S. Patent Application No. 10/745,764, which in turn claims priority to Japanese Patent Application No. 2003-000216 that was filed on January 6, 2003.

25. LedComm is the owner of all rights, title, and interest in and to the '277 Patent, with the full and exclusive right to bring suit to enforce the '277 Patent, including the right to recover for past infringement.

26. The '277 Patent is valid and enforceable under United States Patent Laws.

27. The '277 Patent recognized problems with existing light emitting devices of the time of the invention of the '277 Patent.

28. For instance, the '277 Patent recognized that a traditional light emitting device exhibited poor light emitting efficiency, reliability, and lifetime. *See, e.g.*, '277 Patent at 1:38-2:37. In this regard, the '277 Patent recognized that the amount of current that a light emitting device's LED chip is subjected to contributes to these deficiencies. *See, e.g.*, *id.* at 1:38-50.

29. To help address the aforementioned deficiencies, the '277 Patent sought to provide a light emitting device that exhibited, at least, favorable light emitting efficiency and lifetime without degrading the reliability the light emitting device's LED chip. *See, e.g.*, *id.* at 2:32-37. To these ends, the '277 Patent

discloses a light emitting device configuration in which a metal body is located under a region of a first lead frame on which the light emitting device's LED chip is mounted and under a region of a second lead frame that is electrically connected to the first lead frame. The '277 Patent contemplates that this metal body helps to reduce the negative effects resulting from the LED chip being subjected to current. *See, e.g.*, *id.* at 1:38-50, 2:32-49.

U.S. Patent No. 7,301,176

30. U.S. Patent No. 7,301,176 (the "'176 Patent") is titled "Semiconductor Light Emitting Device and Fabrication Method Thereof" and was issued on November 27, 2007. A true and correct copy of the '176 Patent is attached as Exhibit C.

31. The '176 Patent was filed on April 22, 2005 as U.S. Patent Application No. 11/112,215 which in turn claims priority to Japanese Patent Application No. 2004-131774 that was filed on April 27, 2004.

32. LedComm is the owner of all rights, title, and interest in and to the '176 Patent, with the full and exclusive right to bring suit to enforce the '176 Patent, including the right to recover for past infringement.

33. The '176 Patent is valid and enforceable under United States Patent Laws.

34. The '176 Patent recognized problems with existing light emitting devices of the time of the invention of the '176 Patent.

35. For instance, the '176 Patent recognized a need for light emitting devices with reduced size but also recognized that simply reducing the size of constituent parts of existing light emitting devices would result in performance deficiencies. *See, e.g.*, '176 Patent at 1:57-2:15. For example, the '176 Patent recognized that a light emitting device's light output directivity and/or lead frames' strength of security could be negatively impacted. *See, e.g.*, *id.*

36. To help address the aforementioned deficiencies, the '176 Patent

sought to provide a light emitting device with a reduced size that also allowed for adjustment of the directivity of output light and/or ensured the strength of the light emitting device's lead frames. *See, e.g.*, *id.* at 2:19-25, 3:24-31. To these ends, the '176 Patent discloses a light emitting device configuration in which a light transmitting resin provides a holding portion that holds the light emitting device's lead frames and a light shielding resin is formed to cover a bottom surface and a side surface of the holding portion.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 6,803,606

37. LedComm incorporates by reference and re-alleges paragraphs 16-22 of this Complaint as if fully set forth herein.

38. TP-Link has infringed and is infringing, either literally or under the doctrine of equivalents, the '606 Patent in violation of 35 U.S.C. § 271 *et seq*., directly and/or indirectly, by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, the Accused Products.

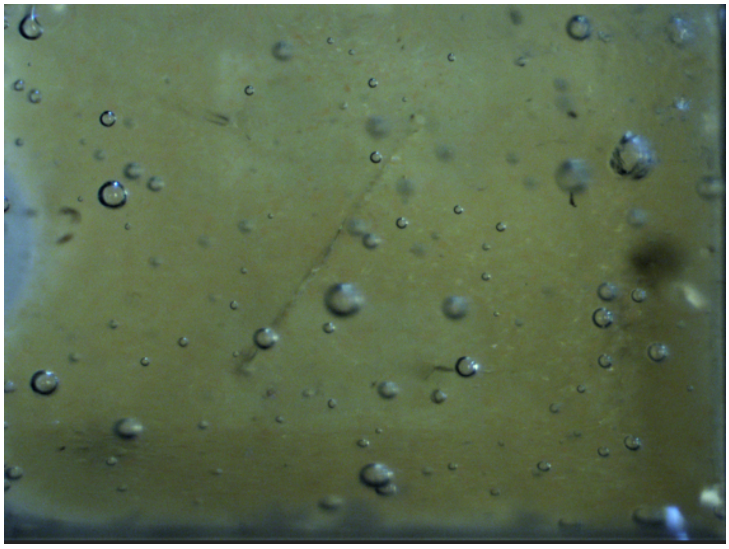
39. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '606 Patent in connection with one of the Accused Products (e.g., the "Kasa Smart Wi-Fi LED Bulb with Multicolor" (LB130), referred to herein as the "Kasa Smart Wi-Fi LED Bulb"). This description is based on publicly available information. LedComm reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

1(a): A light emitting device comprising:— TP-Link, directly and/or indirectly, makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States, light emitting devices that are covered by claim 1 of the '606 Patent.

As one non-limiting example, the Kasa Smart Wi-Fi LED Bulb comprises a "light emitting device," as recited in claim 1. *See, e.g.*, https://static.tp-

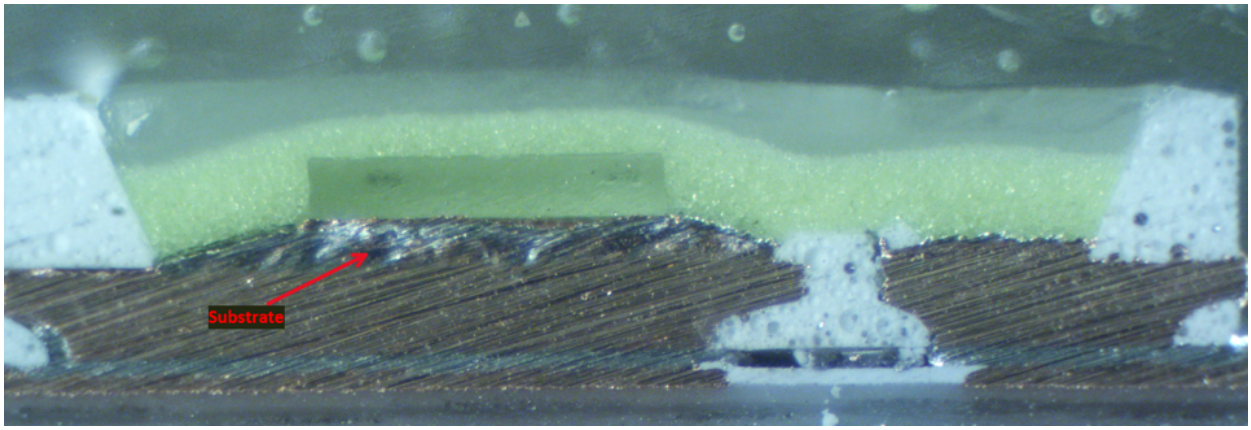
link.com/1910011976_LB(E26)(E27)_UG.pdf.

To illustrate, a top-down view of an example phosphor LED from a Kasa Smart Wi-Fi LED Bulb is shown below:



1(b): a substrate;— The Kasa Smart Wi-Fi LED Bulb comprises a substrate.

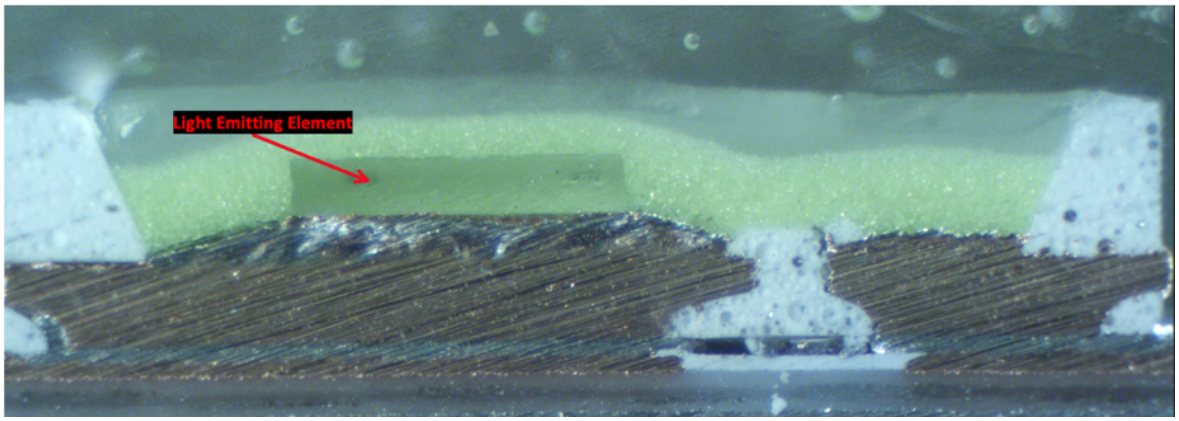
For example, shown below is a cross-sectional view of the example phosphor LED from the Kasa Smart Wi-Fi LED Bulb with the substrate annotated in red:



1(c): a light emitting element on the substrate;— The Kasa Smart Wi-Fi LED Bulb comprises a light emitting element on the substrate.

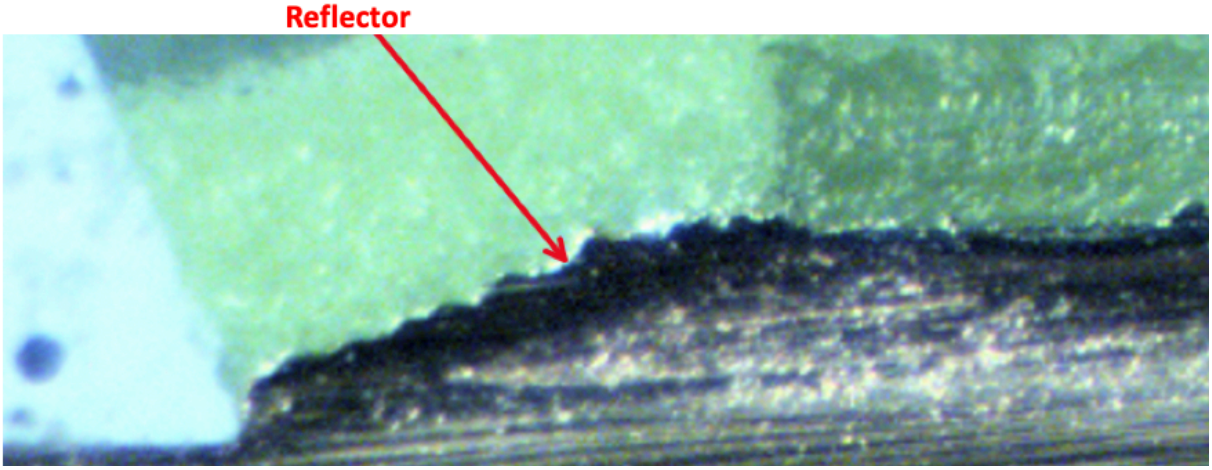
For example, shown below is the cross-sectional view of the example phosphor LED from the Kasa Smart Wi-Fi LED Bulb with the light emitting

element on the substrate identified:

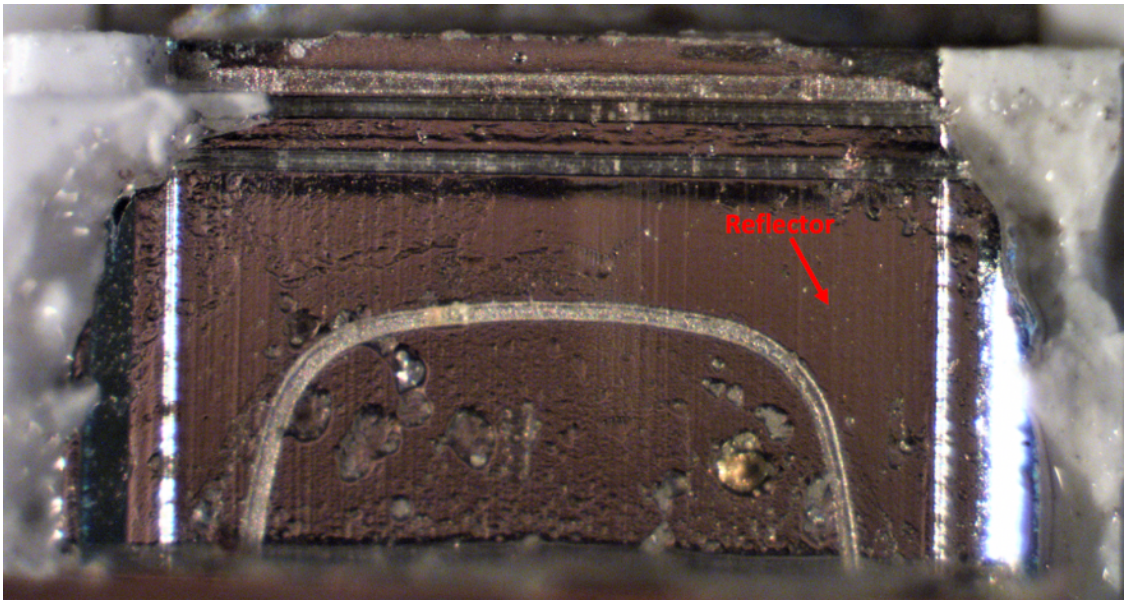


1(d): a reflector on the substrate for reflecting a light beam outgoing from the light emitting element; and— The Kasa Smart Wi-Fi LED Bulb comprises a reflector on the substrate for reflecting a light beam outgoing from the light emitting element.

For example, shown below is a close-up of a portion of the cross-sectional view of the example phosphor LED from the Kasa Smart Wi-Fi LED Bulb with the reflector on the substrate identified:

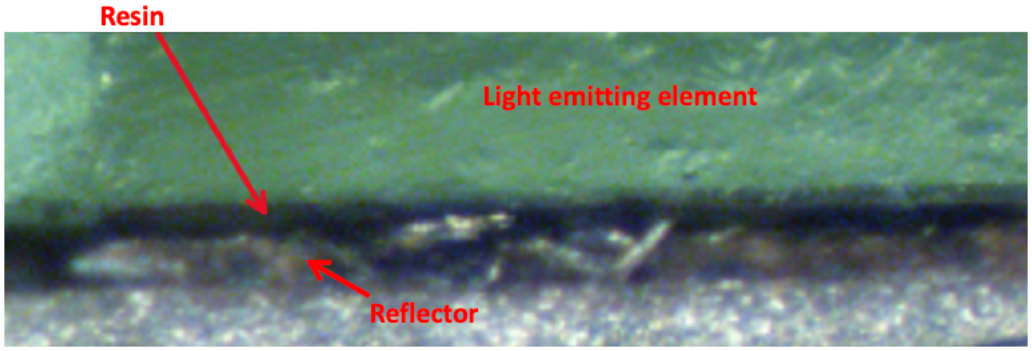


To further illustrate the presence of the reflector on the substrate in the Kasa Smart Wi-Fi LED Bulb, below is a top-down view of a phosphor LED from a Kasa Smart Wi-Fi LED Bulb with the phosphor layer removed and the reflector identified:



1(e): a resin disposed between the light emitting element and the reflector on the substrate,— The Kasa Smart Wi-Fi LED Bulb comprises a resin disposed between the light emitting element and the reflector on the substrate.

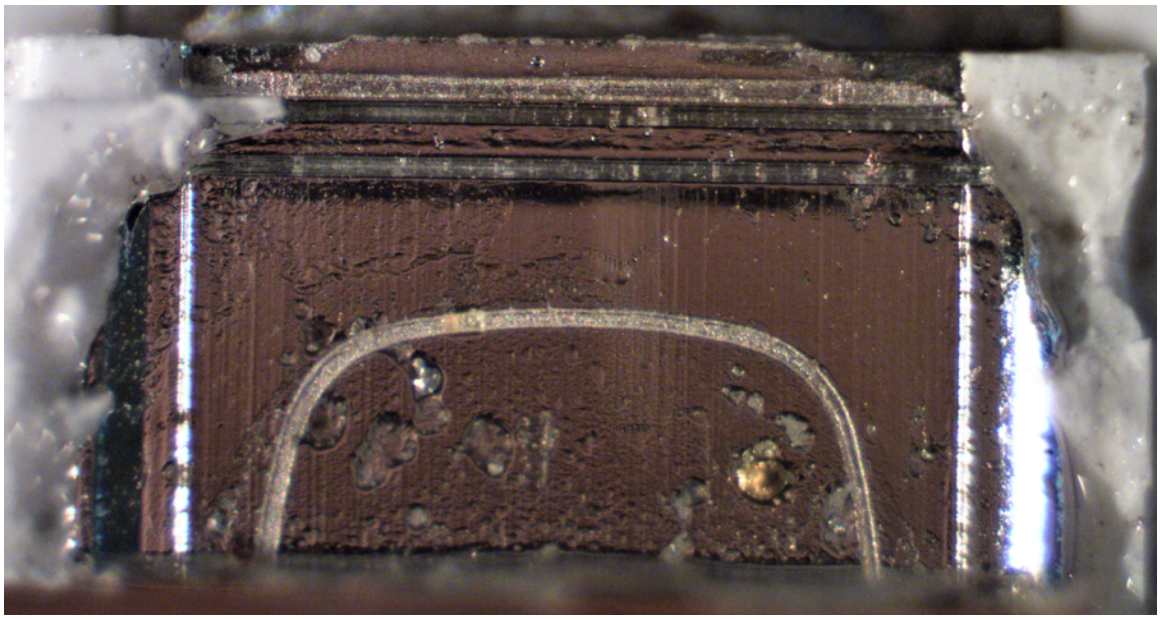
For example, shown below is a close-up of a portion of the cross-sectional view of the example phosphor LED from the Kasa Smart Wi-Fi LED Bulb with the resin disposed between the light emitting element and the reflector identified:

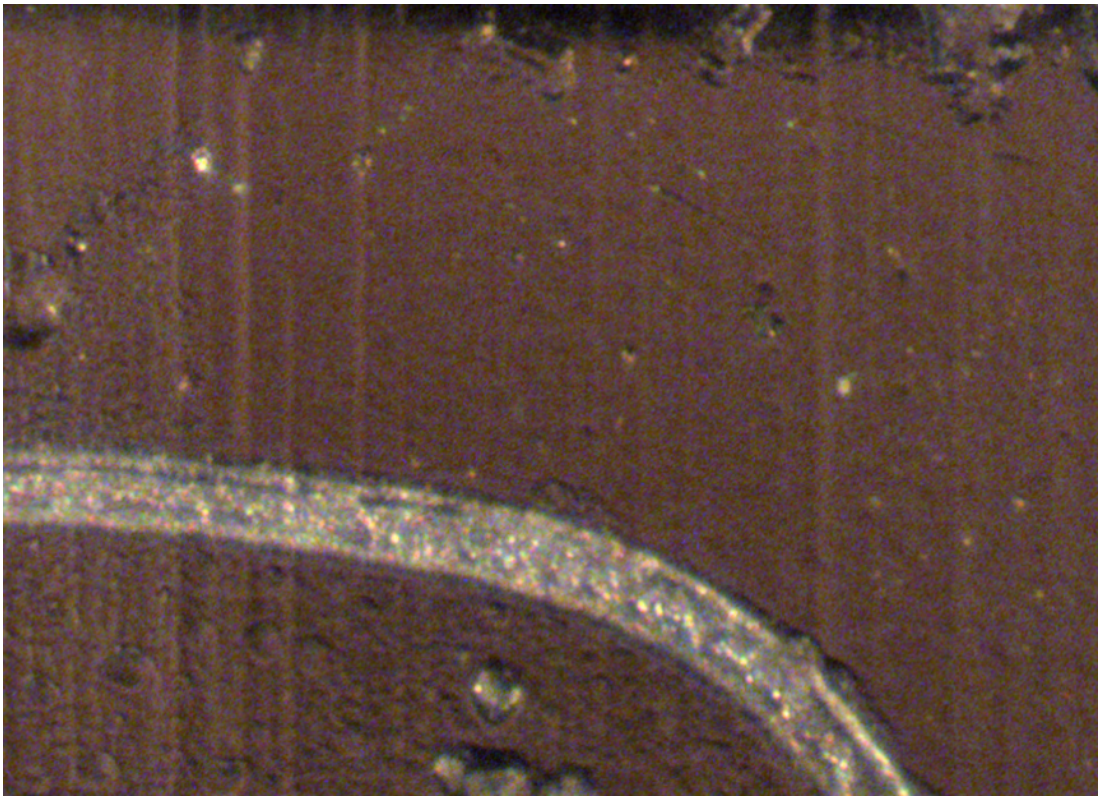


1(f): wherein a face of the reflector on that reflects a light beam outgoing from the light emitting element is formed into a rough surface.— In the Kasa Smart Wi-Fi LED Bulb, a face of the reflector that reflects a light beam outgoing from the light emitting element is formed into a rough surface.

For example, a face of the reflector formed into a rough surface is shown in

the below images of a Kasa Smart Wi-Fi LED Bulb's reflector that is visible after the phosphor layer has been removed:





40. Additionally, TP-Link has been and/or currently is an active inducer of infringement of the '606 Patent under 35 U.S.C. § 271(b) and a contributory infringer of the '606 Patent under 35 U.S.C. § 271(c).

41. Indeed, TP-Link has been and/or currently is intentionally causing, urging, and/or encouraging customers to directly infringe one or more claims of the '606 Patent while being on notice of (or willfully blind to) the '606 Patent. For instance, TP-Link has supplied and continues to supply the Accused Products to customers (e.g., end users and/or distributors of the Kasa Smart Wi-Fi LED Bulb) while knowing that use of these products in their intended manner will directly infringe one or more claims of the '606 Patent.

42. TP-Link has been and/or currently is knowingly and intentionally encouraging and aiding customers to engage in such direct infringement of the '606 Patent. As one example, TP-Link promotes, advertises, and instructs customers or potential customers about the Accused Products and uses of the Accused Products. *See, e.g.*, https://www.kasasmart.com/us/products/smart-lighting; https://static.tp-

link.com/1910011976_LB(E26)(E27)_UG.pdf.

43. TP-Link knows (and/or has known) that such encouraging and aiding does (and/or would) result in its customers directly infringing the '606 Patent. For instance, TP-Link knows (and/or has known) of the existence of the '606 Patent or at least should have known of the existence of the '606 Patent but was willfully blind to its existence. Indeed, TP-Link has had actual knowledge of the '606 Patent since at least as early as the filing and/or service of this Complaint. And, as a result of its knowledge of the '606 Patent (and/or as a direct and probable consequence of its willful blindness to this fact), TP-Link specifically intends (and/or has intended) that its encouraging and aiding does (and/or would) result in direct infringement of the '606 Patent by TP-Link's customers.

44. On information and belief, TP-Link specifically intends (and/or has intended) that its actions will (and/or would) result in direct infringement of one or more claims of the '606 Patent and/or subjectively believes (and/or has believed) that its actions will (and/or would) result in infringement of the '606 Patent but has taken (and/or took) deliberate actions to avoid learning of those facts.

45. Additionally, TP-Link has been and/or currently is contributorily infringing one or more claims of the '606 Patent by offering for sale, selling, and/or importing one or more components in connection with the Accused Products that contribute to the direct infringement of the '606 Patent by customers of the Accused Products. In particular, as set forth above, TP-Link has had actual knowledge of the '606 Patent or was willfully blind to its existence since at least as early as the filing and/or service of this Complaint. Further, TP-Link offers for sale, sells, and/or imports one or more components in connection with the Accused Products that are not staple articles of commerce suitable for substantial non-infringing use, and TP-Link knows (or should know) that such component(s) were especially made or especially adapted for use in infringement of the '606 Patent. TP-Link has supplied (and/or continues to supply) the Accused Products that comprise such

component(s) to customers, who then directly infringe one or more claims of the '606 Patent by using the Accused Products in their intended manner (e.g., pursuant to instructions provided by TP-Link).

46. At least as early as the filing and/or service of this Complaint, TP-Link's infringement of the '606 Patent was and continues to be willful and deliberate, thereby entitling LedComm to enhanced damages.

47. Additional allegations regarding TP-Link's knowledge of the '606 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

48. TP-Link's infringement of the '606 Patent is exceptional and entitles LedComm to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

49. LedComm is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '606 Patent.

50. LedComm is entitled to recover from TP-Link all damages that LedComm has sustained as a result of TP-Link's infringement of the '606 Patent, including, without limitation, a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 7,012,277

51. LedComm incorporates by reference and re-alleges paragraphs 23-29 of this Complaint as if fully set forth herein.

52. TP-Link has infringed and is infringing, either literally or under the doctrine of equivalents, the '277 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, the Accused Products.

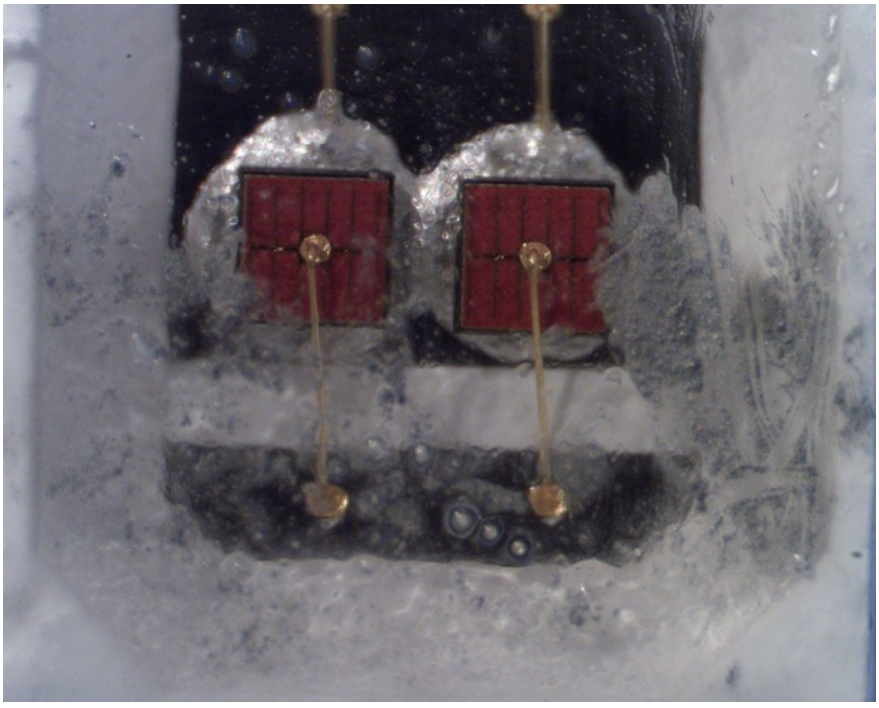
53. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '277 Patent in connection with one of the Accused Products (e.g., the "Kasa

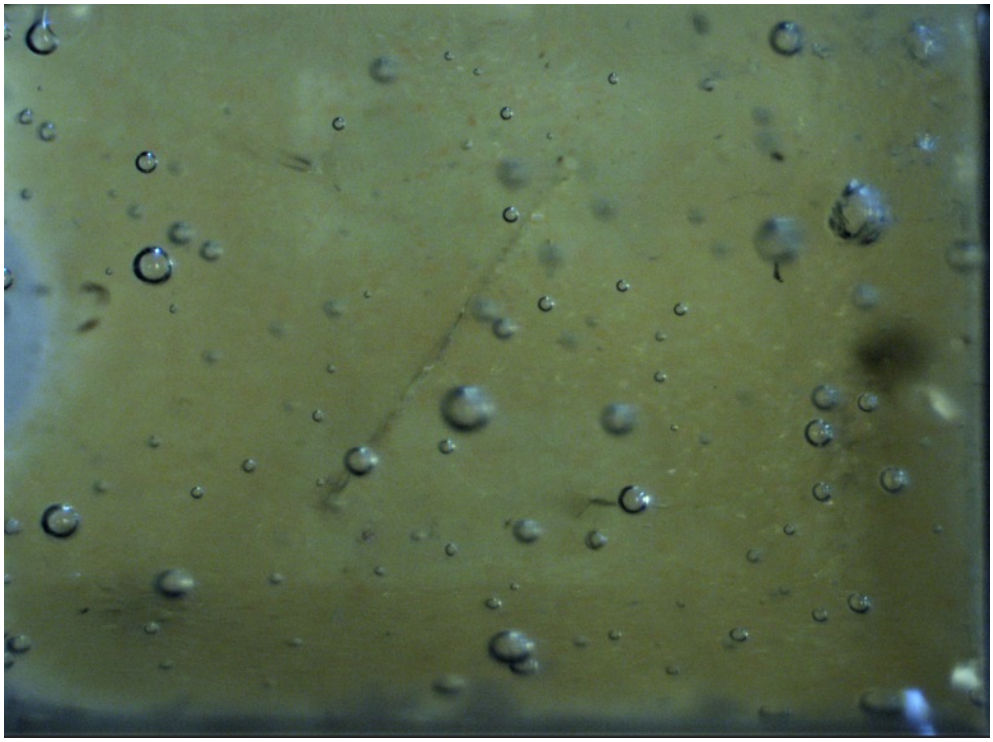
Smart Wi-Fi LED Bulb with Multicolor" (LB130), referred to herein as the "Kasa Smart Wi-Fi LED Bulb"). This description is based on publicly available information. LedComm reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

1(a): A semiconductor light emitting device comprising:— TP-Link, directly and/or indirectly, makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States, semiconductor light emitting devices that are covered by claim 1 of the '277 Patent.

As one non-limiting example, the Kasa Smart Wi-Fi LED Bulb comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.*, https://static.tp-link.com/1910011976_LB(E26)(E27)_UG.pdf.

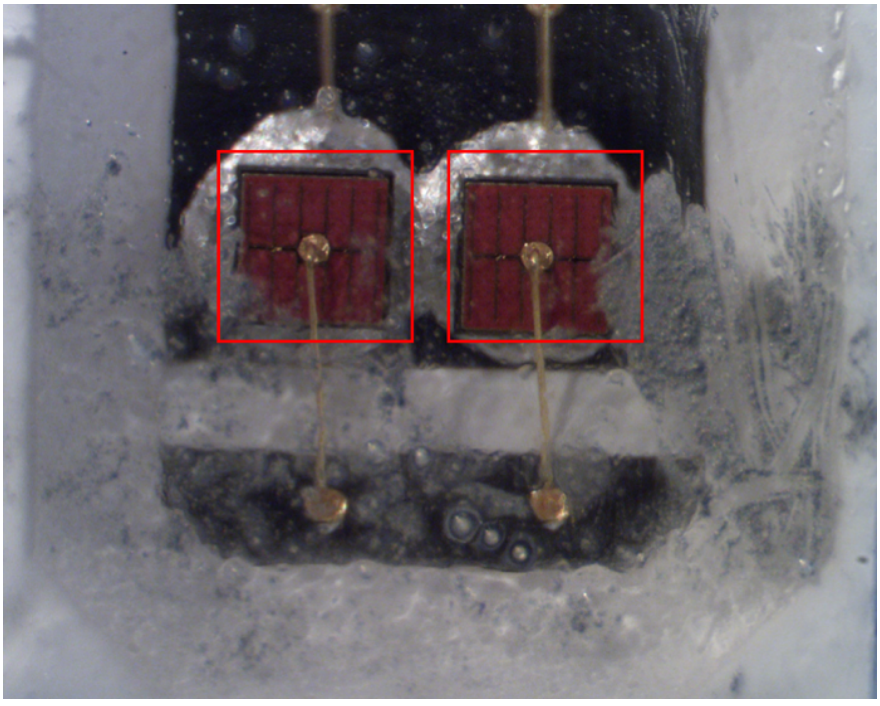
To illustrate, a top-down view of example color LED chips from a Kasa Smart Wi-Fi LED Bulb is shown in the first image below, and a top-down view of an example phosphor LED chip from a Kasa Smart Wi-Fi LED Bulb is shown in the second image below:





1(b): an LED chip, —The Kasa Smart Wi-Fi LED Bulb comprises an LED chip.

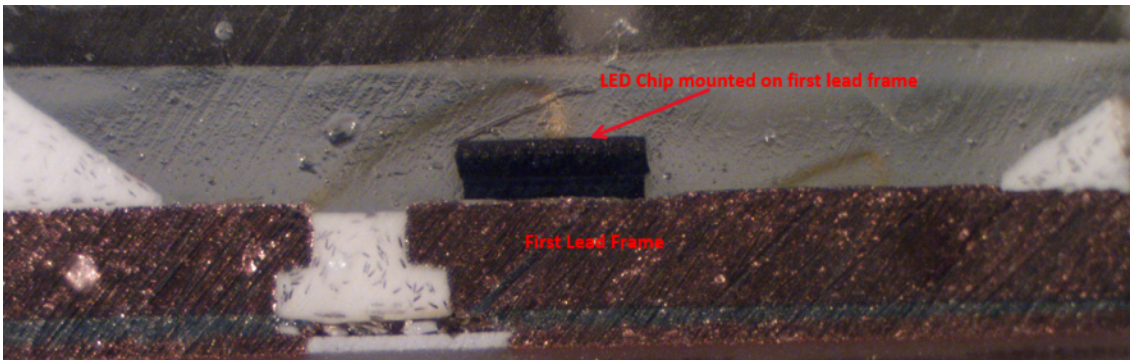
For example, shown below is a top-down view of color LED chips (annotated in red) from a Kasa Smart Wi-Fi LED Bulb:



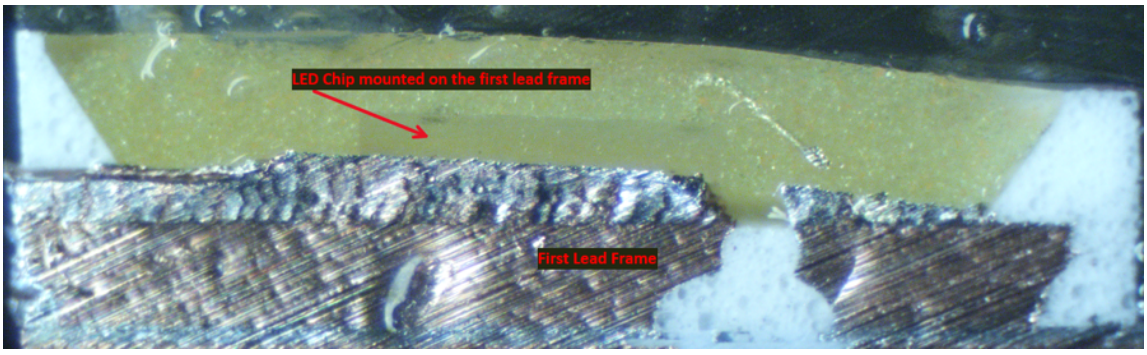
As another example, a cross-sectional view of a phosphor LED chip from a Kasa Smart Wi-Fi LED Bulb is shown with respect to claim element 1(c) below.

1(c): a first lead frame on which said LED chip is mounted, — The Kasa Smart Wi-Fi LED Bulb comprises a first lead frame on which the LED chip is mounted.

For example, a cross section of a color LED chip from a Kasa Smart Wi-Fi LED Bulb was taken, and a resulting cross-sectional view is shown below with the Kasa Smart Wi-Fi LED Bulb mounted to a first lead frame identified:

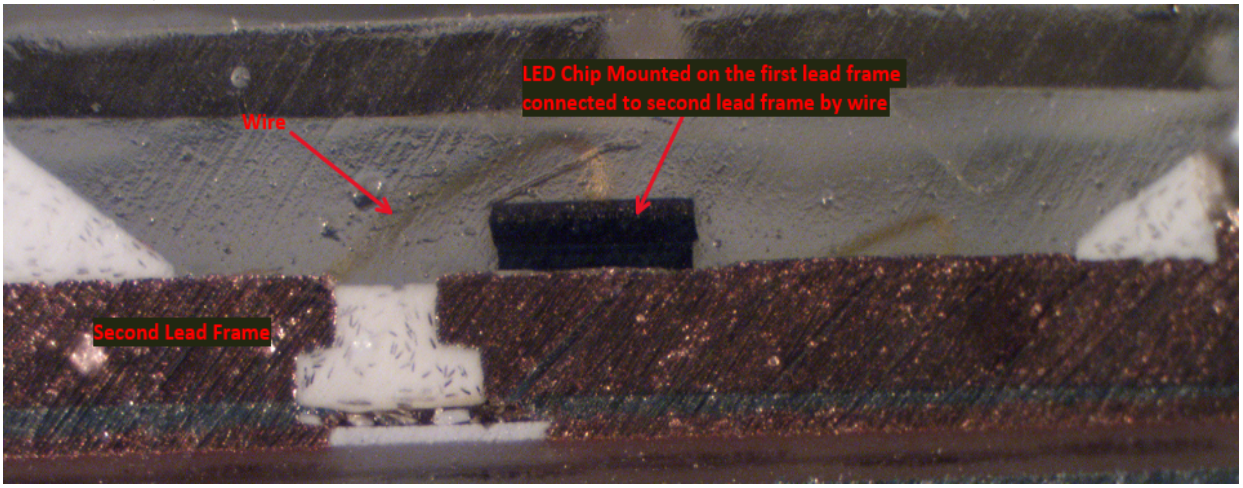


As another example, a cross section of a phosphor LED chip from a Kasa Smart Wi-Fi LED Bulb was taken, and a resulting cross-sectional view is shown below with the phosphor LED chip mounted to a first lead frame identified:

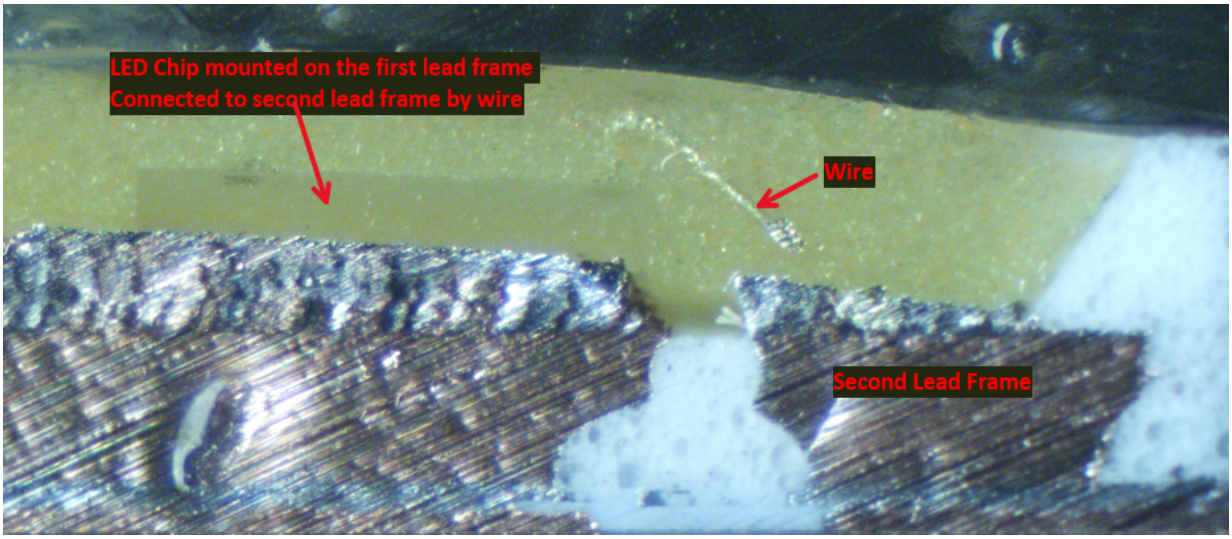


1(d): a second lead frame electrically connected to said LED chip via a wire, and — The Kasa Smart Wi-Fi LED Bulb comprises a second lead frame that is electrically connected to the LED chip via a wire.

For example, shown below is the cross-sectional view of the cross-sectioned color LED chip from the Kasa Smart Wi-Fi LED Bulb with a second lead frame electrically connected to the first lead frame via a wire identified:

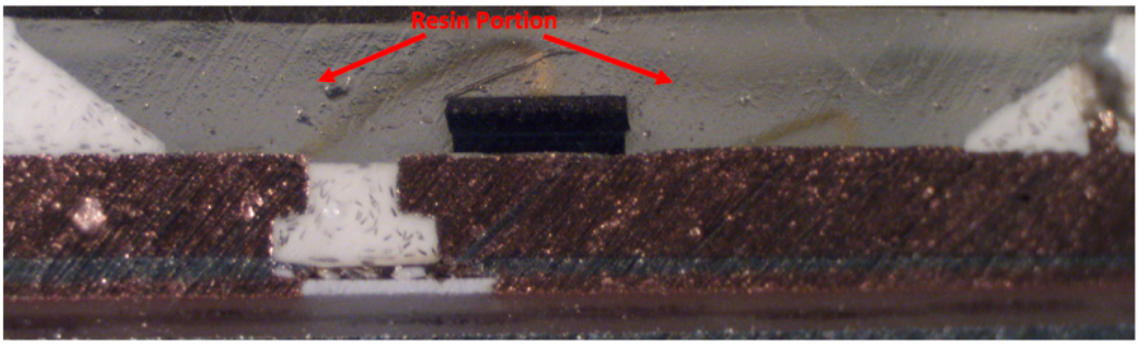


As another example, shown below is a cross-sectional view of a phosphor LED chip from a Kasa Smart Wi-Fi LED Bulb with a second lead frame electrically connected to a first lead frame via a wire identified:

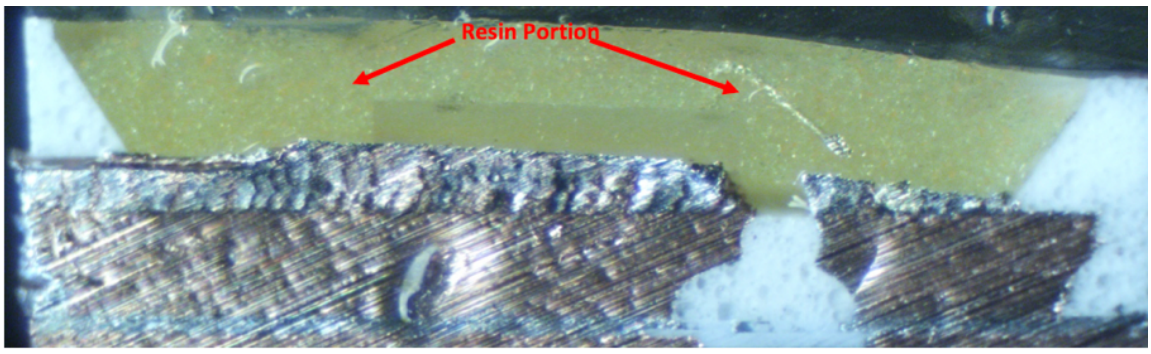


1(e): a resin portion surrounding a circumference of said LED chip, and fastening said first and second lead frames,— The Kasa Smart Wi-Fi LED Bulb comprises a resin portion surrounding the circumference of the LED chip and fastening the first and second lead frames.

For example, shown below is a cross-sectional view of a cross-sectioned color LED chip from the Kasa Smart Wi-Fi LED Bulb with a resin portion surrounding the circumference of the color LED chip and fastening first and second lead frames identified:



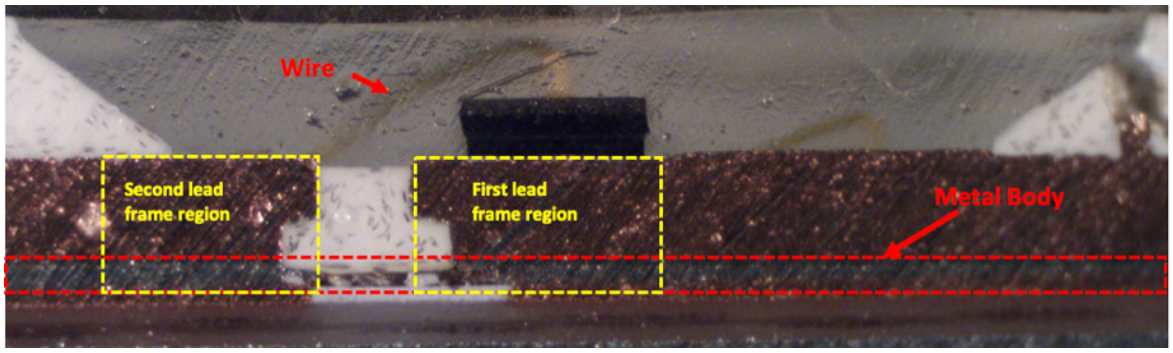
As another example, shown below is a cross-sectional view of a phosphor LED chip from a Kasa Smart Wi-Fi LED Bulb with a resin portion surrounding the circumference of the LED chip and fastening first and second lead frames identified:



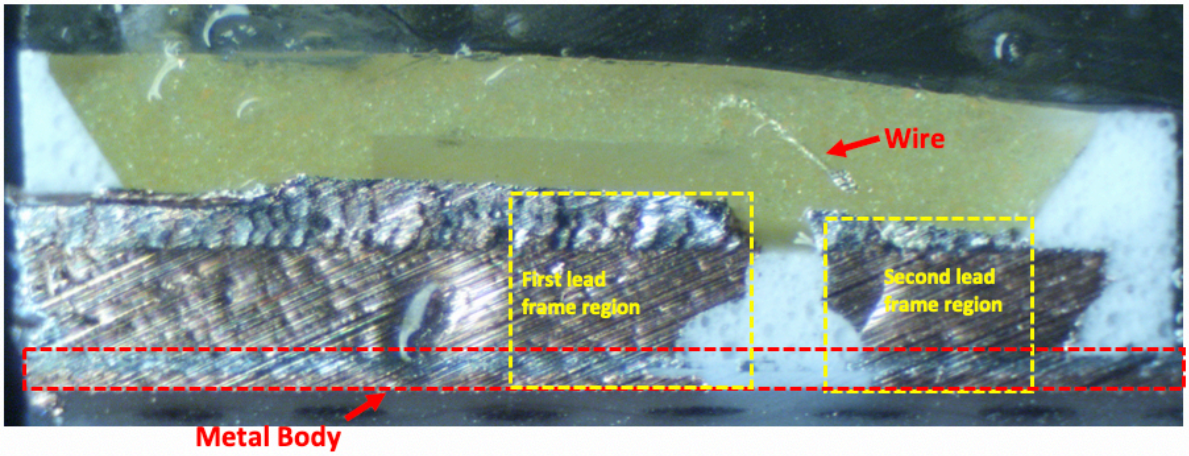
1(f): wherein a metal body is located under a region of said first lead frame where said LED chip is mounted, and wherein the second lead frame has a portion where the wire is connected and the metal body is provided to extend to a region below said portion of the second lead frame.— In the Kasa Smart Wi-Fi LED Bulb, a metal body is located under a region of the first lead frame where the LED chip is mounted and the second lead frame has a portion where the wire is

connected and the metal body is provided to extend to a region below the portion of the second lead frame.

For example, this configuration is shown in the below close-up of a cross-sectional view of a cross-sectioned color LED chip from the Kasa Smart Wi-Fi LED Bulb:



As another example, this configuration is shown in the below image of a cross-sectional view of a phosphor LED chip from a Kasa Smart Wi-Fi LED Bulb:



54. Additionally, TP-Link has been and/or currently is an active inducer of infringement of the '277 Patent under 35 U.S.C. § 271(b) and a contributory infringer of the '277 Patent under 35 U.S.C. § 271(c).

55. Indeed, TP-Link has been and/or currently is intentionally causing, urging, and/or encouraging customers to directly infringe one or more claims of the

'277 Patent while being on notice of (or willfully blind to) the '277 Patent. For instance, TP-Link has supplied and continues to supply the Accused Products to customers (e.g., end users and/or distributors of the Kasa Smart Wi-Fi LED Bulb) while knowing that use of these products in their intended manner will directly infringe one or more claims of the '277 Patent.

56. TP-Link has been and/or currently is knowingly and intentionally encouraging and aiding customers to engage in such direct infringement of the '277 Patent. As one example, TP-Link promotes, advertises, and instructs customers or potential customers about the Accused Products and uses of the Accused Products. *See, e.g.*, https://www.kasasmart.com/us/products/smart-lighting; https://static.tp-link.com/1910011976_LB(E26)(E27)_UG.pdf.

57. TP-Link knows (and/or has known) that such encouraging and aiding does (and/or would) result in its customers directly infringing the '277 Patent. For instance, TP-Link knows (and/or has known) of the existence of the '277 Patent or at least should have known of the existence of the '277 Patent but was willfully blind to its existence. Indeed, TP-Link has had actual knowledge of the '277 Patent since at least as early as the filing and/or service of this Complaint. And, as a result of its knowledge of the '277 Patent (and/or as a direct and probable consequence of its willful blindness to this fact), TP-Link specifically intends (and/or has intended) that its encouraging and aiding does (and/or would) result in direct infringement of the '277 Patent by TP-Link's customers.

58. On information and belief, TP-Link specifically intends (and/or has intended) that its actions will (and/or would) result in direct infringement of one or more claims of the '277 Patent and/or subjectively believes (and/or has believed) that its actions will (and/or would) result in infringement of the '277 Patent but has taken (and/or took) deliberate actions to avoid learning of those facts.

59. Additionally, TP-Link has been and/or currently is contributorily infringing one or more claims of the '277 Patent by offering for sale, selling, and/or

importing one or more components in connection with the Accused Products that contribute to the direct infringement of the '277 Patent by customers of the Accused Products. In particular, as set forth above, TP-Link has had actual knowledge of the '277 Patent or was willfully blind to its existence since at least as early as the filing and/or service of this Complaint. Further, TP-Link offers for sale, sells, and/or imports one or more components in connection with the Accused Products that are not staple articles of commerce suitable for substantial non-infringing use, and TP-Link knows (or should know) that such component(s) were especially made or especially adapted for use in infringement of the '277 Patent. TP-Link has supplied (and/or continues to supply) the Accused Products that comprise such component(s) to customers, who then directly infringe one or more claims of the '277 Patent by using the Accused Products in their intended manner (e.g., pursuant to instructions provided by TP-Link).

60. At least as early as the filing and/or service of this Complaint, TP-Link's infringement of the '277 Patent was and continues to be willful and deliberate, thereby entitling LedComm to enhanced damages.

61. Additional allegations regarding TP-Link's knowledge of the '277 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

62. TP-Link's infringement of the '277 Patent is exceptional and entitles LedComm to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

63. LedComm is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '277 Patent.

64. LedComm is entitled to recover from TP-Link all damages that LedComm has sustained as a result of TP-Link's infringement of the '277 Patent, including, without limitation, a reasonable royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 7,301,176

65. LedComm incorporates by reference and re-alleges paragraphs 30-36 of this Complaint as if fully set forth herein.

66. TP-Link has infringed and is infringing, either literally or under the doctrine of equivalents, the '176 Patent in violation of 35 U.S.C. § 271 *et seq*., directly and/or indirectly, by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, the Accused Products.

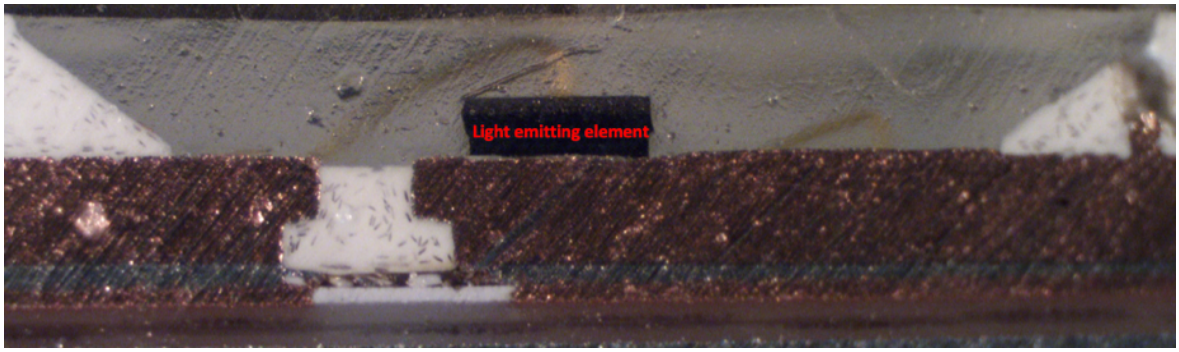
67. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '176 Patent in connection with one of the Accused Products (e.g., the "Kasa Smart Wi-Fi LED Bulb with Multicolor" (LB130), referred to herein as the "Kasa Smart Wi-Fi LED Bulb"). This description is based on publicly available information. LedComm reserves the right to modify this description, including, for example, on the basis of information about the Accused Products that it obtains during discovery.

1(a): A semiconductor light emitting device comprising:— TP-Link, directly and/or indirectly, makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States, semiconductor light emitting devices that are covered by claim 1 of the '176 Patent.

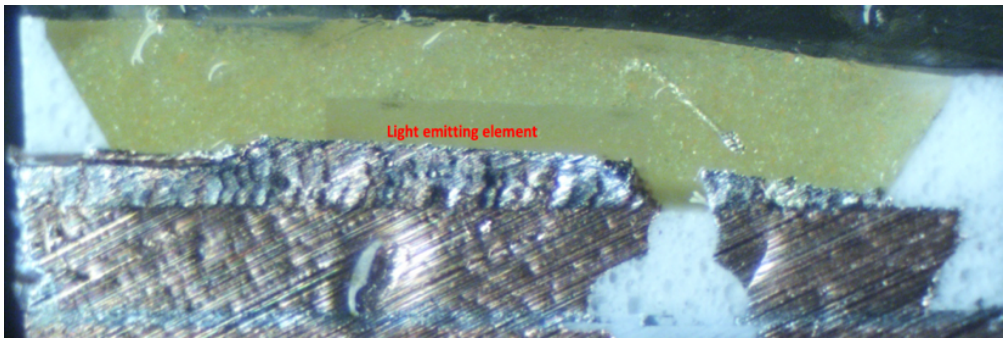
As one non-limiting example, the Kasa Smart Wi-Fi LED Bulb comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.*, https://static.tp-link.com/1910011976_LB(E26)(E27)_UG.pdf.

1(b): a semiconductor light emitting element, — The Kasa Smart Wi-Fi LED Bulb comprises a semiconductor light emitting element.

For example, a cross section of a color LED chip from a Kasa Smart Wi-Fi LED Bulb was taken, and a resulting cross-sectional view is shown below with a semiconductor light emitting element identified:

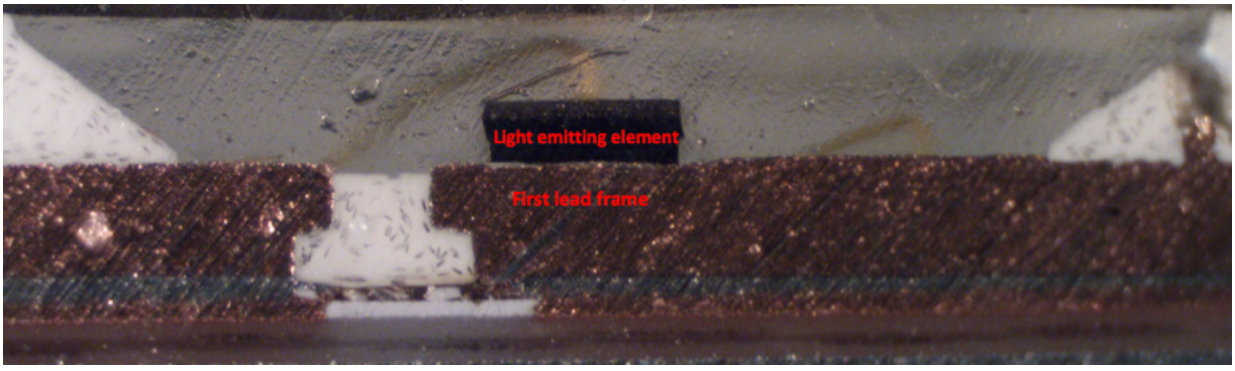


As another example, a cross section of a phosphor LED chip from a Kasa Smart Wi-Fi LED Bulb was taken, and a resulting cross-sectional view is shown below with a semiconductor light emitting element identified:

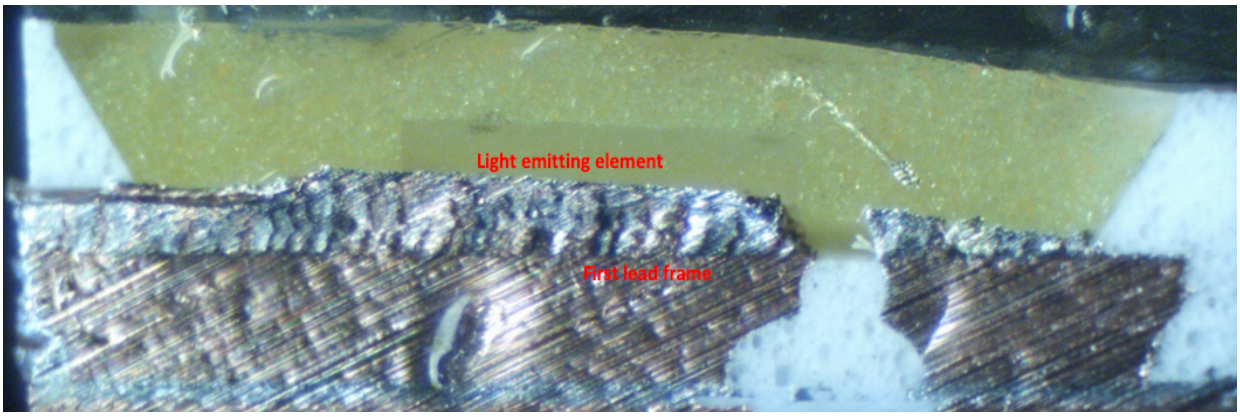


1(c): a first lead frame on which said semiconductor light emitting element is mounted, — The Kasa Smart Wi-Fi LED Bulb comprises a first lead frame on which the semiconductor light emitting element is mounted.

For example, shown below is the cross-sectional view of the color LED chip from the Kasa Smart Wi-Fi LED Bulb with an identification of a first lead frame on which the semiconductor light emitting element is mounted:

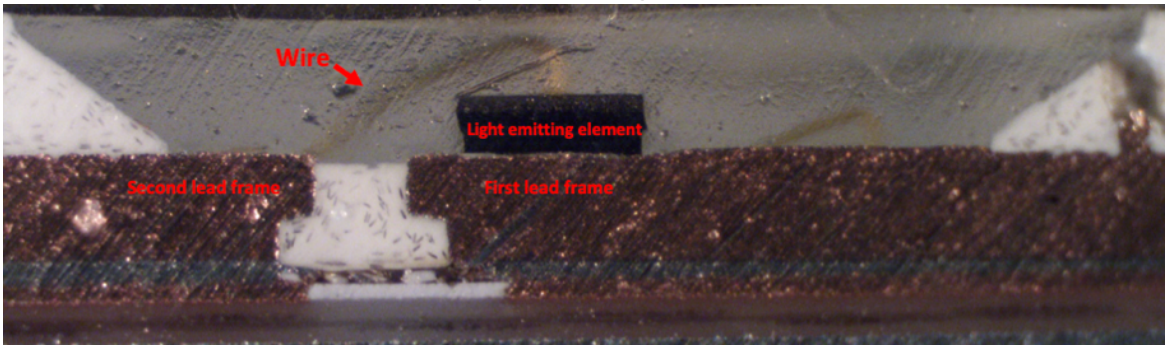


As another example, shown below is the cross-sectional view of the phosphor LED chip from the Kasa Smart Wi-Fi LED Bulb with an identification of a first lead frame on which the semiconductor light emitting element is mounted:



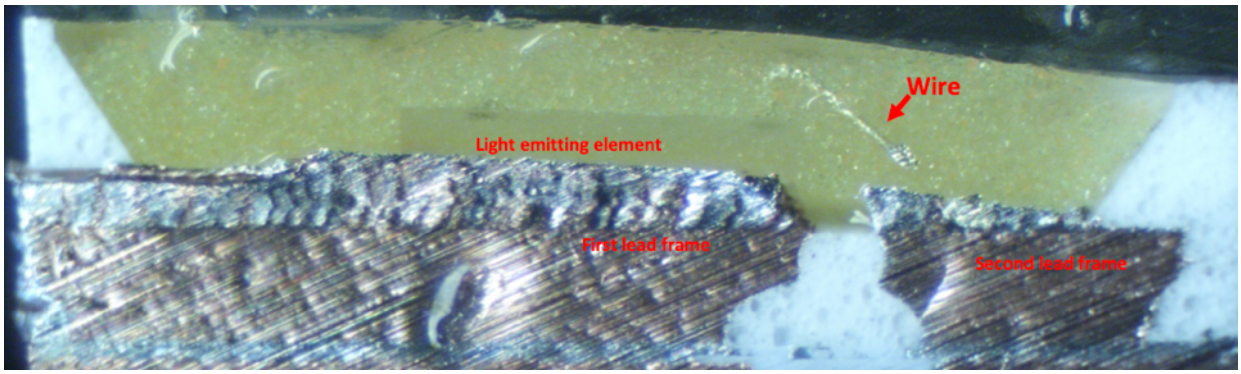
1(d): a second lead frame electrically connected to said semiconductor light emitting element via a wire, and — The Kasa Smart Wi-Fi LED Bulb comprises a second lead frame electrically connected to the semiconductor light emitting element via a wire.

For example, shown below is the cross-sectional view of the color LED chip from the Kasa Smart Wi-Fi LED Bulb with the second lead frame electrically connected to the semiconductor light emitting element via a wire identified:



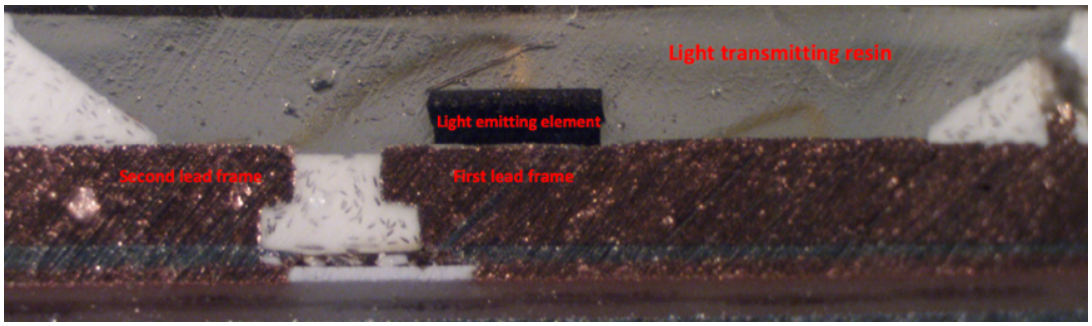
As another example, shown below is the cross-sectional view of the phosphor LED chip from the Kasa Smart Wi-Fi LED Bulb with the second lead frame electrically connected to the semiconductor light emitting element via a wire

identified:

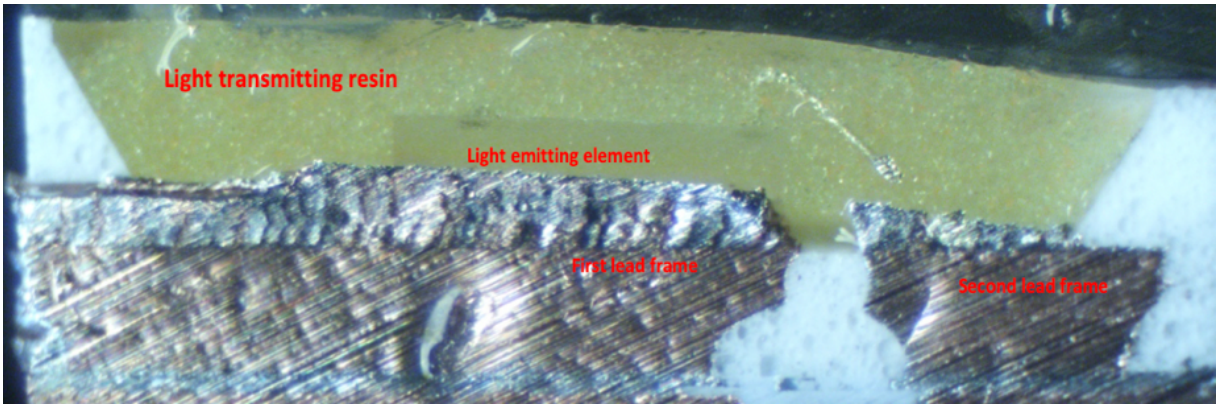


1(e): light transmitting resin formed on said semiconductor light emitting element and on said first and second lead frames, — The Kasa Smart Wi-Fi LED Bulb comprises a light transmitting resin formed on the semiconductor light emitting element and on the first and second lead frames.

For example, shown below is the cross-sectional view of the color LED chip from the Kasa Smart Wi-Fi LED Bulb with the light transmitting resin formed on the light emitting element and first and second lead frames identified:

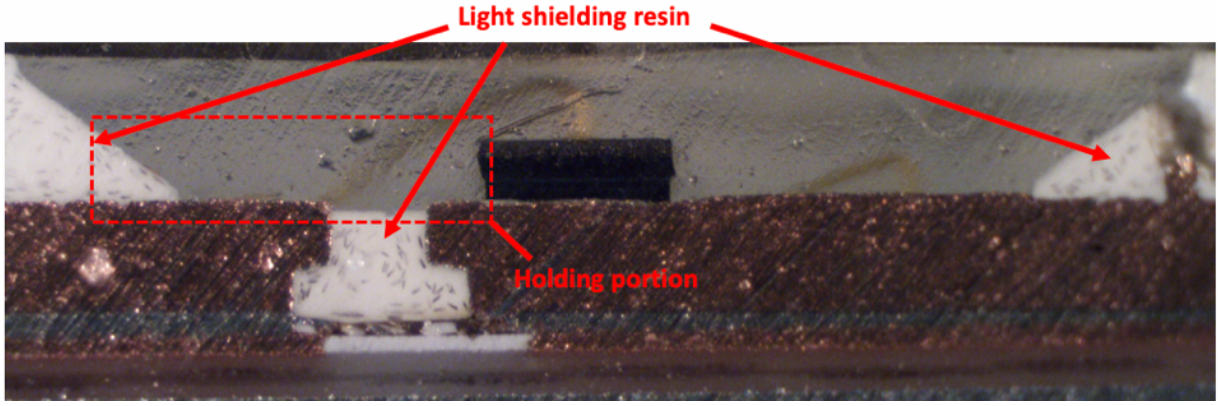


As another example, shown below is the cross-sectional view of the phosphor LED chip from the Kasa Smart Wi-Fi LED Bulb with the light transmitting resin formed on the light emitting element and first and second lead frames identified:

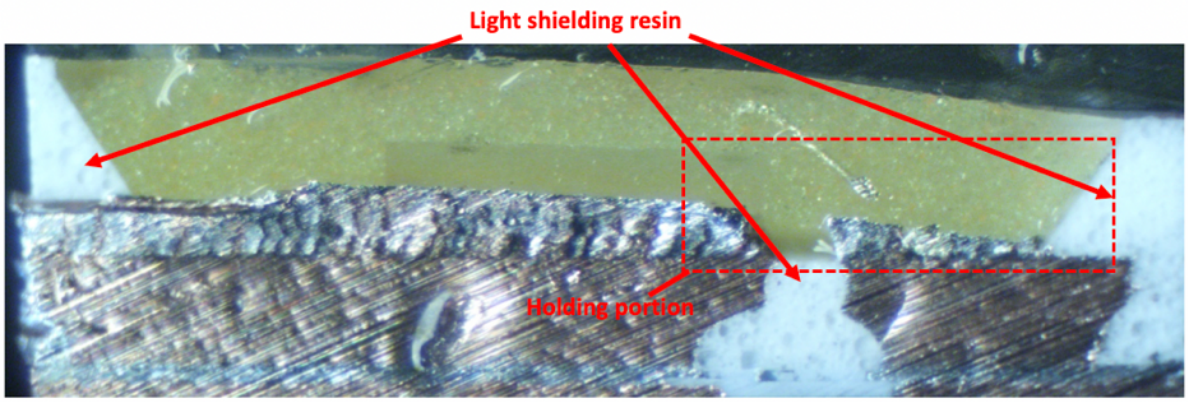


1(f): wherein said light emitting element is surrounded by a light shielding resin, wherein leading ends of said first and second lead frames are inserted into said light transmitting resin to provide a holding portion holding said first and second lead frames, —In the Kasa Smart Wi-Fi LED Bulb, the light emitting element is surrounded by a light shielding resin, and leading ends of the first and second lead frames are inserted into the light transmitting resin to provide a holding portion holding the first and second lead frames.

For example, shown below is the cross-sectional view of the color LED chip from the Kasa Smart Wi-Fi LED Bulb with the light shielding resin and holding portion identified:

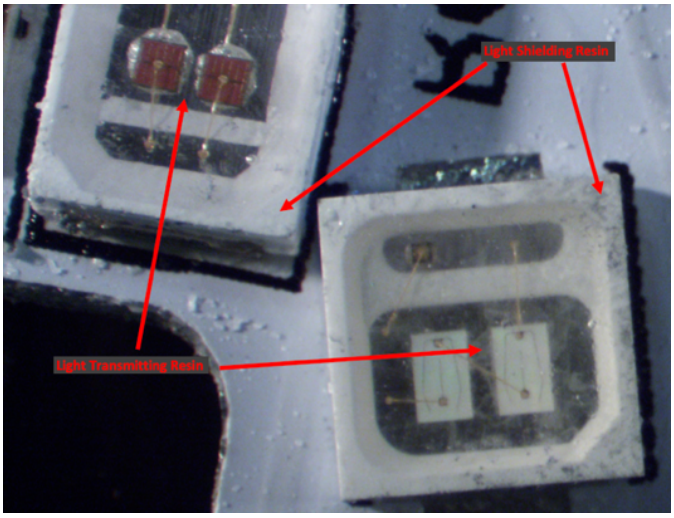


As another example, shown below is the cross-sectional view of the phosphor LED chip from the Kasa Smart Wi-Fi LED Bulb with the light shielding resin and holding portion identified:



1(g): wherein said light shielding resin has a reflectance higher than a reflectance of said light transmitting resin, and —In the Kasa Smart Wi-Fi LED Bulb, the light shielding resin has a reflectance higher than a reflectance of the light transmitting resin.

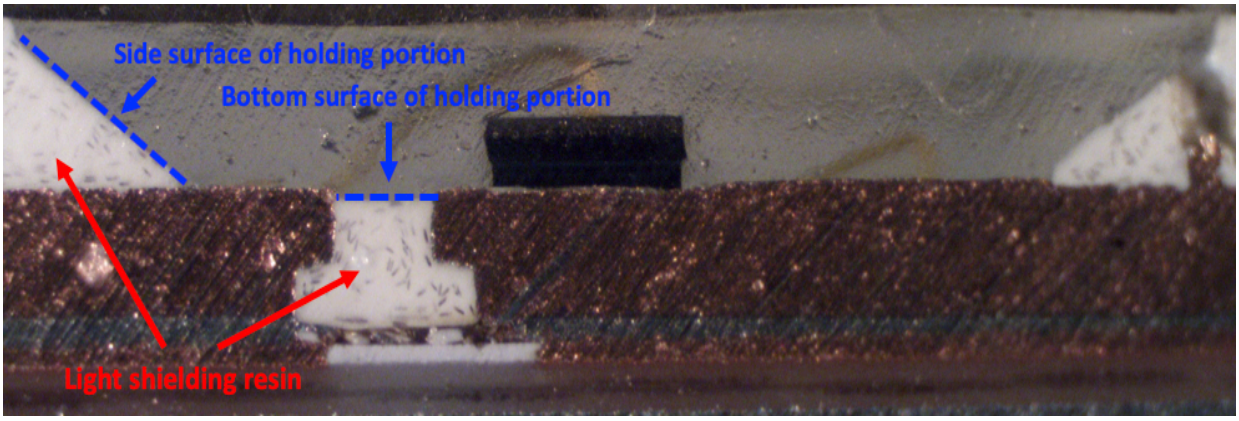
For example, as shown below, the light shielding resin of the Kasa Smart Wi-Fi LED Bulb is opaque and white, whereas the light transmitting resin is largely transparent. Accordingly, on information and belief, the light shielding resin of the Kasa Smart Wi-Fi LED Bulb reflects a greater amount of light than the light transmitting resin.



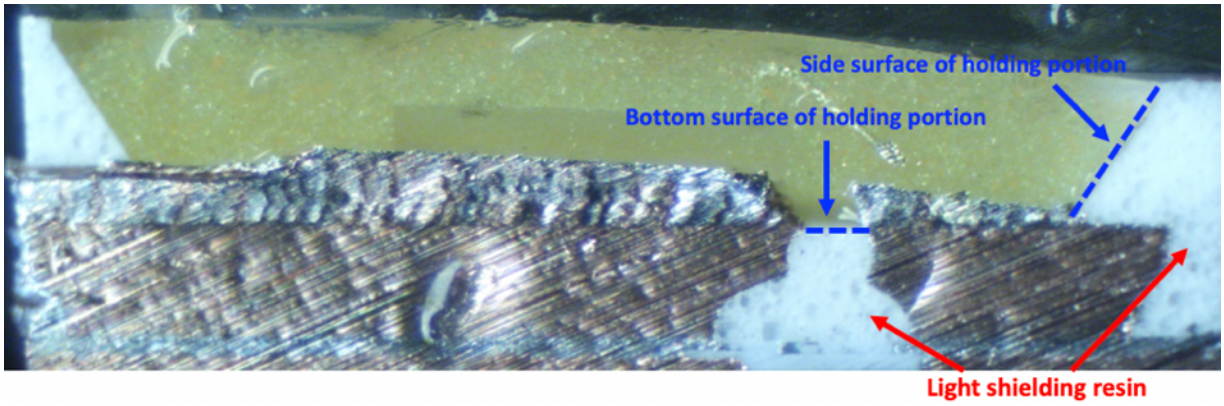
1(h): wherein said light shielding resin is formed to cover a bottom surface and a side surface of said holding portion provided in said light transmitting

resin. — In the Kasa Smart Wi-Fi LED Bulb, the light shielding resin is formed to cover a bottom surface and a side surface of the holding portion provided in the light transmitting resin.

For example, shown below is the cross-sectional view of the color LED chip from the Kasa Smart Wi-Fi LED Bulb with the light shielding resin covering a bottom surface and a side surface of the holding portion identified:



As another example, shown below is the cross-sectional view of the phosphor LED chip from the Kasa Smart Wi-Fi LED Bulb with the light shielding resin covering a bottom surface and a side surface of the holding portion identified:



68. Additionally, TP-Link has been and/or currently is an active inducer of infringement of the '176 Patent under 35 U.S.C. § 271(b) and a contributory infringer of the '176 Patent under 35 U.S.C. § 271(c).

69. Indeed, TP-Link has been and/or currently is intentionally causing, urging, and/or encouraging customers to directly infringe one or more claims of the '176 Patent while being on notice of (or willfully blind to) the '176 Patent. For instance, TP-Link has supplied and continues to supply the Accused Products to customers (e.g., end users and/or distributors of the Kasa Smart Wi-Fi LED Bulb) while knowing that use of these products in their intended manner will directly infringe one or more claims of the '176 Patent.

70. TP-Link has been and/or currently is knowingly and intentionally encouraging and aiding customers to engage in such direct infringement of the '176 Patent. As one example, TP-Link promotes, advertises, and instructs customers or potential customers about the Accused Products and uses of the Accused Products. *See, e.g.*, https://www.kasasmart.com/us/products/smart-lighting; https://static.tp-link.com/1910011976_LB(E26)(E27)_UG.pdf.

71. TP-Link knows (and/or has known) that such encouraging and aiding does (and/or would) result in its customers directly infringing the '176 Patent. For instance, TP-Link knows (and/or has known) of the existence of the '176 Patent or at least should have known of the existence of the '176 Patent but was willfully blind to its existence. Indeed, TP-Link has had actual knowledge of the '176 Patent since at least as early as the filing and/or service of this Complaint. And, as a result of its knowledge of the '176 Patent (and/or as a direct and probable consequence of its willful blindness to this fact), TP-Link specifically intends (and/or has intended) that its encouraging and aiding does (and/or would) result in direct infringement of the '176 Patent by TP-Link's customers.

72. On information and belief, TP-Link specifically intends (and/or has intended) that its actions will (and/or would) result in direct infringement of one or more claims of the '176 Patent and/or subjectively believes (and/or has believed) that its actions will (and/or would) result in infringement of the '176 Patent but has taken (and/or took) deliberate actions to avoid learning of those facts.

73. Additionally, TP-Link has been and/or currently is contributorily infringing one or more claims of the '176 Patent by offering for sale, selling, and/or importing one or more components in connection with the Accused Products that contribute to the direct infringement of the '176 Patent by customers of the Accused Products. In particular, as set forth above, TP-Link has had actual knowledge of the '176 Patent or was willfully blind to its existence since at least as early as the filing and/or service of this Complaint. Further, TP-Link offers for sale, sells, and/or imports one or more components in connection with the Accused Products that are not staple articles of commerce suitable for substantial non-infringing use, and TP-Link knows (or should know) that such component(s) were especially made or especially adapted for use in infringement of the '176 Patent. TP-Link has supplied (and/or continues to supply) the Accused Products that comprise such component(s) to customers, who then directly infringe one or more claims of the '176 Patent by using the Accused Products in their intended manner (e.g., pursuant to instructions provided by TP-Link).

74. At least as early as the filing and/or service of this Complaint, TP-Link's infringement of the '176 Patent was and continues to be willful and deliberate, thereby entitling LedComm to enhanced damages.

75. Additional allegations regarding TP-Link's knowledge of the '176 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

76. TP-Link's infringement of the '176 Patent is exceptional and entitles LedComm to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

77. LedComm is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '176 Patent.

78. LedComm is entitled to recover from TP-Link all damages that LedComm has sustained as a result of TP-Link's infringement of the '176 Patent,

including, without limitation, a reasonable royalty.

PRAYER FOR RELIEF

WHEREFORE, LedComm respectfully requests:

A. That Judgment be entered that TP-Link has infringed at least one or more claims of the Patents-in-Suit, directly and/or indirectly, literally and/or under the doctrine of equivalents;

B. An award of damages sufficient to compensate LedComm for TP-Link's infringement under 35 U.S.C. § 284, including an enhancement of damages on account of TP-Link's willful infringement;

C. That the case be found exceptional under 35 U.S.C. § 285 and that LedComm be awarded its reasonable attorneys' fees;

D. Costs and expenses in this action;

E. An award of prejudgment and post-judgment interest; and

F. Such other and further relief as the Court may deem just and proper.

Respectfully submitted,

Dated: March 2, 2020

FEINBERG DAY KRAMER ALBERTI LIM TONKOVICH & BELLOLI LLP

and

LEE SULLIVAN SHEA & SMITH LLP

By: */s/ M. Elizabeth Day*
M. Elizabeth Day

Attorneys for Plaintiff
LedComm LLC

DEMAND FOR JURY TRIAL

Plaintiff demands trial by jury for all issues so triable pursuant to Fed. R. Civ. Pro. 38(b) and Civil L.R. 16-4.4.

Dated: March 2, 2020

FEINBERG DAY KRAMER ALBERTI LIM TONKOVICH & BELLOLI LLP

and

LEE SULLIVAN SHEA & SMITH LLP

By: */s/ M. Elizabeth Day*
M. Elizabeth Day

Attorneys for Plaintiff
LedComm LLC