IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

LEDCOMM LLC, Plaintiff, v. THE HOME DEPOT, INC., HOME DEPOT U.S.A. INC., Defendants.	)	Civil Action No. 6:20-cv-00946 **JURY TRIAL DEMANDED**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff LedComm LLC ("LedComm" or "Plaintiff"), by and through the undersigned counsel, hereby asserts the following claims for patent infringement against Defendants The Home Depot Inc., and Home Depot U.S.A. Inc. (collectively, "HD" or "Defendants"), and alleges as follows:

SUMMARY

1. LedComm owns by assignment all right, title and interest in numerous United States and foreign patents and applications including United States Patent Nos. 6,803,606, 6,982,522, 7,012,277, 7,154,125, 7,161,190, 7,301,176, and 7,490,959 (collectively, the "Patents-in-Suit").

2. HD infringes the Patents-in-Suit by at least selling, without authorization, LedComm's proprietary technologies in a number of its commercial products including, *inter alia*, EcoSmart and Commercial Electric products (*e.g.*, Commercial Electric 4 ft. 64 W Equivalent LED Shop Light, Commercial Electric 24 inch LED Color Changing Tape Light, Commercial

Electric 24 foot LED Tape Light with Remote, Commercial Electric 6 inch Adjustable Gimbal Recessed Trim Light, Commercial Electric 2 foot LED Industrial High Bay Light, Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light, EcoSmart 60W A19 Smart LED Bulb, EcoSmart 60W Dimmable LED Bulb Selectable CCT, EcoSmart 60W A19 LED Bulb, EcoSmart 65W BR30 Dimmable LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart 100W A19 LED Bulb, EcoSmart Dimmable BR40 LED Bulb, EcoSmart Dimmable Par38 LED Bulb, EcoSmart R20 75W LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart 60W A19 Dimmable LED Bulb CCT and EcoSmart 6 inch Integrated LED Dimmable Downlight, among other substantially similar products) (collectively, the "Accused Products"). These Accused Products are marketed, offered, and distributed throughout the United States, including in this District.

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

NATURE OF THE ACTION

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

5. HD has infringed and continues to infringe 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.

6. 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 HD's infringement of the Patents-in-Suit.

THE PARTIES

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

8. On information and belief, Defendant The Home Depot, Inc. is a Delaware Corporation with its principal place of business at 2455 Paces Ferry Road, Atlanta, Georgia, 30339-4024, and may be served with process by serving its registered agent, Corporation Service Company d/b/a CSC-Lawyers Incorporating Service Company, 211 E. 7th Street, Suite 620, Austin, TX 78701-3218.

9. On information and belief, Defendant Home Depot U.S.A., Inc. is a wholly owned subsidiary of The Home Depot, Inc. Home Depot U.S.A., Inc. is also a Delaware Corporation with its principal place of business at 2455 Paces Ferry Road, Atlanta, Georgia, 30339-4024, and may be served with process by serving its registered agent, Corporation Service Company d/b/a CSC-Lawyers Incorporating Service Company, 211 E. 7th Street, Suite 620, Austin, TX 78701-3218.

10. On information and belief, HD operates numerous places of business in Texas and in this District, including, without limitation, promoting, offering to sell, and selling products to consumers through its website and "The Home Depot" retail stores located in this District, such as "The Home Depot" retail store (Waco #6532) located at 5605 W Waco Dr, Waco, TX 76710. *See* https://www.homedepot.com/l/Waco/TX/Waco/76710/6532.

11. On information and belief, HD makes or facilitates the making of both the EcoSmart and Commercial Electric brand products under its private label business (*see e.g.*, https://www.energystar.gov/productfinder/product/certified-light-bulbs/details/2326316 and

https://www.energystar.gov/productfinder/product/certified-light-fixtures/details/2268016). Both the EcoSmart and Commerical Electric brands are trademarked and held by the Home Depot Product Authority, LLC (https://uspto.report/TM/86372116 and https://uspto.report/TM/90066514).

12. On information and belief, HD, through HD's numerous retail stores, 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 Western District of Texas, and otherwise directs infringing activities to this District in connection with the Accused Products.

JURISDICTION AND VENUE

13. 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).

14. This Court has personal jurisdiction over HD because HD has (i) availed itself of the rights and benefits of the laws of the State of Texas, (ii) transacted, conducted, and/or solicited business and engaged in a persistent course of conduct in the State of Texas (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 Texas (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 Texas (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 Texas (and in this District), and (vi) committed acts of patent infringement in the State of Texas (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), as HD operates numerous retail stores in this State and District that sell the Accused Products.

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. 21. 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. 6,982,522

22. U.S. Patent No. 6,982,522 (the "'522 Patent") is titled "LED Device Including Phosphor Layers on the Reflecting Surface" and was issued on January 3, 2006. A true and correct copy of the '522 Patent is attached as Exhibit B.

23. The '522 Patent was filed on September 23, 2003 as U.S. Patent Application No. 10/667,669, which in turn claims priority to Japanese Patent Application No. 2002-293693 that was filed on October 7, 2002.

24. LedComm is the owner of all rights, title, and interest in and to the '522 Patent, with the full and exclusive right to bring suit to enforce the '522 Patent, including the right to recover for past infringement.

25. The '522 Patent is valid and enforceable under United States Patent Laws.

26. The '522 Patent recognized problems with existing light emitting devices of the time of the invention of the '522 Patent.

27. For instance, the '522 Patent recognized that existing white LED devices (that each include a combination of a blue LED and phosphors emitting red, blue and green lights), "have a low excitation efficiency or a low wavelength conversion efficiency," resulting in a low luminance. '522 Patent at 1:48-54. To solve this problem, the '522 Patent recognized that "instead of the blue LED [ ] emitting light having a blue-region wavelength of 460 nm, it can be devised to use an LED emitting light having a short blue-violet-region wavelength of 430 nm or below to improve the excitation efficiency of the phosphors." *Id.* at 1:56-60. However, the '522 Patent explains that "when the wavelength of the emitting light is changed to an ultraviolet region from the blue-violet-region, even the high-efficiency light-reflecting resin . . . used as the base [ ] of the LED device [ ] of the visible light region has a rapidly reduced light reflectance in a short wavelength region," which also causes a reduction of luminance. *Id.* at 1:61-2:3.

28. In view of the foregoing, the '522 Patent discloses an LED device comprising "a base having a recess with the upper surface opened, the inner wall surface of the recess constituting a reflection surface; a LED chip disposed on the inner bottom of the recess; a resin filled in the recess, the resin including phosphors which absorb a part of light emitted from the LED chip to convert the wavelength thereof and emit light; and a phosphor layer formed on the reflection surface, the phosphor layer including the phosphors." *Id.* at 2:13-21. In this respect, "when the

emitted light from the LED chip reaches the phosphor layer, the phosphors included in the phosphor layer convert the wavelength of the emitted light from the LED chip and emit light," and thus, "the emitted light can be more effectively converted, enhancing reflection efficiency and luminance." *Id.* at 2:22-27.

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

29. 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 C.

30. 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.

31. 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.

32. The '277 Patent is valid and enforceable under United States Patent Laws. The '277 Patent recognized problems with existing light emitting devices of the time of the invention of the '277 Patent.

33. 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 from a light emitting device's LED chip contributes to these deficiencies. See, *e.g.*, '277 Patent at 1:38-50.

34. 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. 7,154,125

35. U.S. Patent No. 7,154,125 (the "'125 Patent") is titled "Nitride-Based Semiconductor Light-Emitting Device and Manufacturing Method Thereof" and was issued on December 26, 2006. A true and correct copy of the '125 Patent is attached as Exhibit D.

36. The '125 Patent was filed on April 23, 2003 as U.S. Patent Application No. 10/422,404, which in turn claims priority to Japanese Patent Application No. 2002-120576 that was filed on April 23, 2002.

37. LedComm is the owner of all rights, title, and interest in and to the '125 Patent, with the full and exclusive right to bring suit to enforce the '125 Patent, including the right to recover for past infringement.

38. The '125 Patent is valid and enforceable under United States Patent Laws.

39. The '125 Patent recognized problems with existing light emitting devices of the time of the invention of the '125 Patent.

40. For instance, the '125 Patent recognized that in conventional nitride-based semiconductor light-emitting devices, "a part of light emitted from [a] InGaN light-emitting layer [ ] is directed towards [an] Si substrate and absorbed by [the] Si substrate," which decreases the light extraction efficiency. '125 Patent at 1:33-37. According to the '125 Patent, although it may

be possible to form a reflective film on an Si substrate to "prevent the incidence of light to [the] Si substrate [ ] and to extract the light from the side surface of the semiconductor light-emitting device in the same manner as that in a device with a sapphire substrate," "the nitride-based semiconductor layer cannot be formed thick as the difference in thermal expansion coefficient between nitride-based semiconductor layers causes crack[s]." *Id.* at 1:39-47.

41. To help address the aforementioned deficiencies, the '125 Patent sought to provide a light emitting device that includes "a reflective layer formed on a support substrate, a p-type nitride based semiconductor layer, a light-emitting layer and an n-type nitride-based semiconductor layer successively formed on the reflective layer, wherein a light extracting surface located above the n-type nitride-based semiconductor layer has irregularities." *Id.* at 2:13-20. In this respect, "[w]hen the light extracting surface has irregularities, the light can also be extracted to outside, whereby light extraction efficiency can be improved." *Id.* at 4:4-6.

U.S. Patent No. 7,161,190

42. U.S. Patent No. 7,161,190 (the "'190 Patent") is titled "Semiconductor Light-Emitting Device and Method of Manufacturing the Same" and was issued on January 9, 2007. A true and correct copy of the '190 Patent is attached as Exhibit E.

43. The '190 Patent was filed on August 1, 2005 as U.S. Patent Application No. 11/193,364, which in turn claims priority to Japanese Patent Application No. 2004-225951 that was filed on August 2, 2004.

44. LedComm is the owner of all rights, title, and interest in and to the '190 Patent, with the full and exclusive right to bring suit to enforce the '190 Patent, including the right to recover for past infringement.

45. The '190 Patent is valid and enforceable under United States Patent Laws.

46. The '190 Patent recognized problems with existing light emitting devices of the time of the invention of the '190 Patent.

47. For instance, the '190 Patent recognized that an LED having a high heat dissipation property is required to prevent temperature rises in a device that results in a decrease in optical output. *See e.g.,* '190 Patent at 1:21-25. According to the '190 Patent, it was common to adopt "a structure in which a submount is provided under the light-emitting element to release heat generated therefrom into a metal package via the submount to improve heat dissipation." *Id.* at 1:47-51. However, as semiconductor light-emitting devices required extremely high luminous intensity, it became difficult to "attain the required luminous intensity only by improving the conversion efficiency from electricity to light," and attempts to increase the size of a light-emtting element itself and/or manufacture such a package became impractical. *See, e.g., id.* at 2:3-13.

48. To help address the aforementioned deficiencies, the '190 Patent sought to provide a light emitting device that included "a light-emitting element, a first lead frame having a main surface having the light-emitting element mounted thereon, a resin portion for fixing the first lead frame, and a heat-radiating member bonded to a back face of the first lead frame with an electrically-conductive layer containing metal interposed therebetween." *Id.* at 2:25-31. With this structure, the heat generated in the light-emitting element is more likely to be transferred to the heat-radiating member via the first lead frame. *See e.g. id.* at 2:32-34.

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

49. 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 F.

50. 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.

51. 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.

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

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

54. 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*.

55. 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.

U.S. Patent No. 7,490,959

56. U.S. Patent No. 7,490,959 (the "'959 Patent") is titled "Light Emitting Apparatus, Backlight Apparatus, And Electronic Apparatus" and was issued on February 17, 2009. A true and correct copy of the '959 Patent is attached as Exhibit G.

57. The '959 Patent was filed on December 14, 2006 as U.S. Patent Application No. 11/639,806, which in turn claims priority to Japanese Patent Application No. 2005-363886 that was filed on December 16, 2005.

58. LedComm is the owner of all rights, title, and interest in and to the '959 Patent, with the full and exclusive right to bring suit to enforce the '959 Patent, including the right to recover for past infringement.

59. The '959 Patent is valid and enforceable under United States Patent Laws.

60. The '959 Patent recognized problems with existing light emitting devices of the time of the invention of the '959 Patent.

61. For instance, in order to "increase a luminance of a plane light-source," the '959 Patent recognized a need for "a light emitting apparatus that is thin and small in a radiation angle, in a short-axis direction, of a package, and high in coupling efficiency with respect to a light guiding plate." '959 Patent at 2:21-26, 36-41.

62. In this respect, the '959 Patent sought to provide a "light emitting apparatus" comprising "a placement surface that includes an electrode; a light emitter that is placed on the placement surface; and a transparent sealing resin that seals the light emitter[ ] and forms a concave surface . . . [where] the light emitter and the electrode being connected via a wire [ ] is curved in such a way that a top section of the curved wire substantially coincides with a deepest section of the concave surface." *See e.g. id*. at 2:46-56; *see also, e.g., id*. at Claim 1.

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

63. LedComm incorporates by reference and re-alleges paragraphs 1-62 of the Complaint as if fully set forth herein.

64. Defendants have infringed and are infringing, either literally or under the doctrine of equivalents, the '606 Patent in violation of 35 U.S.C. § 271 et seq., by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, a number of its commercial products including, *inter alia*, EcoSmart and Commercial Electric products (*e.g.*, Commercial Electric 4 ft. 64 W Equivalent LED Shop Light, Commercial Electric 24 foot LED Tape Light with Remote, Commercial Electric 2 foot LED Industrial High Bay Light, Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light, EcoSmart 60W A19 Smart LED Bulb, EcoSmart 60W Dimmable LED Bulb Selectable CCT, EcoSmart 60W A19 LED Bulb, EcoSmart 65W BR30 Dimmable LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart 100W A19 LED Bulb, EcoSmart Dimmable BR40 LED Bulb, EcoSmart Dimmable Par38 LED Bulb, EcoSmart R20 75W LED Bulb, EcoSmart 90W Dimmable BR30 LED Bulb and EcoSmart 6 inch Integrated LED Dimmable Downlight, among other substantially similar products) (collectively, the "'606 Accused Products").

65. 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 two of the '606 Accused Products (*e.g.*, the Commerical Electric 4 ft. 64 W Equivalent LED Shop Light and the EcoSmart 6 inch integrated LED Dimmable Downlight). 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 '606 Accused Products that it obtains during discovery.

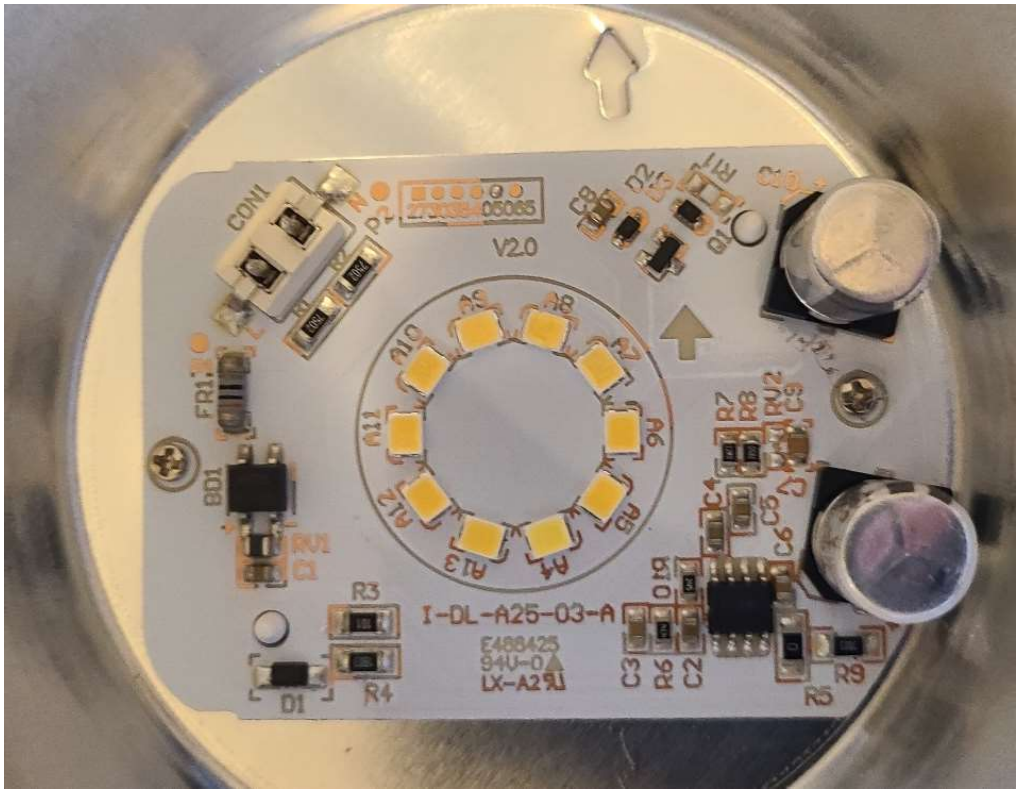
1(a): A light emitting device comprising:— Defendants make, use, sell, and/or offer to sell in the United States, and/or import into the United States, light emitting devices that are covered by claim 1 of the '606 Patent.

As one non-limiting example, a Commercial Electric 4 ft 64 W Equivalent Integrated LED Shop Light comprises a "light emitting device," as recited in claim 1. *See, e.g.*, https://www.homedepot.com/p/Commercial-Electric-4-ft-64-Watt-Equivalent-White-Integrated-LED-Shop-Light-4000K-Bright-White-3200-Lumens-Linkable-5-ft-Cord-Included-54103161/205331022.

To illustrate, a top-down view of an example phosphor LED from a Commercial Electric 4 ft 64 W Equivalent Integrated LED Shop Light is shown below:

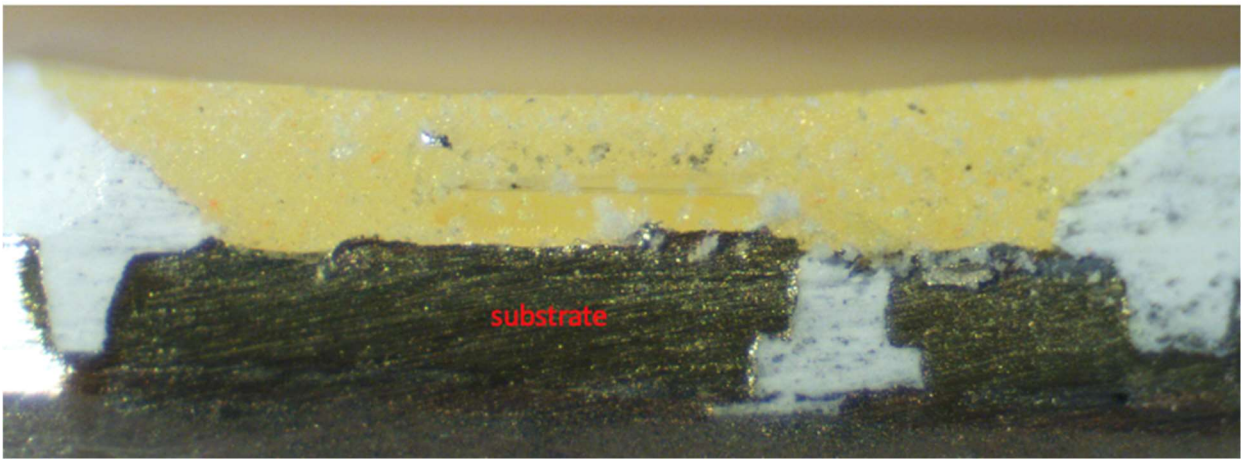
As another non-limiting example, the Ecosmart 6 in. Integrated LED Dimmable Downlight comprises a "light emitting device," as recited in claim 1. *See, e.g.,* https://www.homedepot.com/p/EcoSmart-6-in-White-Integrated-LED-Recessed-Trim-4-Pack-5000K-Daylight-NB01aA10FR1-509/303780872.

To illustrate, a top-down view of some example phosphor LEDs from an EcoSmart 6 in. Integrated LED Dimmable Downlight is shown below:

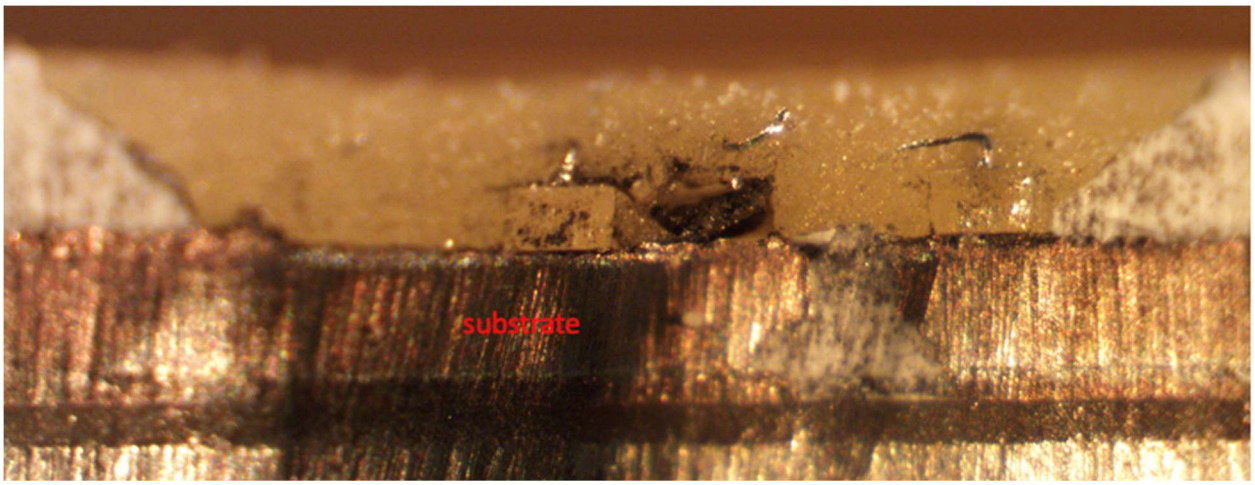


1(b): a substrate;— A Commerical Electric 4 ft. 64 W Equivalent LED Shop Light and the EcoSmart 6 inch integrated LED Dimmable Downlight each comprise a substrate.

For example, shown below is a cross-sectional view of the example phosphor LED from the Commerical Electric 4 ft. 64 W Equivalent LED Shop Light with the substrate annotated in red:

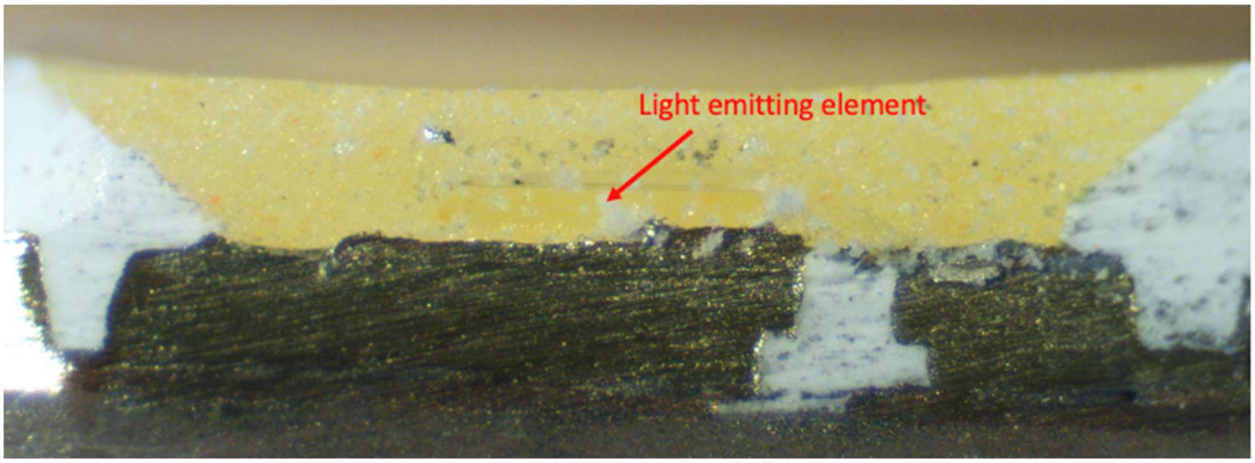


As another example, shown below is a cross-sectional view of an example phosphor LED from the EcoSmart 6 inch integrated LED Dimmable Downlight with the substrate annotated in red:

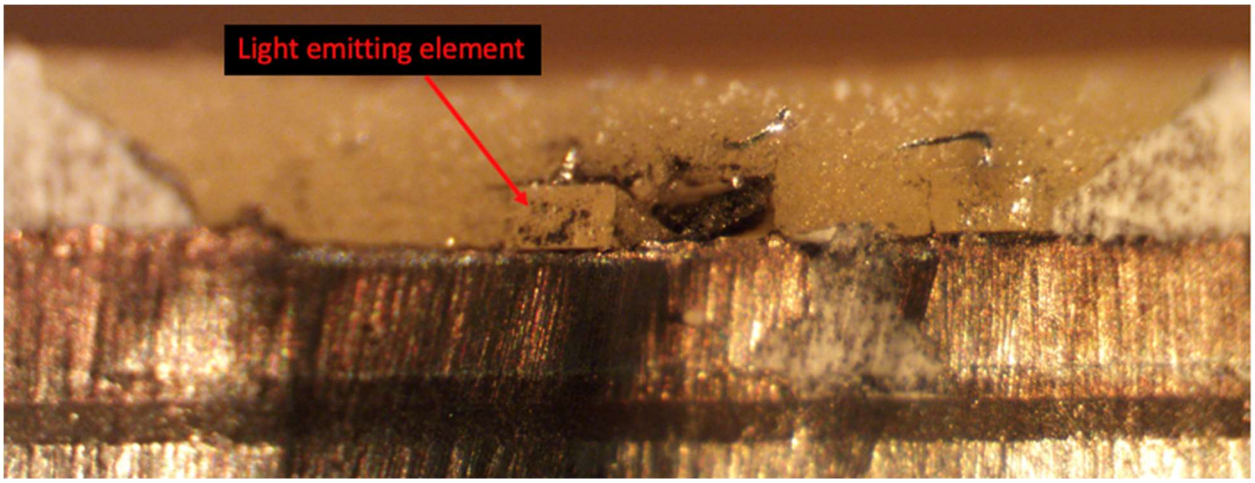


1(c): a light emitting element on the substrate;— A Commerical Electric 4 ft. 64 W Equivalent LED Shop Light and the EcoSmart 6 inch integrated LED Dimmable Downlight each comprise a light emitting element on the substrate.

For example, shown below is the cross-sectional view of the example phosphor LED from the Commerical Electric 4 ft. 64 W Equivalent LED Shop Light with the light emitting element on the substrate identified:

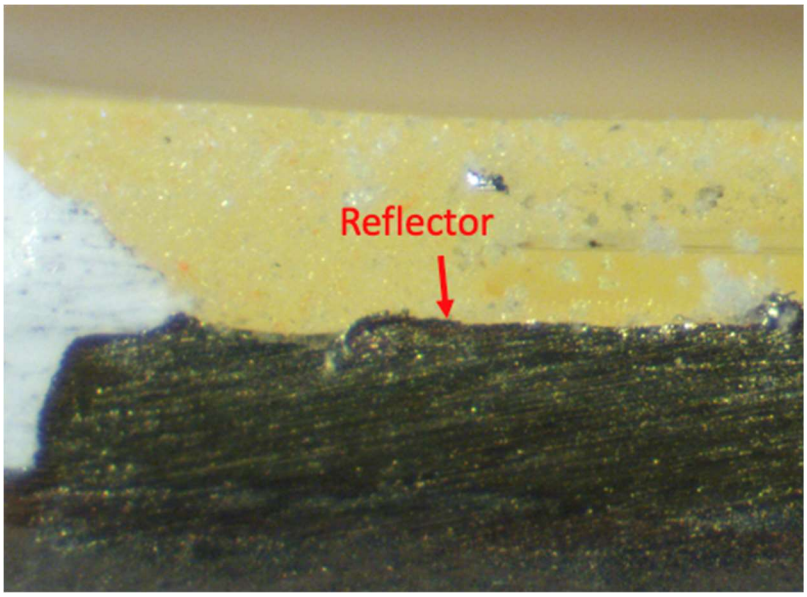


As another example, shown below is the cross-sectional view of the example phosphor LED from the EcoSmart 6 inch integrated LED Dimmable Downlight with the light emitting element on the substrate identified:

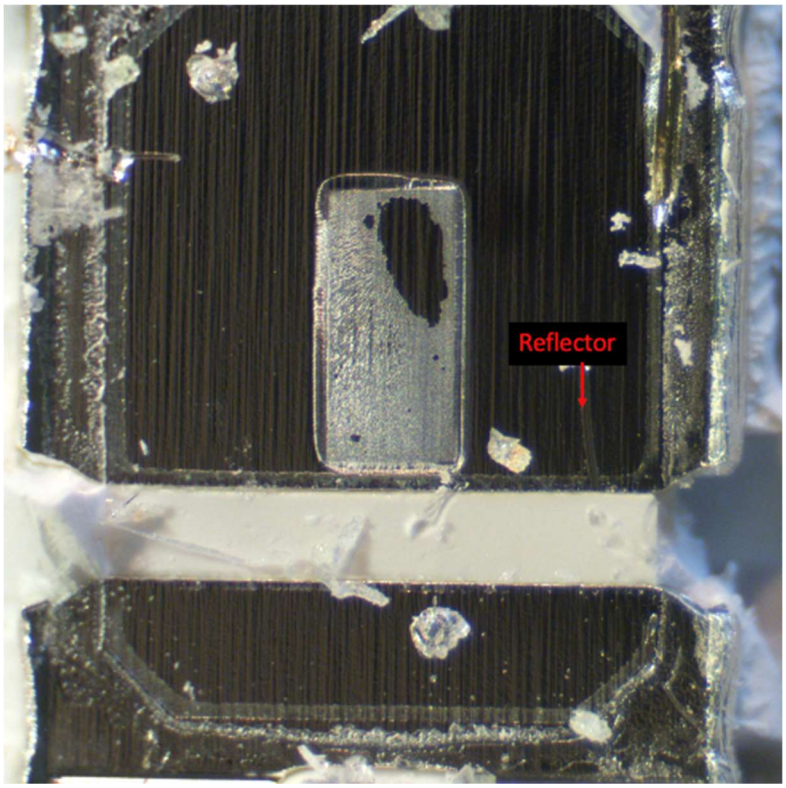


1(d): a reflector on the substrate for reflecting a light beam outgoing from the light emitting element; and— A Commerical Electric 4 ft. 64 W Equivalent LED Shop Light and the EcoSmart 6 inch integrated LED Dimmable Downlight each comprise a reflector on the substrate for reflecting a light beam outgoing from the light emitting element.

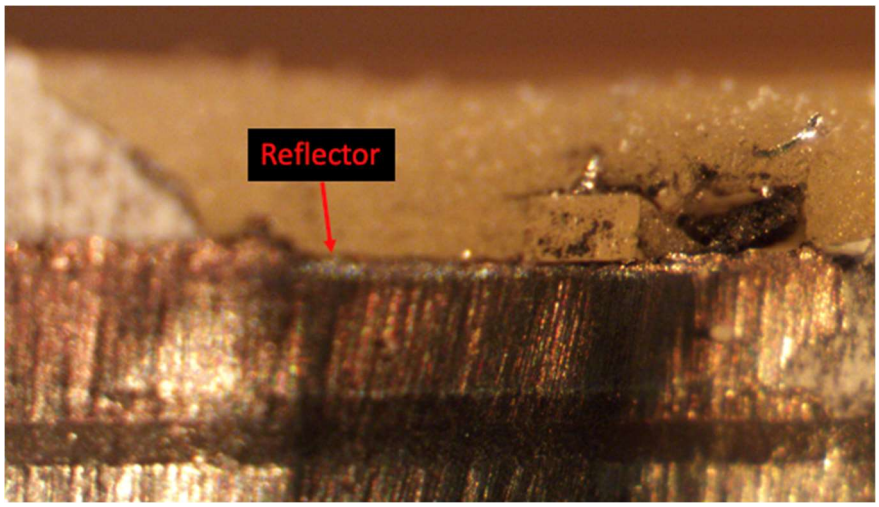
For example, shown below is a close-up of a portion of the cross-sectional view of the example phosphor LED from the Commerical Electric 4 ft. 64 W Equivalent LED Shop Light with the reflector on the substrate identified:



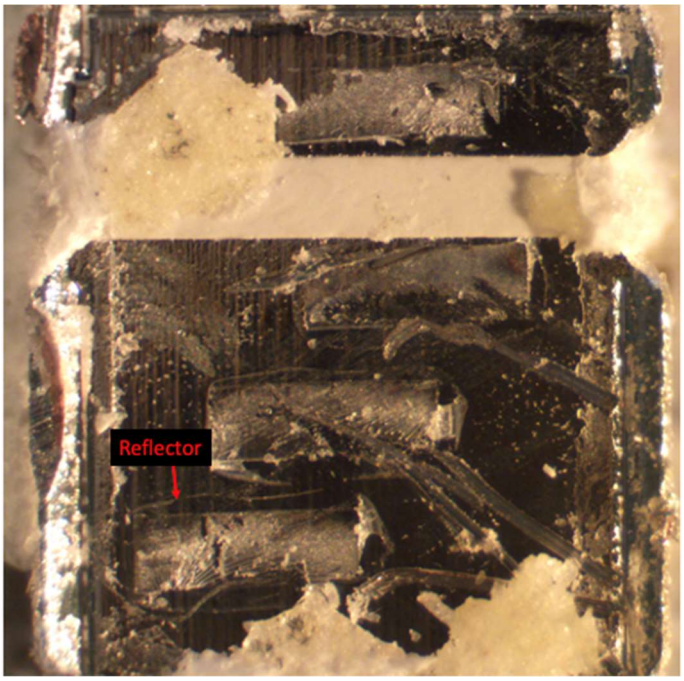
To further illustrate the presence of the reflector on the substrate in the Commerical Electric 4 ft. 64 W Equivalent LED Shop Light, below is a top-down view of a phosphor LED from a Commerical Electric 4 ft. 64 W Equivalent LED Shop Light with the phosphor layer removed and the reflector identified:



As another example, shown below is a close-up of a portion of the cross-sectional view of the example LED from the Commerical Electric 4 ft. 64 W Equivalent LED Shop Light with the reflector on the substrate identified:

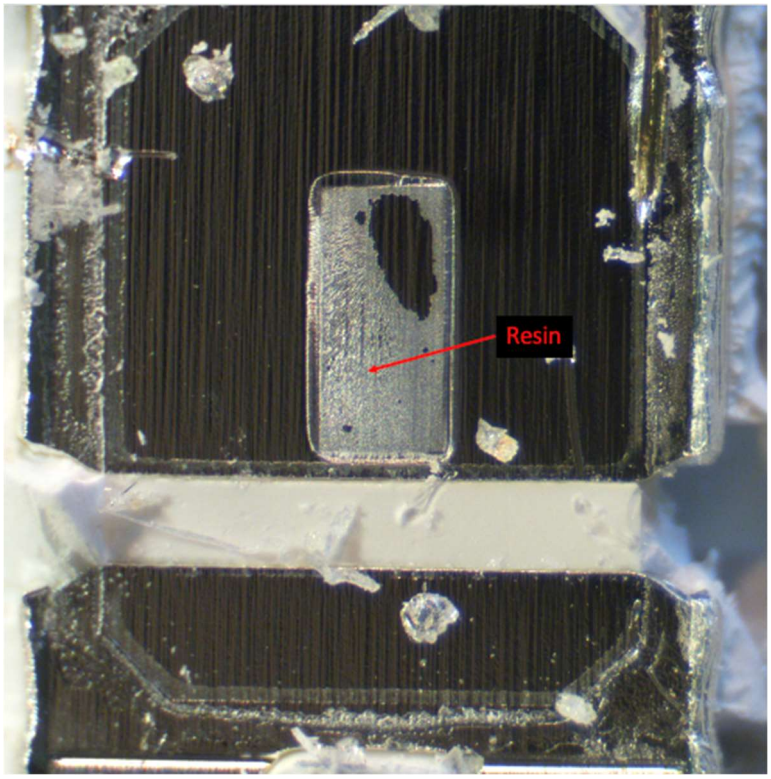


To further illustrate the presence of the reflector on the substrate in the EcoSmart 6 inch integrated LED Dimmable Downlight, below is a cross-sectional view with an example LED from an EcoSmart 6 inch integrated LED Dimmable Downlight with the reflector on the substrate identified:

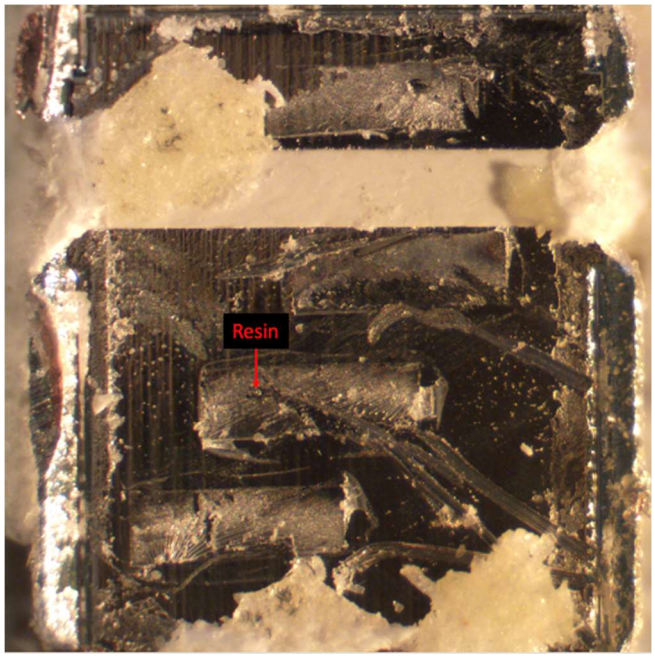


1(e): a resin disposed between the light emitting element and the reflector on the substrate,— A Commerical Electric 4 ft. 64 W Equivalent LED Shop Light and the EcoSmart 6 inch integrated LED Dimmable Downlight each comprise a resin disposed between the light emitting element and the reflector on the substrate.

For example, shown below is the top-down view of the example phosphor LED from the Commerical Electric 4 ft. 64 W Equivalent LED Shop Light with the LED removed and a resin disposed between the light emitting element identified:



As another example, shown below is a top-down view of the example LED from the EcoSmart 6 inch integrated LED Dimmable Downlight with the LED removed and a resin disposed between the light emitting element 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 a Commerical Electric 4 ft. 64 W Equivalent LED Shop Light and the EcoSmart 6 inch integrated LED Dimmable Downlight, 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 image of a Commerical Electric 4 ft. 64 W Equivalent LED Shop Light's reflector that is visible after the phosphor layer has been removed:

As another example, a face of the reflector formed into a rough surface is shown in the below image of an EcoSmart 6 inch integrated LED Dimmable Downlight's reflector:

66. Defendants' 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.

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

68. LedComm is entitled to recover from Defendants all damages that LedComm has sustained as a result of Defendants' infringement of the '606 Patent, including, without limitation, a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 6,982,522

69. LedComm incorporates by reference and re-alleges paragraphs 1-62 of the Complaint as if fully set forth herein.

70. Defendants have infringed and are infringing, either literally or under the doctrine of equivalents, the '522 Patent in violation of 35 U.S.C. § 271 et seq., by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, a number of its commercial products including, *inter alia*, EcoSmart products

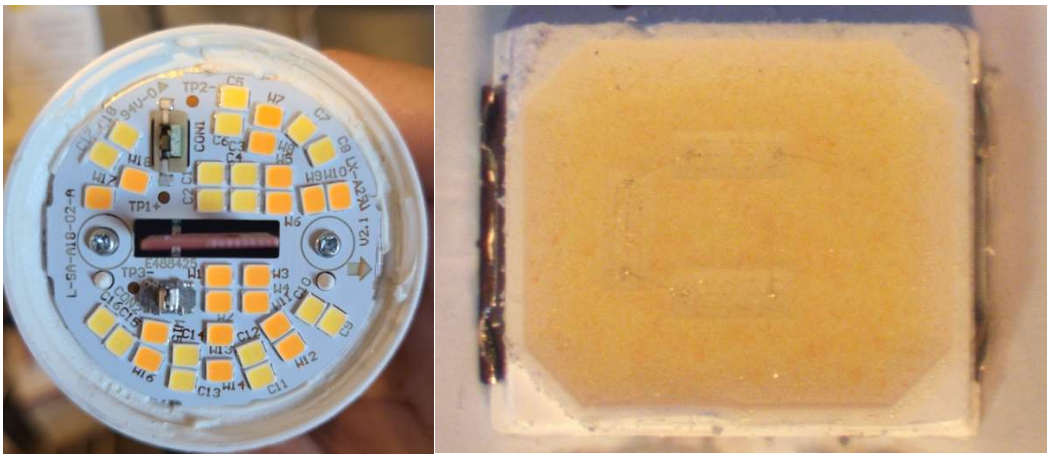
(*e.g.*, the EcoSmart 60W A19 Smart LED Bulb, the EcoSmart 65W BR30 Dimmable LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart 60W A19 Dimmable LED Bulb CCT and the EcoSmart Dimmable Par38 LED Bulb, among other substantially similar products) (collectively, the "'522 Accused Products").

71. 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 '522 Patent in connection with two of the Accused Products (*e.g.*, the EcoSmart 60W A19 Smart LED Bulb and the EcoSmart 65W BR30 Dimmable 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 '522 Accused Products that it obtains during discovery.

1(a): A LED device, comprising:— Defendants make, use, sell, and/or offer to sell in the United States, and/or import into the United States, LED devices that are covered by claim 1 of the '522 Patent.

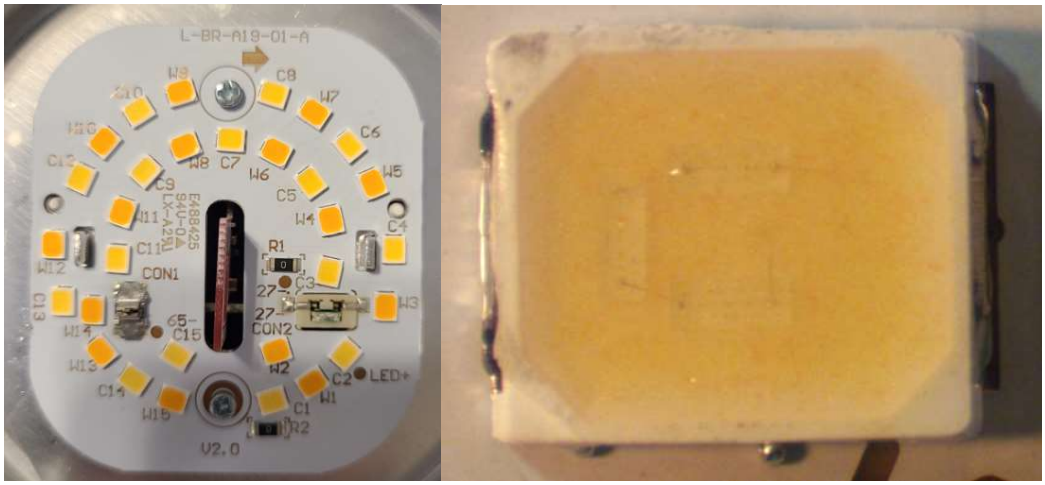
As one non-limiting example, the EcoSmart 60W A19 Smart LED Bulb comprises a "light emitting device," as recited in claim 1. *See, e.g.*, https://www.homedepot.com/p/EcoSmart-60-Watt-Equivalent-A19-SMART-LED-Light-Bulb-Tunable-White-Starter-Kit-1-Bulb-A9A19A60WESDZR1/310288335.

To illustrate, top-down views of an example phosphor LED from an EcoSmart 60W A19 Smart LED Bulb are shown below:



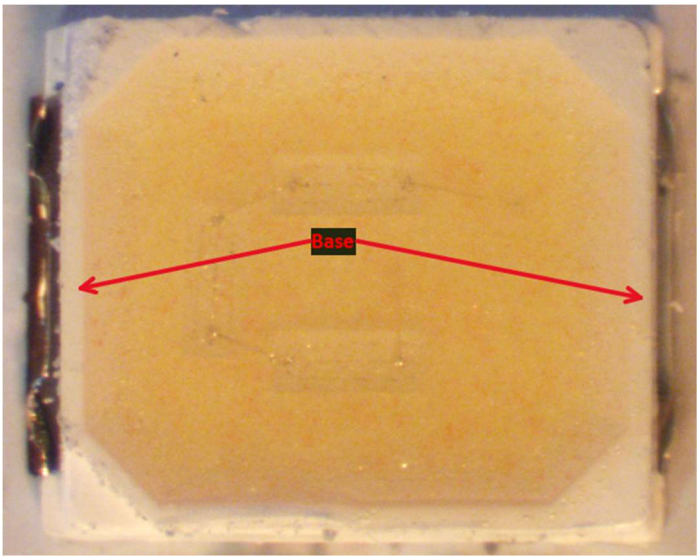
As another non-limiting example, the EcoSmart 65W BR30 Dimmable LED Bulb comprises a "light emitting device," as recited in claim 1. *See, e.g.,* https://www.homedepot.com/p/EcoSmart-65W-Equivalent-BR30-Dimmable-Energy-Star-LED-Light-Bulb-Soft-White-6-Pack-1003018402/301663112.

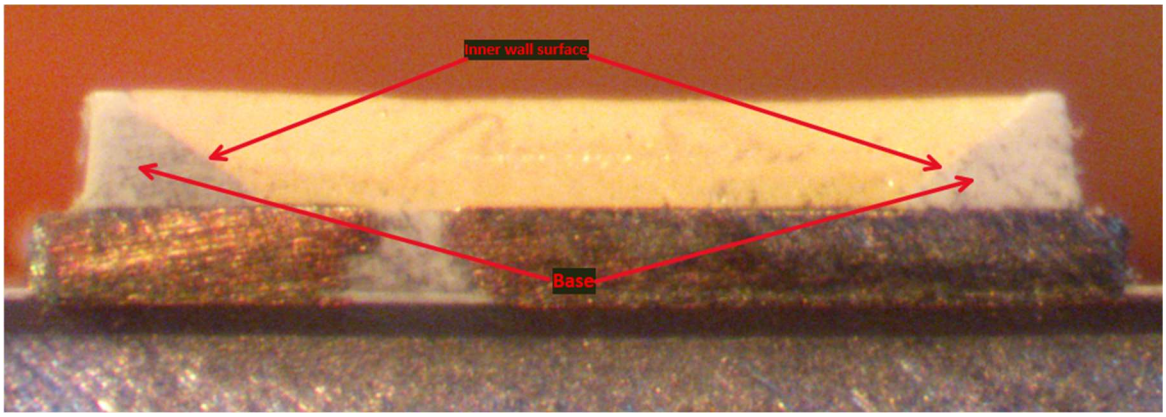
To illustrate, top-down views of an example phosphor LED from an EcoSmart 65W BR30 Dimmable LED Bulb are shown below:



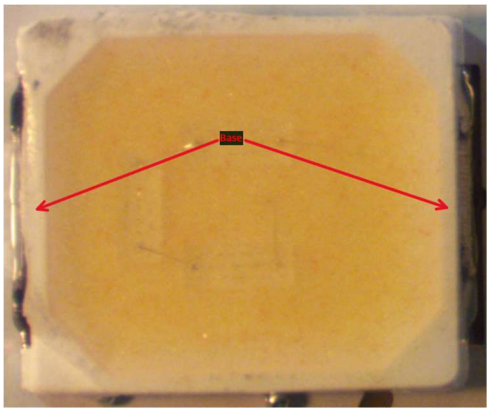
1(b): a base having a recess with the upper surface opened , the inner wall surface of the recess constituting a reflection surface;— The EcoSmart 60W A19 Smart LED Bulb and the EcoSmart 65W BR30 Dimmable LED Bulb each comprise a base having a recess with the upper surface opened, the inner wall surface of the recess constituting a reflection surface.

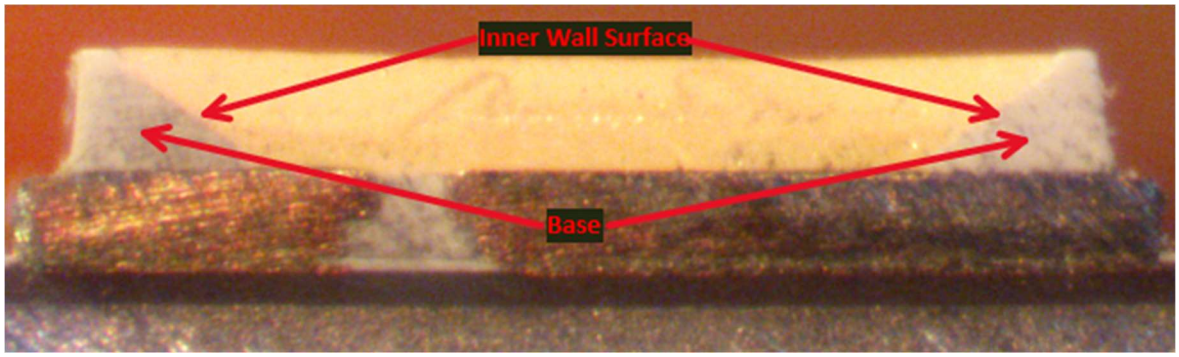
For example, shown below are top-down and cross-sectional views of the example phosphor LED from the EcoSmart 60W A19 Smart LED Bulb identifying a base with the upper surface opened, and the inner wall surface of the recess constituting a reflection surface identified in red:





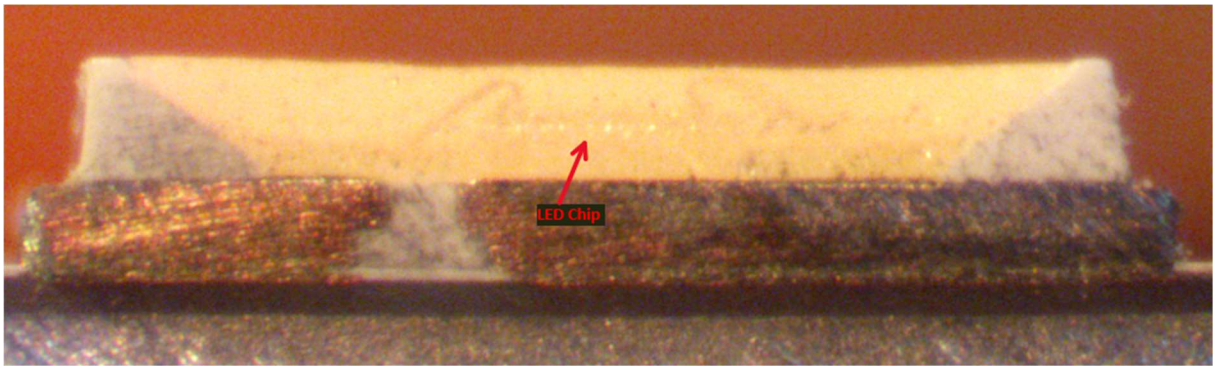
As another example, shown below are top-down and cross-sectional views of the example phosphor LED from the EcoSmart 65W BR30 Dimmable LED Bulb identifying a base with the upper surface opened, and the inner wall surface of the recess constituting a reflection surface identified in red:



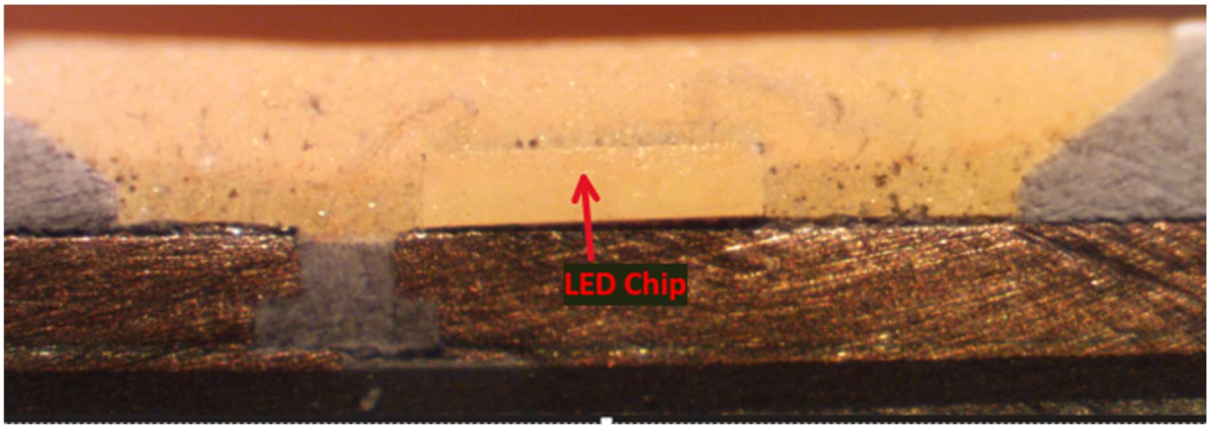


1(c): a LED chip disposed on the inner bottom of the recess;— The EcoSmart 60W A19 Smart LED Bulb and the EcoSmart 65W BR30 Dimmable LED Bulb each comprise an LED chip disposed on the inner bottom of the recess.

For example, shown below is the cross-sectional view of the example phosphor LED from the EcoSmart 60W A19 Smart LED Bulb with the LED chip identified:

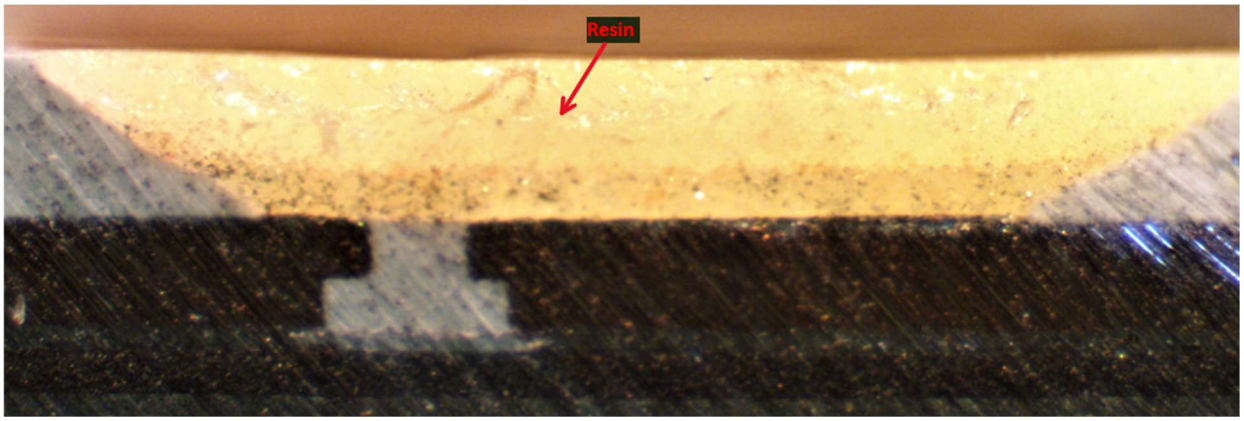


As another example, shown below is the cross-sectional view of the example phosphor LED from the EcoSmart 65W BR30 Dimmable LED Bulb with the LED chip identified:

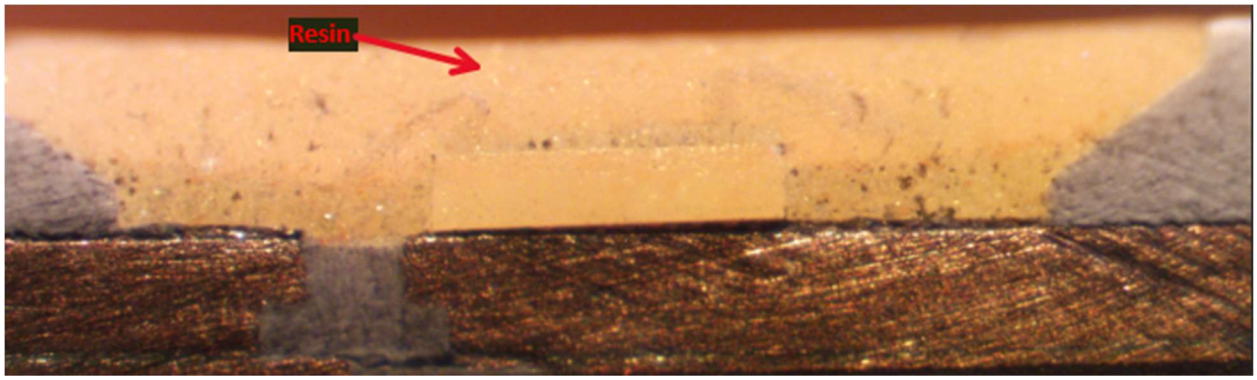


1(d): a resin filled in the recess, the resin including phosphors which absorb a part of light emitted from the LED chip to convert the wavelength thereof and emit light; — The EcoSmart 60W A19 Smart LED Bulb and the EcoSmart 65W BR30 Dimmable LED Bulb each comprise a resin filled in the recess, the resin including phosphors which absorb a part of light emitted from the LED chip to convert the wavelength thereof and emit light.

For example, shown below is a close-up of a portion of the cross-sectional view of the example phosphor LED from the EcoSmart 60W A19 Smart LED Bulb with the resin identified:

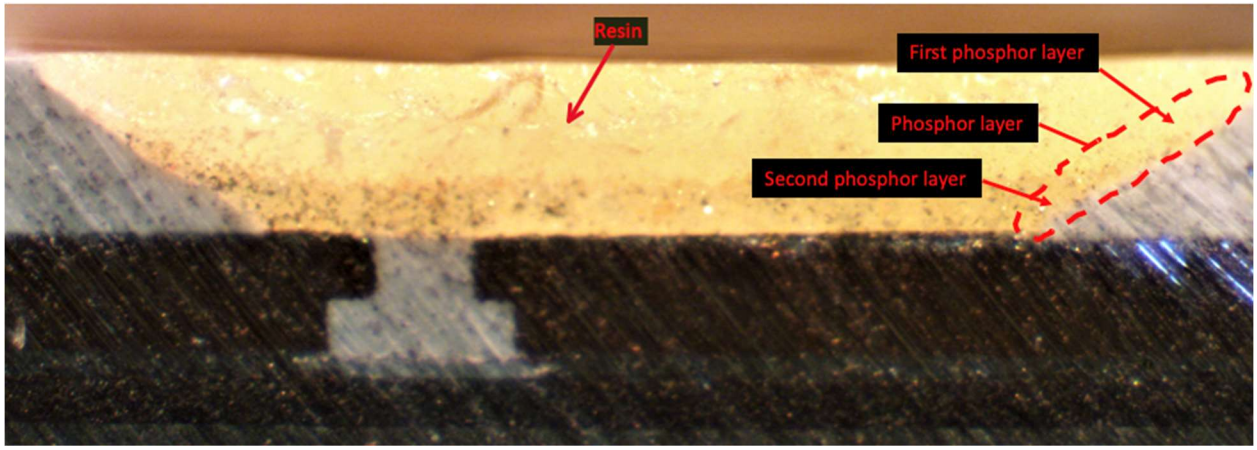


As another example, shown below is a close-up of a portion of the cross-sectional view of the example LED from the EcoSmart 65W BR30 Dimmable LED Bulb with the resin identified:



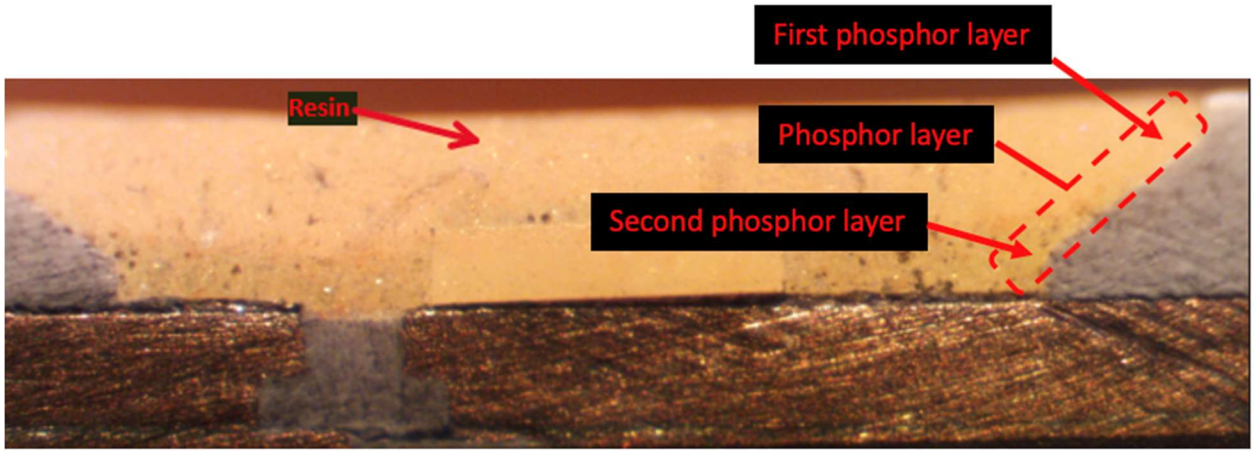
1(e): a phosphor layer formed on the reflection surface, the phosphor layer including the phosphors, wherein the phosphor layer comprises a plurality of phosphor layers each of which is excited to emit a different wavelength of light from each other,— The EcoSmart 60W A19 Smart LED Bulb and the EcoSmart 65W BR30 Dimmable LED Bulb each comprise a phosphor layer formed on the reflection surface, the phosphor layer including the phosphors, wherein the phosphor layer comprises a plurality of phosphor layers each of which is excited to emit a different wavelength of light from each other.

For example, shown below is a cross-sectional view of the example phosphor LED from the EcoSmart 60W A19 Smart LED Bulb with the phosphor layer formed on the reflection surface identified:



As shown above, the phosphor layer comprises a plurality of phosphor layers (*e.g.*, a first phosphor layer and a second phosphor layer) each of which is excited to emit a different wavelength of light from each other.

As another example, shown below is a cross-sectional view of the example LED from the EcoSmart 65W BR30 Dimmable LED Bulb with the phosphor layer formed on the reflection surface identified:



As shown above, the phosphor layer comprises a plurality of phosphor layers (*e.g.*, a first phosphor layer and a second phosphor layer) each of which is excited to emit a different wavelength of light from each other.

72. Defendants' infringement of the '522 Patent is exceptional and entitles LedComm to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

73. LedComm is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '522 Patent.

74. LedComm is entitled to recover from Defendants all damages that LedComm has sustained as a result of Defendants' infringement of the '522 Patent, including, without limitation, a reasonable royalty.

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

75. LedComm incorporates by reference and re-alleges paragraphs 1-62 of the Complaint as if fully set forth herein.

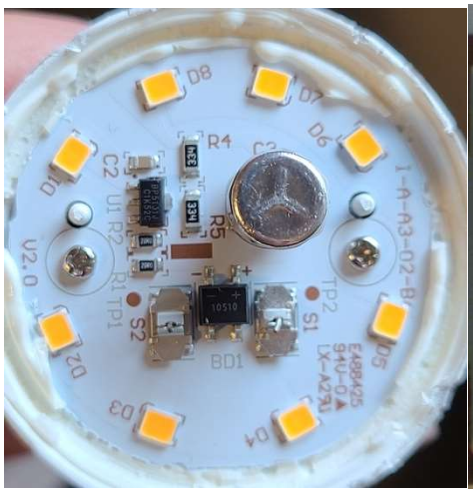
76. Defendants have infringed and are infringing, either literally or under the doctrine of equivalents, the '277 Patent in violation of 35 U.S.C. § 271 et seq., by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, a number of its commercial products including, *inter alia*, EcoSmart and Commercial Electric products (*e.g.*, Commercial Electric 2 foot LED Industrial High Bay Light, Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light, EcoSmart 60W A19 Smart LED Bulb, EcoSmart 60W Dimmable LED Bulb Selectable CCT, EcoSmart 60W A19 LED Bulb, EcoSmart 65W BR30 Dimmable LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart 100W A19 LED Bulb, EcoSmart Dimmable BR40 LED Bulb, EcoSmart Dimmable Par38 LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, and EcoSmart 6 inch Integrated LED Dimmable Downlight , among other substantially similar products) (collectively, the "'277 Accused Products").

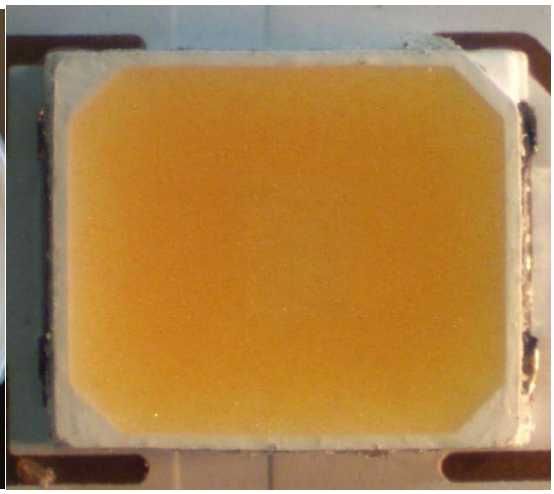
77. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '277 Patent in connection with two of the '277 Accused Products (*e.g.*, the EcoSmart 60W A19 LED Bulb and EcoSmart 90W BR30 Dimmable LED bulb). This 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 '277 Accused Products that it obtains during discovery.

1(a): A semiconductor light emitting device comprising:— Defendants make, use, sell, and/or offer to sell in the United States, and/or import into the United States, semiconductor light emitting devices that are covered by claim 1 of the '277 Patent.

As one non-limiting example, the EcoSmart 60W A19 LED Bulb comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.*, https://www.homedepot.com/p/EcoSmart-60-Watt-Equivalent-A19-Non-Dimmable-LED-Light-Bulb-Soft-White-8-Pack-B7A19A60WUL18/303574541.

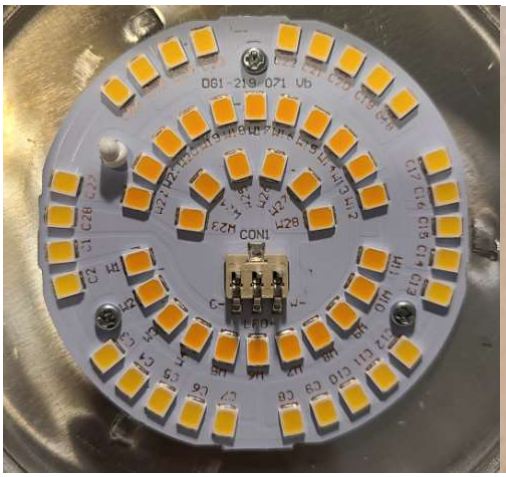
To illustrate, top-down views of example phosphor LED chips from an EcoSmart 60W A19 LED Bulb are shown in the images below:





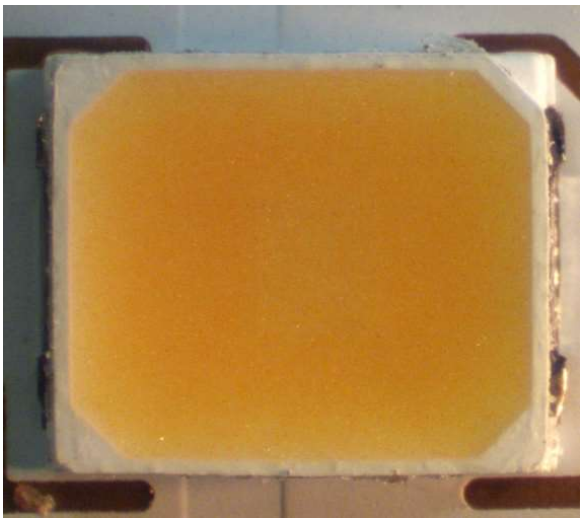
As another non-limiting example, the EcoSmart 90W BR30 Dimmable LED bulb comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.,* https://www.homedepot.com/p/EcoSmart-90-Watt-Equivalent-BR30-Dimmable-Energy-Star-LED-Light-Bulb-Bright-White-2-Pack-1003021002/303714707.

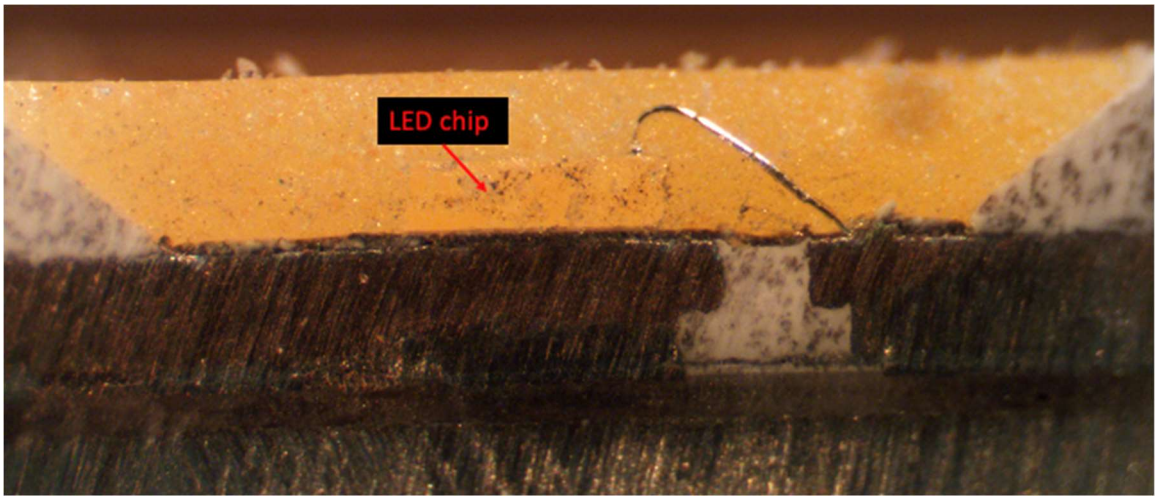
To illustrate, top-down views of example LED chips from an EcoSmart 90W BR30 Dimmable LED bulb are shown below:



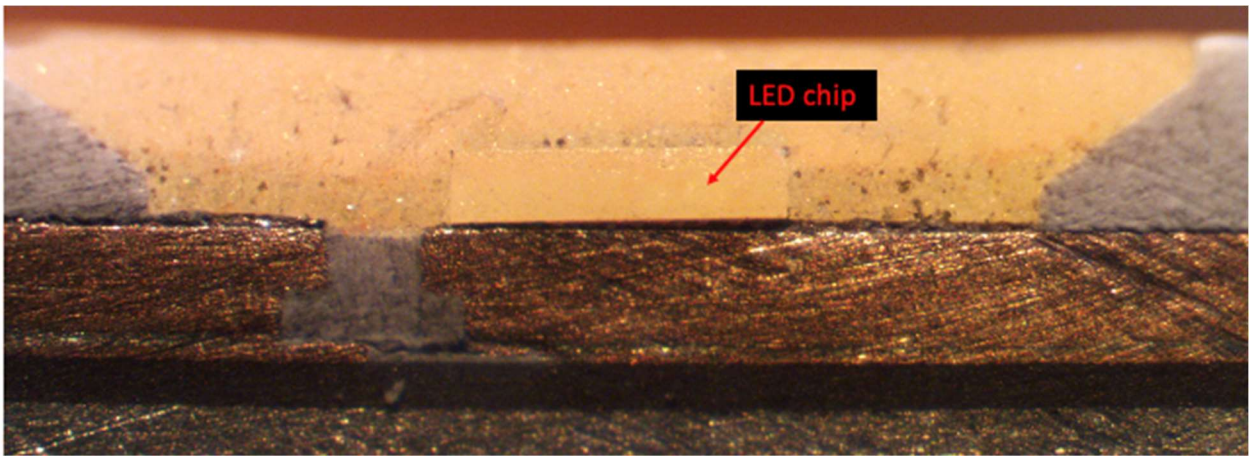

1(b): an LED chip*;*— The EcoSmart 60W A19 LED Bulb and EcoSmart 90W BR30 Dimmable LED bulb each comprise an LED chip.

For example, shown below is a top-down view and a cross-sectional view of the example phosphor LED from the EcoSmart 60W A19 LED Bulb, respectively:



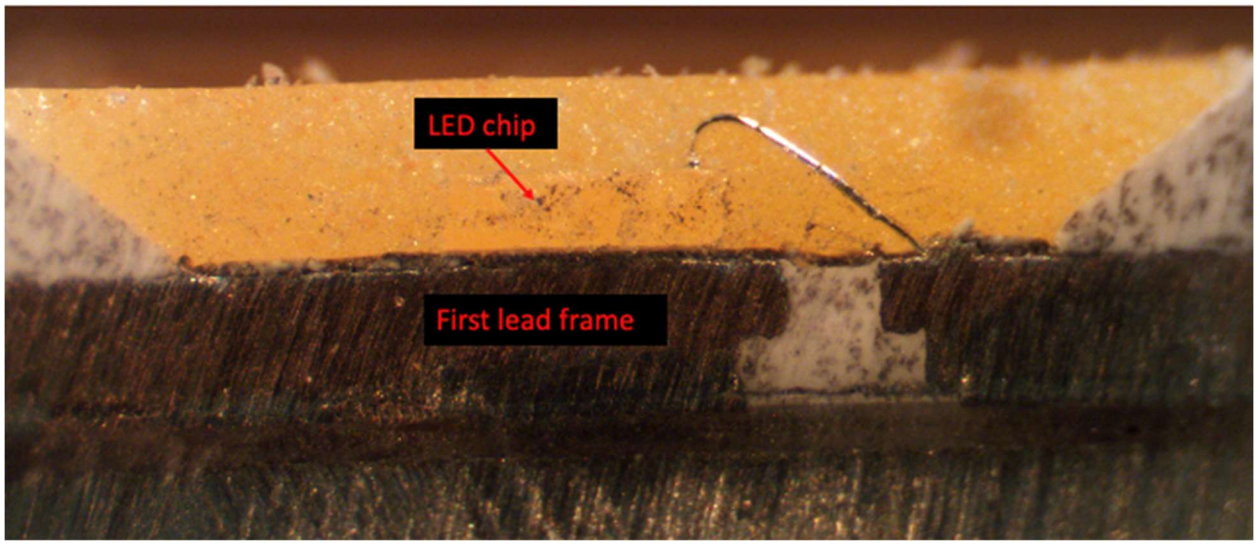


As another example, shown below is a top-down view and a cross-sectional view of the phosphor LED from the EcoSmart 90W BR30 Dimmable LED bulb, respectively:

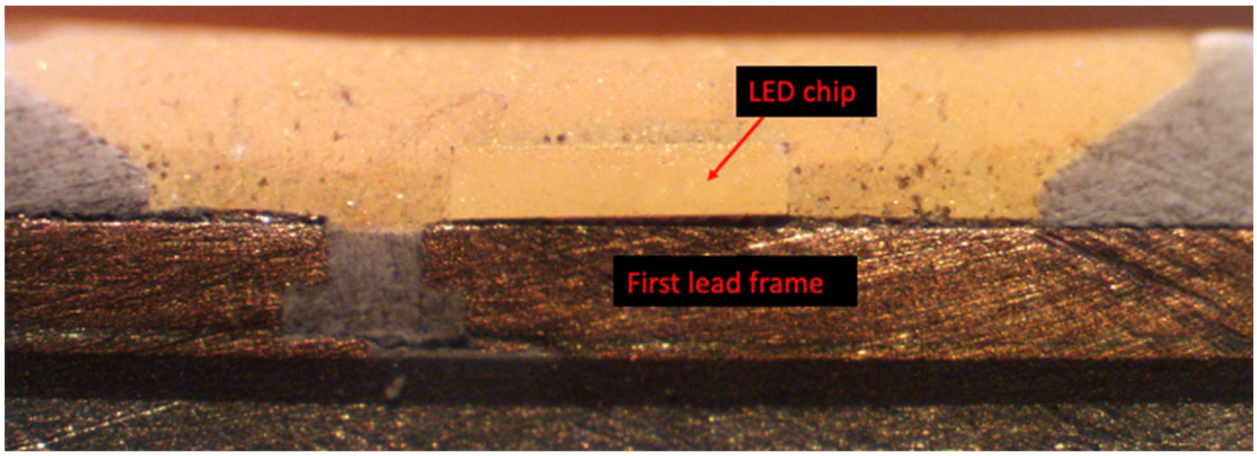


1(c): a first lead frame on which said LED chip is mounted;— The EcoSmart 60W A19 LED Bulb and EcoSmart 90W BR30 Dimmable LED bulb each comprise a first lead frame on which said LED chip is mounted.

For example, shown below is a resulting cross-sectional view of the one cross-sectioned LED chip from the EcoSmart 60W A19 LED Bulb with the one cross-sectioned LED chip mounted to a first lead frame identified:

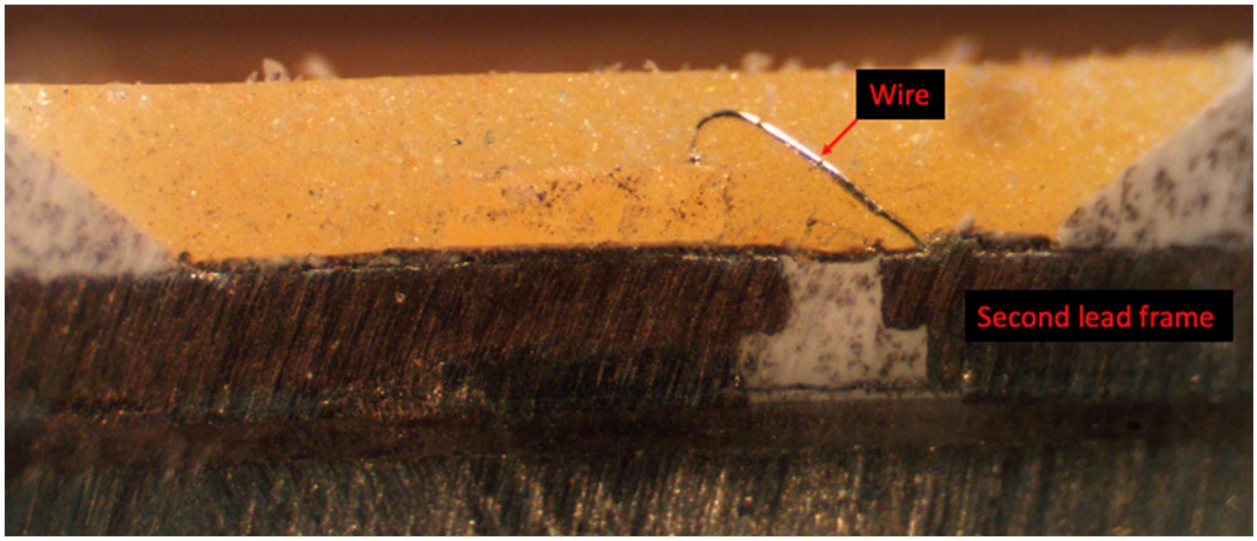


As another example, shown below is a resulting cross-sectional view of the one cross-sectioned LED chip from the EcoSmart 90W BR30 Dimmable LED bulb with the one cross-sectioned LED chip mounted to a first lead frame identified:

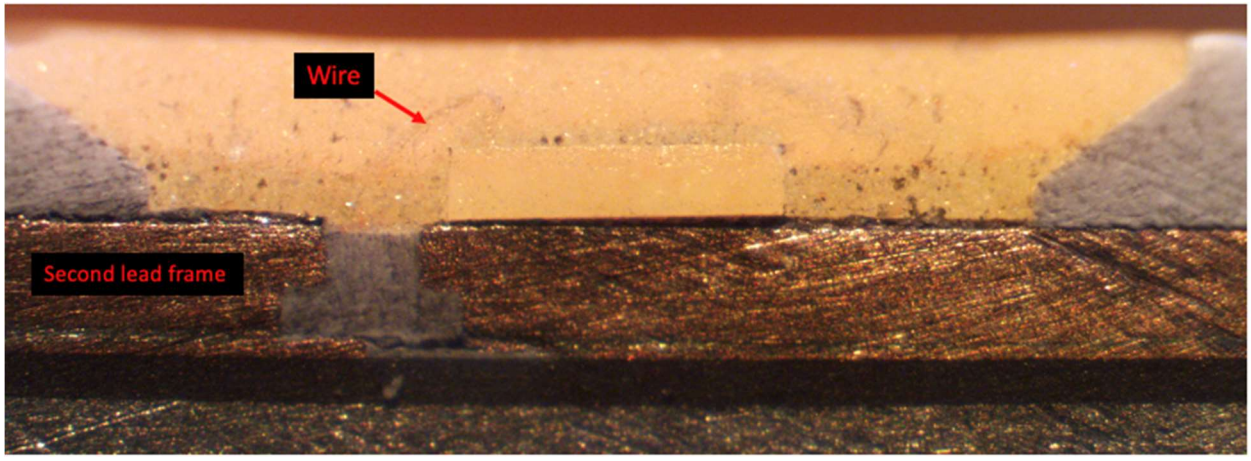


1(d): a second lead frame electrically connected to said LED chip via a wire, and — The EcoSmart 60W A19 LED Bulb and EcoSmart 90W BR30 Dimmable LED bulb each comprises a second lead frame that is electrically connected to the LED chip via a wire .

For example, shown below is the cross-sectional view of the cross-sectioned phosphor LED chip from the EcoSmart 60W A19 LED Bulb with a second lead frame electrically connected to the LED chip via a wire identified:

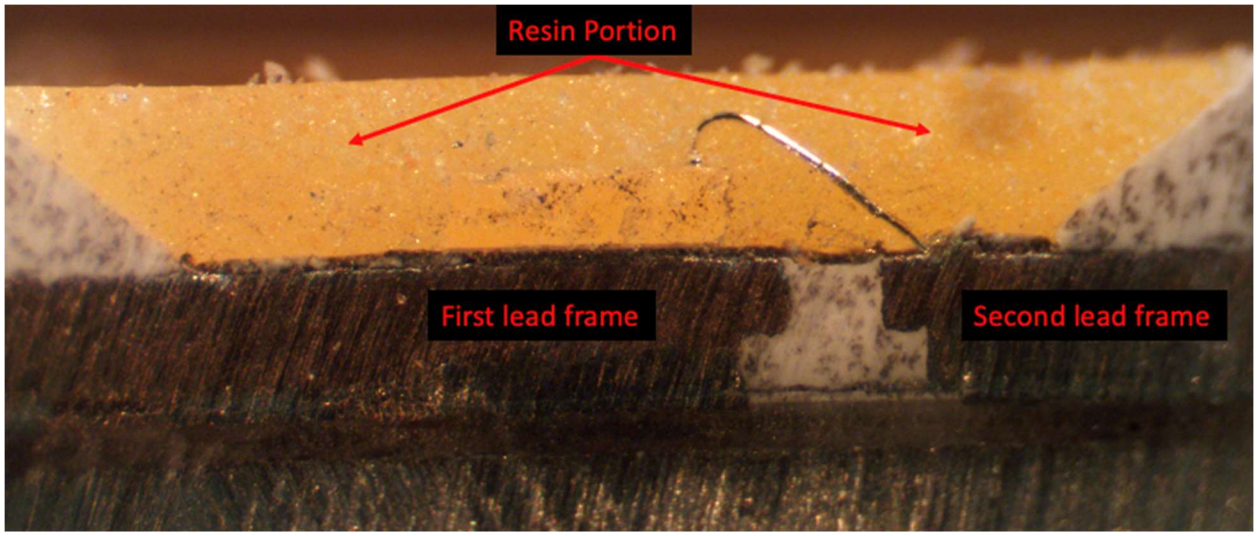


As another example, shown below are cross-sectional views of the cross-sectioned color LED chip from the EcoSmart 90W BR30 Dimmable LED bulb with a second lead frame electrically connected to the LED chip via a wire identified:

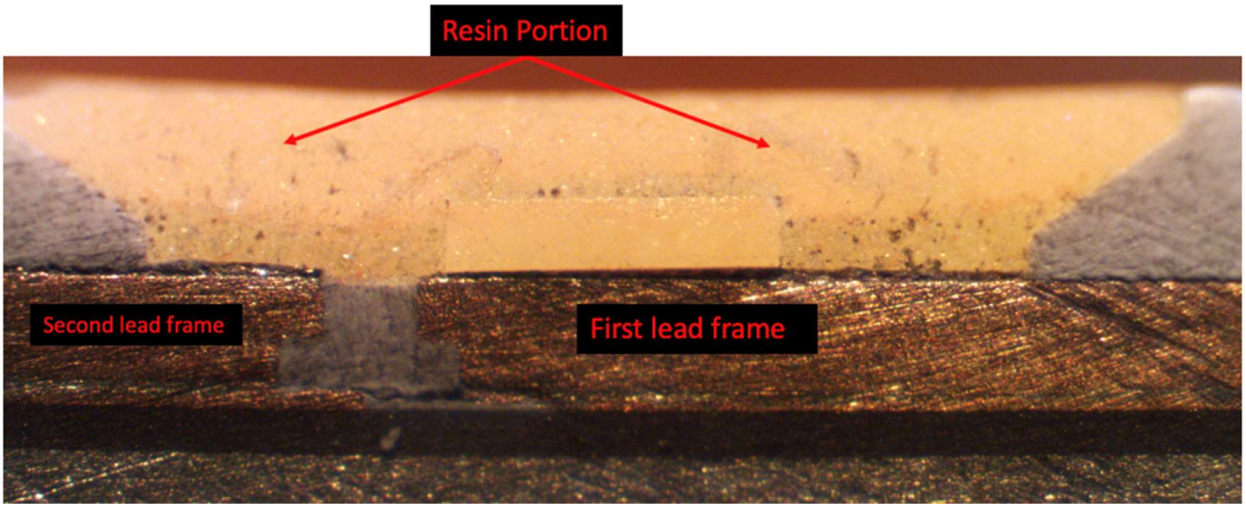


1(e): a resin portion surrounding a circumference of said LED chip, and fastening said first and second lead frames,— The EcoSmart 60W A19 LED Bulb and EcoSmart 90W BR30 Dimmable LED bulb each comprises a resin portion surrounding the circumference of the LED chip and fastening the first and second lead frames.

For example, shown below is a cross-sectional view of a cross-sectioned phosphor LED chip from the EcoSmart 60W A19 LED Bulb with a resin portion surrounding the circumference of the color LED chip and fastening first and second lead frames identified:

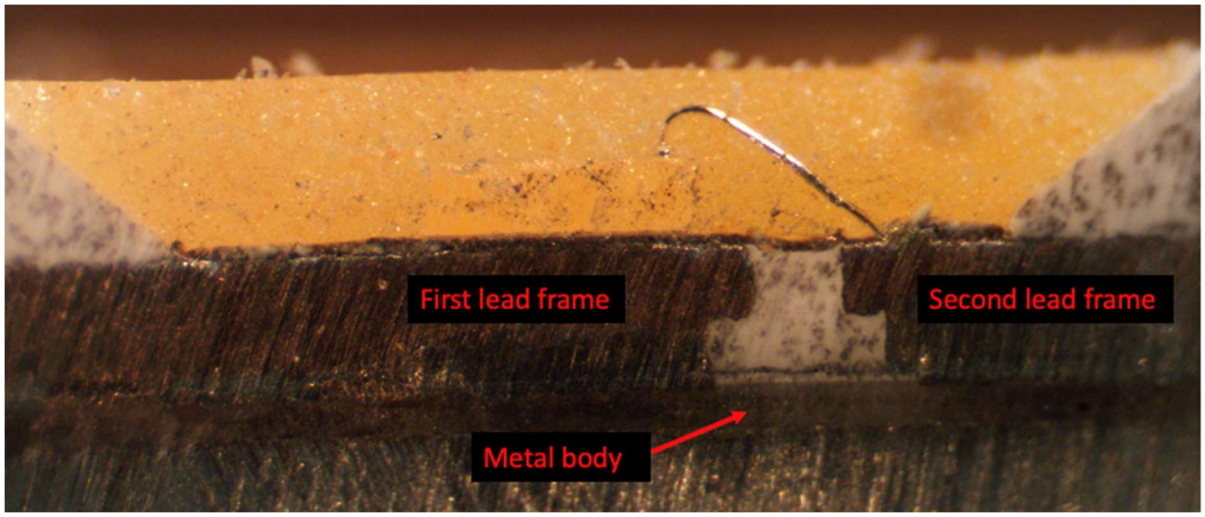


As another example, shown below is a cross-sectional view of a color LED chip from an EcoSmart 90W BR30 Dimmable LED bulb with a resin portion surrounding the circumference of the LED chip and fastening first and second lead frames identified:

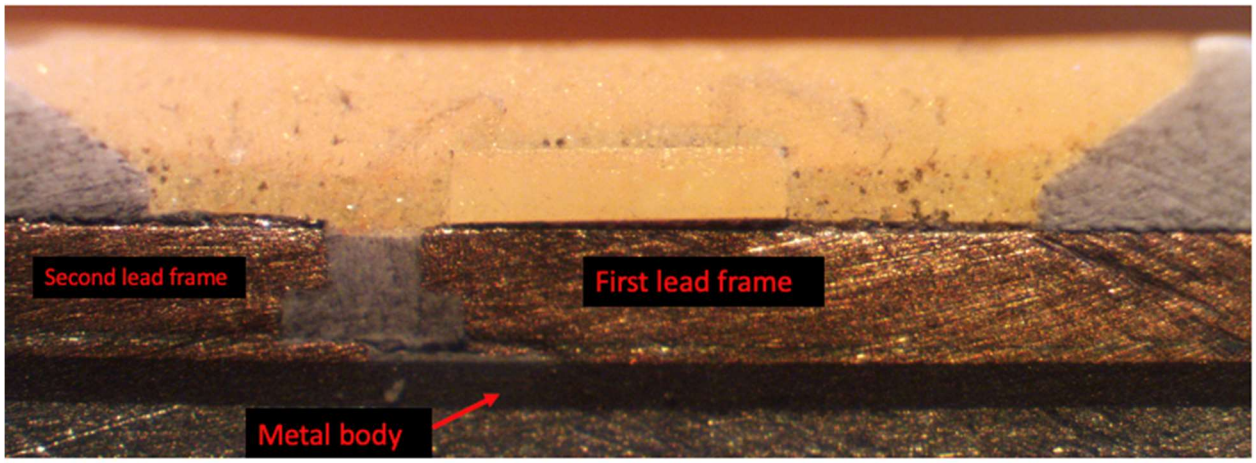


1(f): wherein a metal body is located under a region of said first lead frame where said LED chip is mounted, and wherein the second lead frame has a portion where the wire is connected and the metal body is provided to extend to a region below said portion of the second lead frame.— In the EcoSmart 60W A19 LED Bulb and EcoSmart 90W BR30 Dimmable 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 cross-sectional view of a cross-sectioned phosphor LED chip from the EcoSmart 60W A19 LED Bulb:



As another example, this configuration is shown in the below cross-sectional view of a cross-sectioned LED chip from the EcoSmart 90W BR30 Dimmable LED bulb:



78. Defendants' 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.

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

80. LedComm is entitled to recover from Defendants all damages that LedComm has sustained as a result of Defendants' infringement of the '277 Patent, including, without limitation, a reasonable royalty.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 7,154,125

81. LedComm incorporates by reference and re-alleges paragraphs 1-62 of the Complaint as if fully set forth herein.

82. Defendants have infringed and are infringing, either literally or under the doctrine of equivalents, the '125 Patent in violation of 35 U.S.C. § 271 et seq., by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, a number of its commercial products including, *inter alia*, Commercial Electric products (*e.g.* the Commercial Electric 24 inch Color Changing Tape Light and the

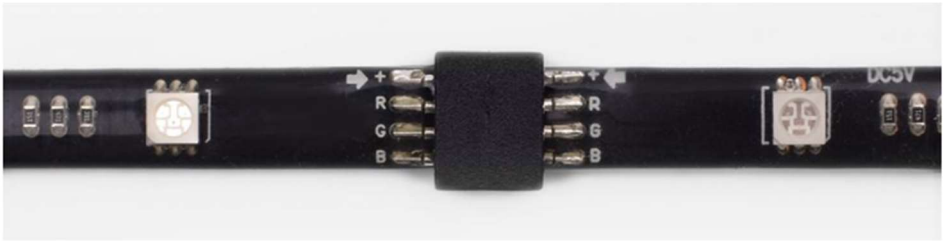
Commercial Electric 24 foot Color Changing Tape Light, among other substantially similar products) (collectively, the "'125 Accused Products").

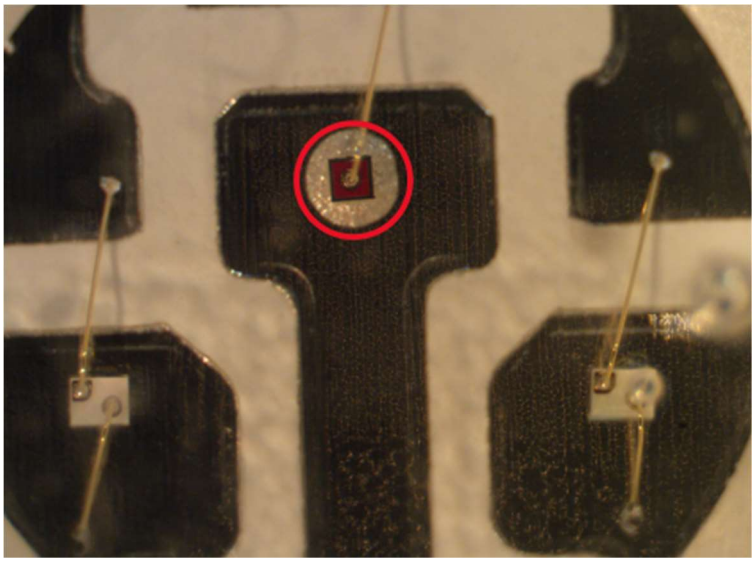
83. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '125 Patent in connection with one of the '125 Accused Products (*e.g.*, the Commercial Electric 24 inch Color Changing Tape Light). This description is based on publicly available information. LedComm reserves the right to modify this description, including, for example, on the basis of information about the '125 Accused Products that it obtains during discovery.

1(a): A nitride-based semiconductor light-emitting device comprising::— Defendants make, use, sell, and/or offer to sell in the United States, and/or import into the United States, semiconductor light emitting devices that are covered by claim 1 of the '125 Patent.

As one non-limiting example, the Commercial Electric 24 inch Color Changing Tape Light comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.,* https://www.homedepot.com/p/Commercial-Electric-2-in-x24-in-LED-RGB-Under-Cabinet-Light-LS520RGB-48inch/306548395.

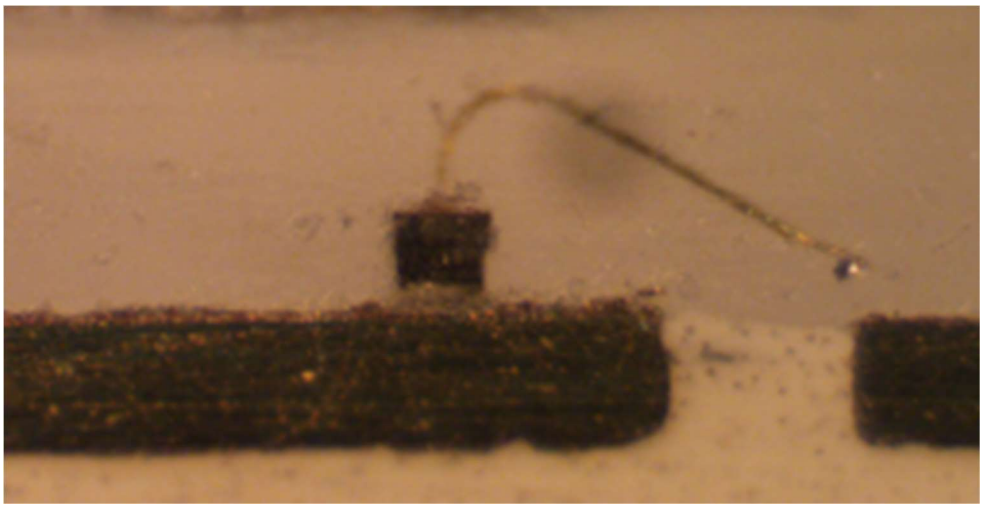
To illustrate, top-down views of an example multiple color nitride-based semiconductor light-emitting device from a Commercial Electric 24 inch Color Changing Tape Light are shown below:



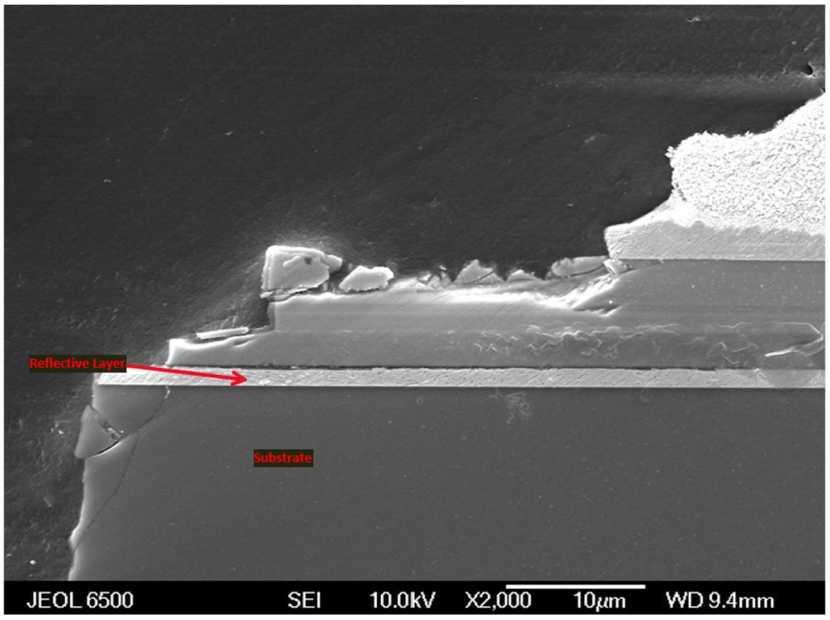


1(b): a reflective layer formed on a support substrate;— The Commercial Electric 24 inch Color Changing Tape Light comprises a reflective layer formed on a support substrate.

For example, shown below is a cross-sectional view showing a reflective layer formed on a support substrate from the Commercial Electric 24 inch Color Changing Tape Light:

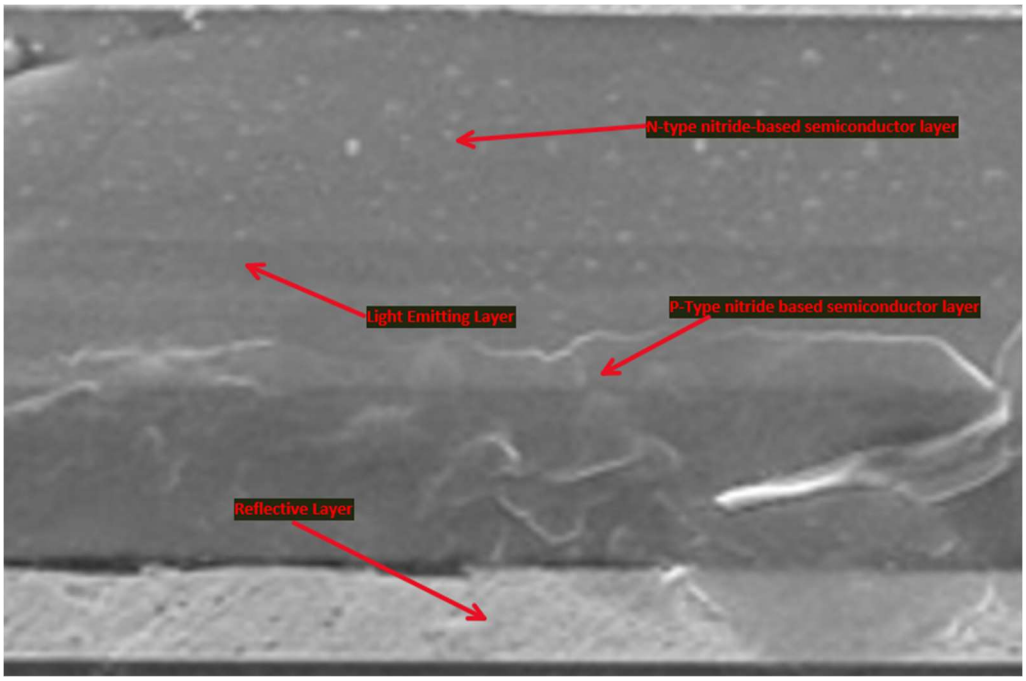


As another example, and in more detail, shown below is a scanning electron microscope ("SEM") image showing a reflective layer formed on a support substrate from the Commercial Electric 24 inch Color Changing Tape Light. As shown, the substrate is a ceramic material, and a reflective layer is formed on the substrate:



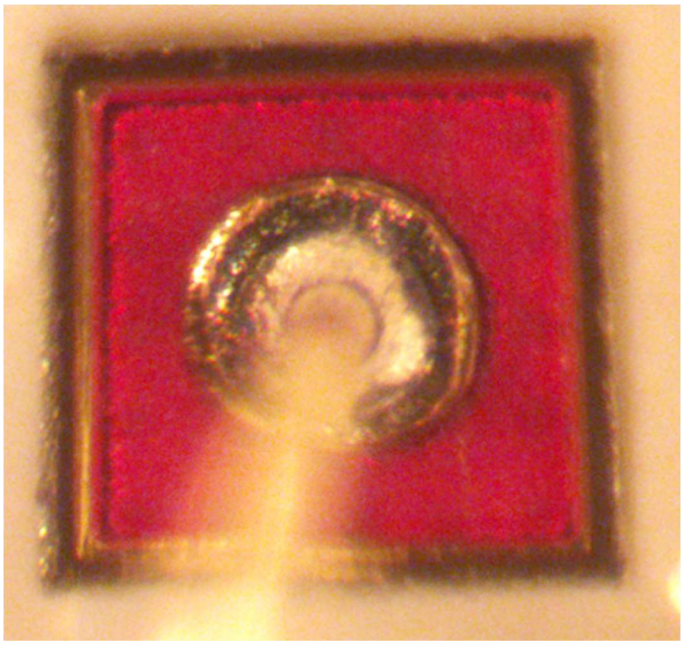
1(c): a p-type nitride-based semiconductor layer, a light-emitting layer and an n-type nitride-based semiconductor layer successively formed on the reflective layer;— The Commercial Electric 24 inch Color Changing Tape Light comprises a p-type nitride-based semiconductor layer, a light-emitting layer and an n-type nitride-based semiconductor layer successively formed on the reflective layer.

For example, shown below is a close-up SEM image of the cross-sectioned LED chip from the Commercial Electric 24 inch Color Changing Tape Light identifying a p-type nitride-based semiconductor layer, a light emitting layer, and a n-type nitride-based semiconductor layer successively formed on the reflective layer:



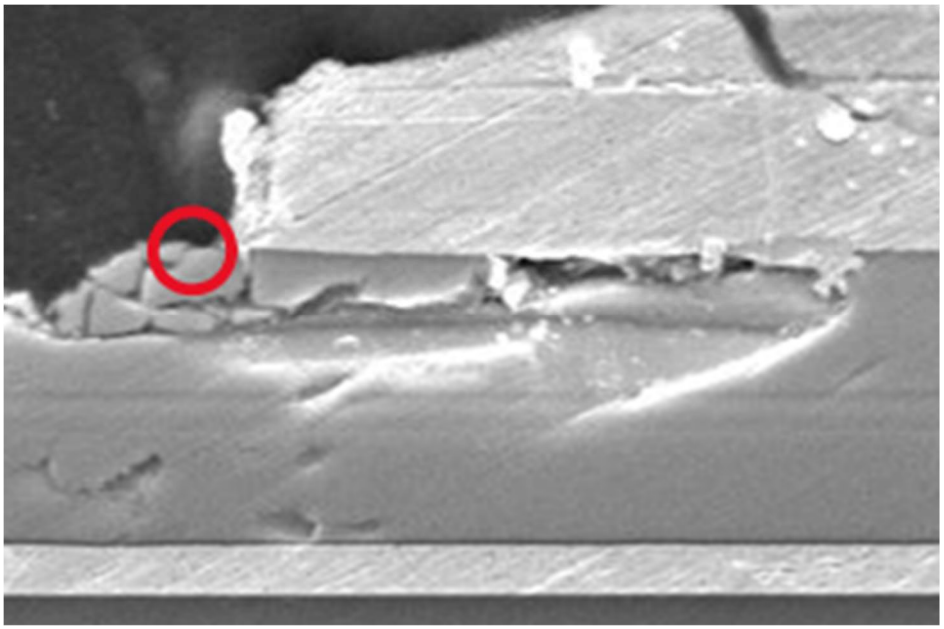
1(d): wherein a light extracting surface located above said n-type nitride-based semiconductor layer has irregularities; and— The Commercial Electric 24 inch Color Changing Tape Light comprises a light extracting surface that is located above the n-type nitride-based semiconductor layer and has irregularities.

For example, shown below are top views of a diode in the Commercial Electric 24 inch Color Changing Tape Light that shows a light extracting surface located above the n-type nitride-based semiconductor layer (shown above with respect to claim element 1(c)) having surface irregularities:

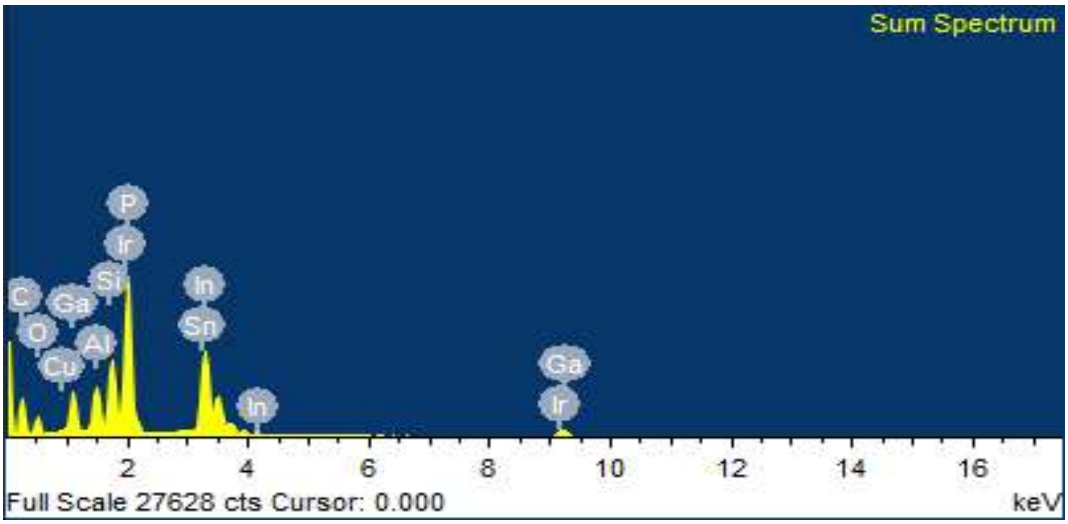


1(e): a high refractive index film including one selected from a group consisting of silicon nitride, indium oxide, neodymium oxide, zirconium oxide, titanium oxide, cerium oxide and bismuth oxide is formed on said n-type nitride-based semiconductor layer, and an upper surface of said high refractive index film is said light extracting surface,— The Commercial Electric 24 inch Color Changing Tape Light comprises a high refractive index film including one selected from a group consisting of silicon nitride, indium oxide, neodymium oxide, zirconium oxide, titanium oxide, cerium oxide and bismuth oxide is formed on said n-type nitride-based semiconductor layer, and an upper surface of said high refractive index film is said light extracting surface.

For example, shown below is an SEM image showing a high refractive index film formed on the n-type nitride-based semiconductor layer, where an upper surface of the high refractive index film corresponds to the light extracting surface:



As further shown below, a screenshot of a sum frequency generation spectroscopy (SFG) measurement is provided that verifies that the high refractive index film includes indium (In) and tin (Sn) oxides:



84. Defendants' infringement of the '125 Patent is exceptional and entitles LedComm to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

85. LedComm is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '125 Patent.

86. LedComm is entitled to recover from Defendants all damages that LedComm has sustained as a result of Defendants' infringement of the '125 Patent, including, without limitation, a reasonable royalty.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 7,161,190

87. LedComm incorporates by reference and re-alleges paragraphs 1-62 of the Complaint as if fully set forth herein.

88. Defendants have infringed and are infringing, either literally or under the doctrine of equivalents, the '190 Patent in violation of 35 U.S.C. § 271 et seq., by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, a number of its commercial products including, *inter alia*, EcoSmart and Commercial Electric products (*e.g.*, Commercial Electric 4 ft. 64 W Equivalent LED Shop Light, Commercial Electric 2 foot LED Industrial High Bay Light, Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light, EcoSmart 60W A19 Smart LED Bulb, EcoSmart 60W Dimmable LED Bulb Selectable CCT, EcoSmart 60W A19 LED Bulb, EcoSmart 65W BR30 Dimmable LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart 100W A19 LED Bulb, EcoSmart Dimmable BR40 LED Bulb, EcoSmart Dimmable Par38 LED Bulb, EcoSmart R20 75W LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart 60W A19 Dimmable LED Bulb CCT, EcoSmart 6 inch Integrated LED Dimmable Downlight, among other substantially similar products) (collectively, the "'190 Accused Products").

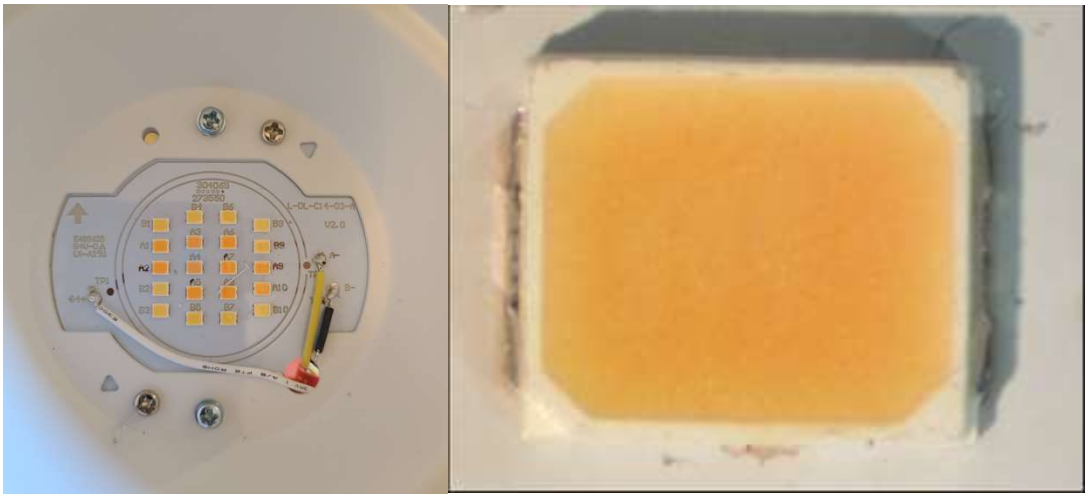
89. As just one non-limiting example, set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '190 Patent in connection with two of the '190 Accused Products (*e.g.*, the Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light, and the EcoSmart Dimmable R20 75W 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:— Defendants make, use, sell, and/or offer to sell in the United States, and/or import into the United States, semiconductor light emitting devices that are covered by claim 1 of the '190 Patent.

As one non-limiting example, the Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.*, https://www.homedepot.com/p/Commercial-Electric-5-6-in-Matte-White-Integrated-LED-Recessed-Trim-5-Ways-4-Pack-NS01aA11FR1-259/303780877.

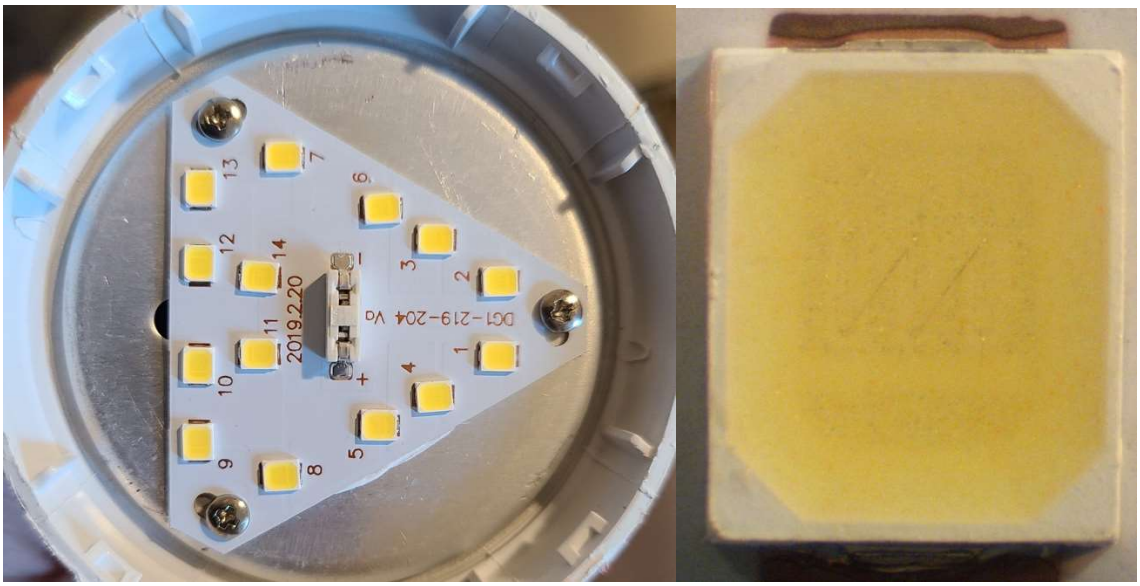
To illustrate, a top-down view of example color LED chips from a Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light is shown in the first image below, and a top-down view of an example phosphor LED chip from a Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light is shown in the second image below:



As another non-limiting example, the EcoSmart Dimmable R20 75W LED Bulb comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.,*

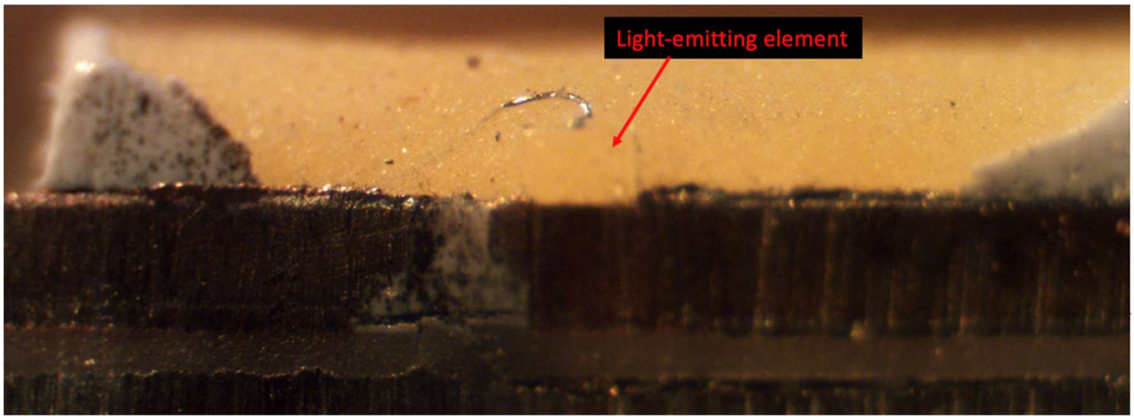
https://www.homedepot.com/p/EcoSmart-75-Watt-Equivalent-BR20-Dimmable-Energy-Star-LED-Light-Bulb-Daylight-3-Pack-1003020802/303667906.

To illustrate, top-down views of an example phosphor LED chip from an EcoSmart Dimmable R20 75W LED Bulb are shown below:

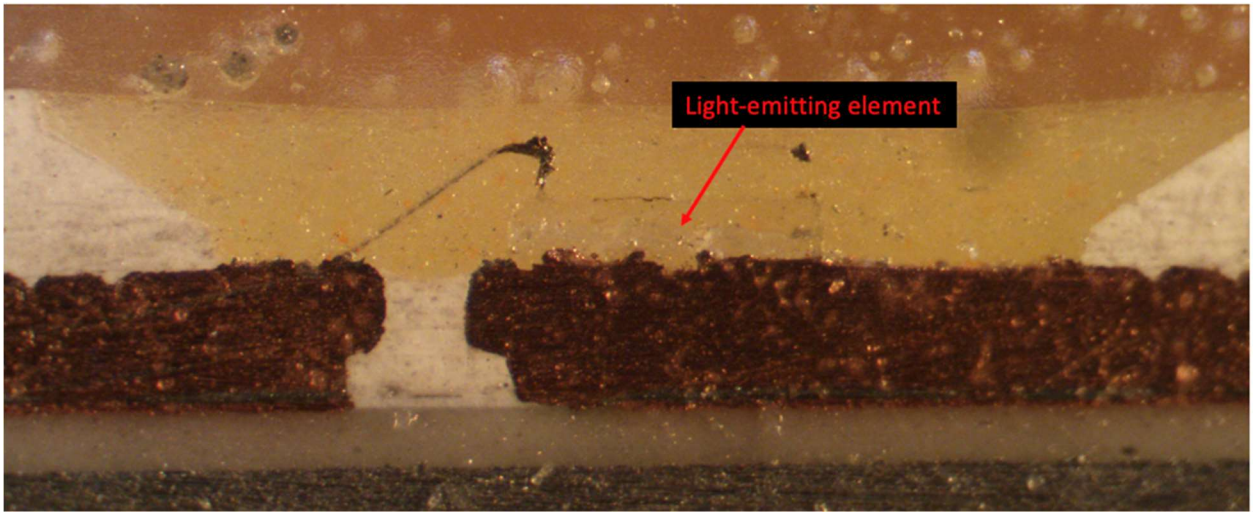


1(b): a light-emitting element;— The Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light and the EcoSmart Dimmable R20 75W LED Bulb each comprise a light-emitting element.

For example, shown below is a cross-sectional view of the example phosphor LED from the Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light with the light-emitting element identified:

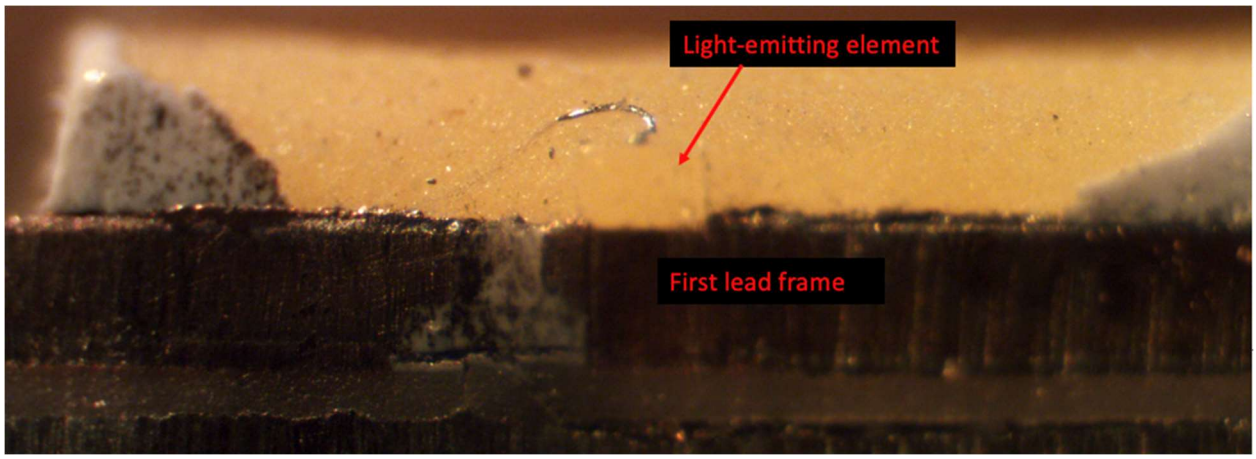


As another example, shown below is a cross-sectional view of the LED from the EcoSmart Dimmable R20 75W LED Bulb with the light-emitting element identified:

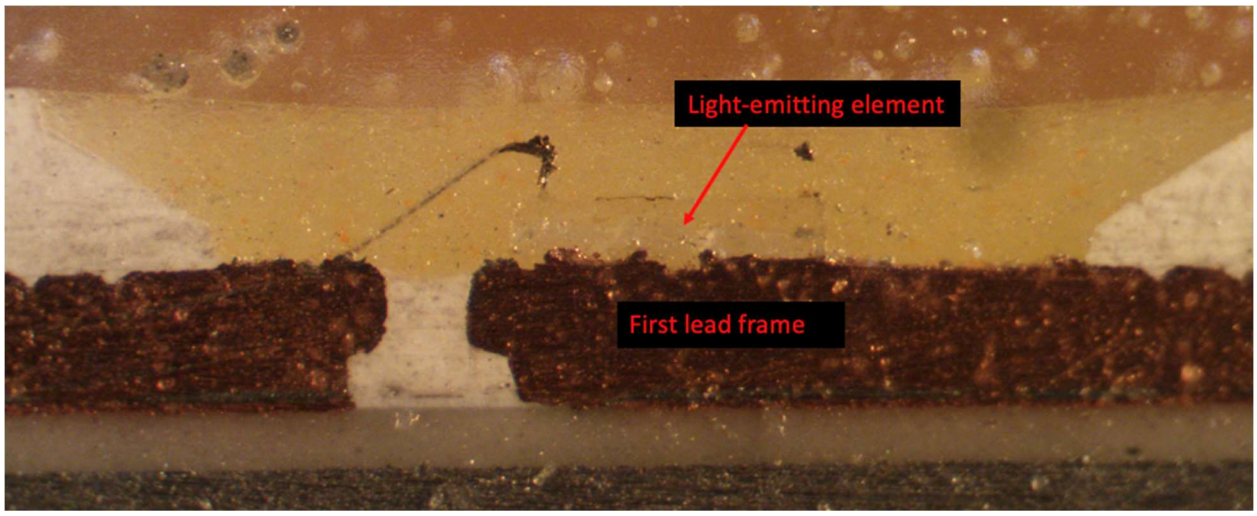


1(c): a first lead frame having a main surface having said light-emitting element mounted thereon;— The Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light and the EcoSmart Dimmable R20 75W LED Bulb each comprise a first lead frame having a main surface having said light-emitting element mounted thereon.

For example, shown below is a resulting cross-sectional view of one cross-sectioned LED chip from the Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light with a first lead frame having a main surface on which the light-emitting element is mounted identified:

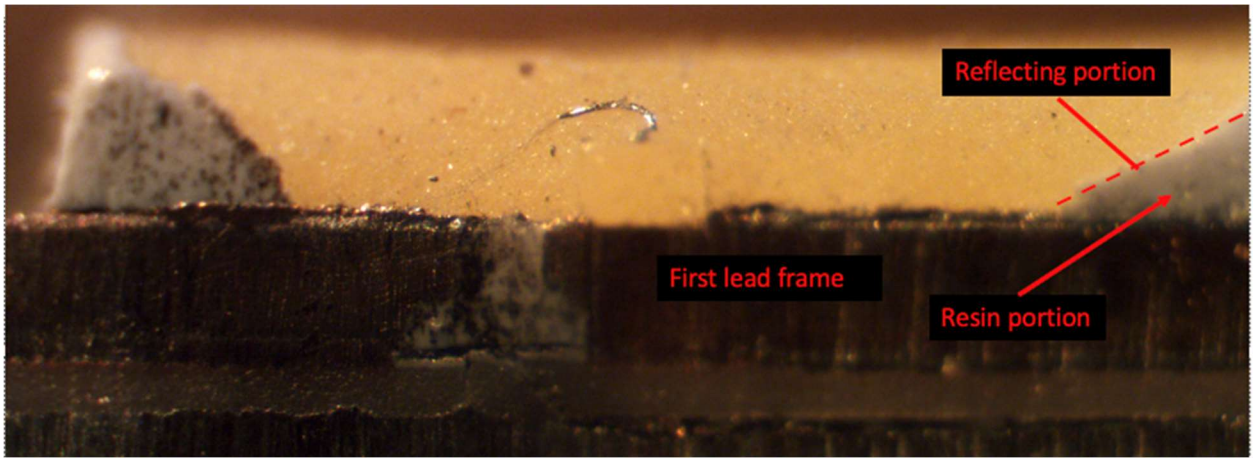


As another example, shown below is a resulting cross-sectional view of one cross-sectioned LED chip from the EcoSmart Dimmable R20 75W LED Bulb with a first lead frame having a main surface on which the light-emitting element is mounted identified:

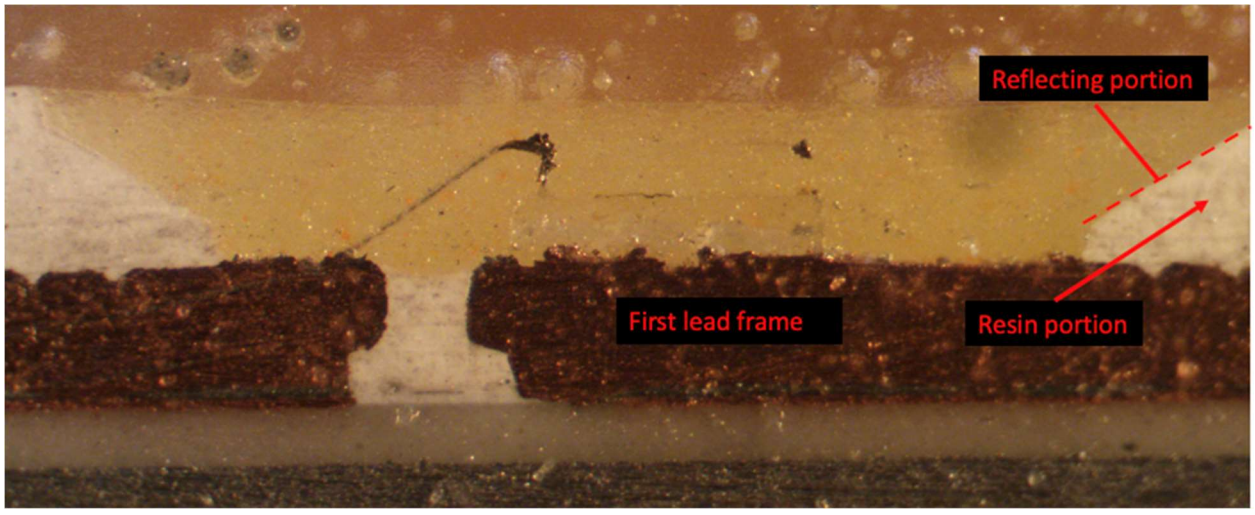


1(d): a resin portion for fixing said first lead frame, said resin portion has a reflecting portion reflecting light emitted from said light-emitting element; and— The Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light and the EcoSmart Dimmable R20 75W LED Bulb each comprise a resin portion for fixing said first lead frame, said resin portion has a reflecting portion reflecting light emitted from said light-emitting element.

For example, shown below is a cross-sectional view of the phosphor LED chip from the Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light showing the resin portion for fixing the first lead frame, and the reflecting portion reflecting light emitted from the light-emitting element:



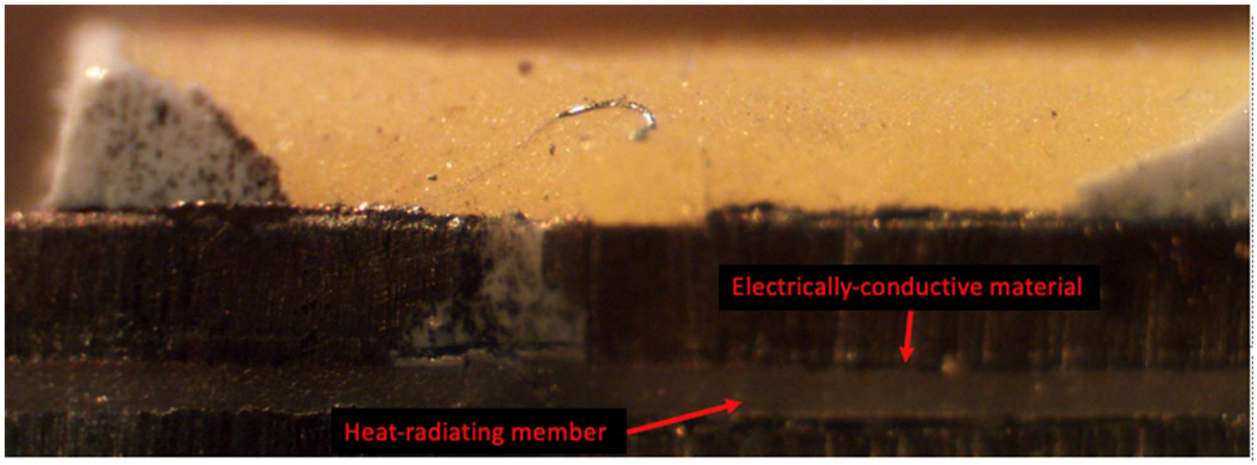
As another example, shown below is a cross-sectional view of the phosphor LED chip from the EcoSmart Dimmable R20 75W LED Bulb showing the resin portion for fixing the first lead frame, and the reflecting portion reflecting light from the light-emitting element:



1(e): a heat-radiating member bonded to a back face of said first lead frame with an electrically-conductive layer containing metal interposed therebetween, said electrically-

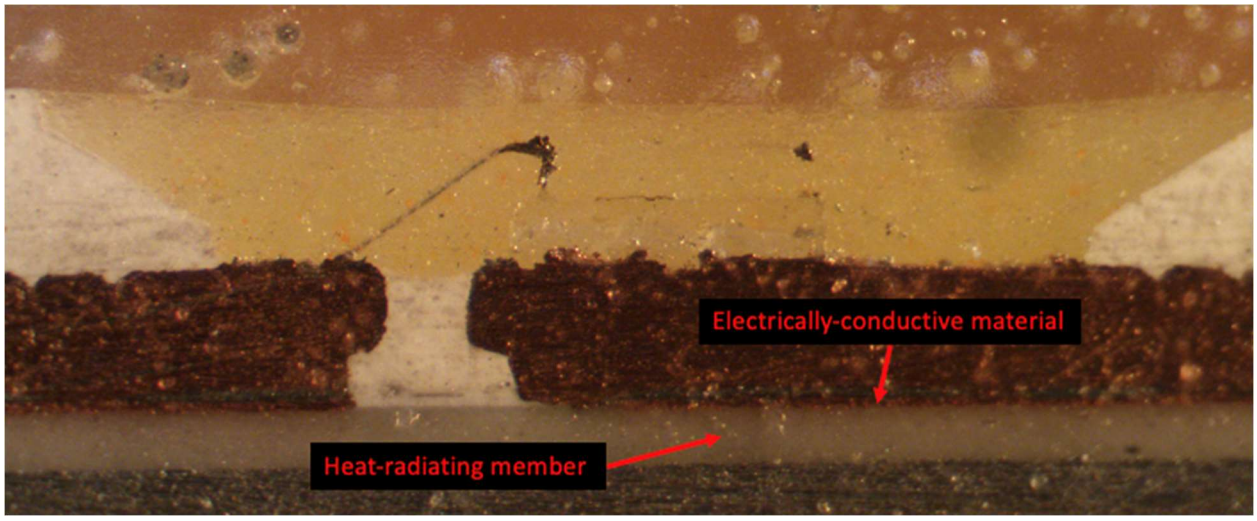
conductive layer is formed to extend from an area below the reflecting portion to the area outside the area covered by the reflecting portion,— The Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light and the EcoSmart Dimmable R20 75W LED Bulb each comprises a heat-radiating member bonded to a back face of said first lead frame with an electrically-conductive layer containing metal interposed therebetween, said electrically-conductive layer is formed to extend from an area below the reflecting portion to the area outside the area covered by the reflecting portion.

For example, shown below is a cross-sectional view of a phosphor LED chip from the Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light with a heat radiating member bonded to a back face of the first lead frame with an electrically-conductive layer containing metal interposed therebetween identified:



As shown above, the electrically-conductive layer is formed to extend from an area below the reflecting portion to the area outside the area covered by the reflecting portion.

In another example, shown below is a cross-sectional view of a phosphor LED chip from the EcoSmart Dimmable R20 75W LED Bulb with a heat radiating member bonded to a back face of the first lead frame with an electrically-conductive layer containing metal interposed therebetween identified:



As shown above, the electrically-conductive layer is formed to extend from an area below the reflecting portion to the area outside the area covered by the reflecting portion.

90. Defendants' infringement of the '190 Patent is exceptional and entitles LedComm to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

91. LedComm is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '190 Patent.

92. LedComm is entitled to recover from Defendants all damages that LedComm has sustained as a result of Defendants' infringement of the '190 Patent, including, without limitation, a reasonable royalty.

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

93. LedComm incorporates by reference and re-alleges paragraphs 1-62 of the Complaint as if fully set forth herein.

94. Defendants have infringed and are infringing, either literally or under the doctrine of equivalents, the '176 Patent in violation of 35 U.S.C. § 271 et seq., by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, a number of its commercial products including, *inter alia*, EcoSmart and

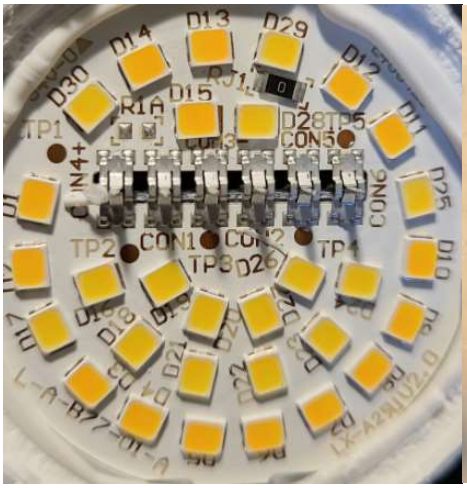
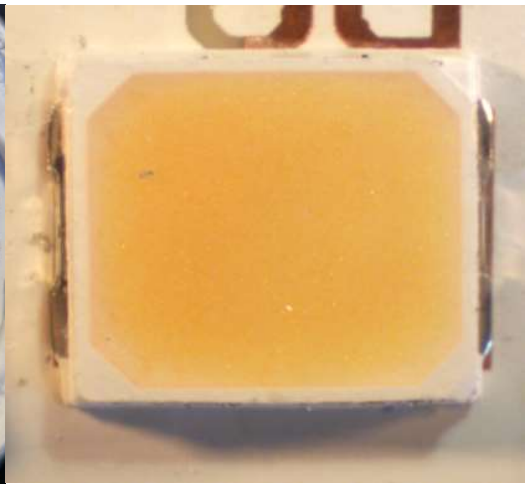
Commercial Electric products (*e.g.*, Commercial Electric 24 inch LED Color Changing Tape Light, Commercial Electric 2 foot LED Industrial High Bay Light, Commercial Electric 5 & 6 inch LED Color Changing Recessed Trim Light, EcoSmart 60W A19 Smart LED Bulb, EcoSmart 60W Dimmable LED Bulb Selectable CCT, EcoSmart 60W A19 LED Bulb, EcoSmart 65W BR30 Dimmable LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, EcoSmart Dimmable Par38 LED Bulb, EcoSmart R20 75W LED Bulb, EcoSmart 90W BR30 Dimmable LED Bulb, and EcoSmart 60W A19 Dimmable LED Bulb CCT, among other substantially similar products) (collectively, the "'176 Accused Products").

95. 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 two of the '176 Accused Products (*e.g.*, the EcoSmart 60W A19 Dimmable LED Bulb CCT, and the EcoSmart Dimmabe Par38 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:— Defendants make, use, sell, and/or offer to sell in the United States, and/or import into the United States, semiconductor light emitting devices that are covered by claim 1 of the '176 Patent.

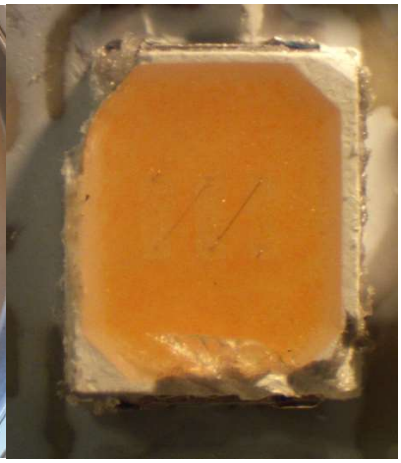
As one non-limiting example, the EcoSmart 60W A19 Dimmable LED Bulb CCT comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.*, https://www.homedepot.com/p/EcoSmart-60-Watt-Equivalent-A19-Dimmable-LED-Light-Bulb-Selectable-CCT-4-Pack-A9A19A60WT20C04/309683304.

For instance, shown below are top-down views of an example phosphor LED from the EcoSmart 60W A19 Dimmable LED Bulb CCT:

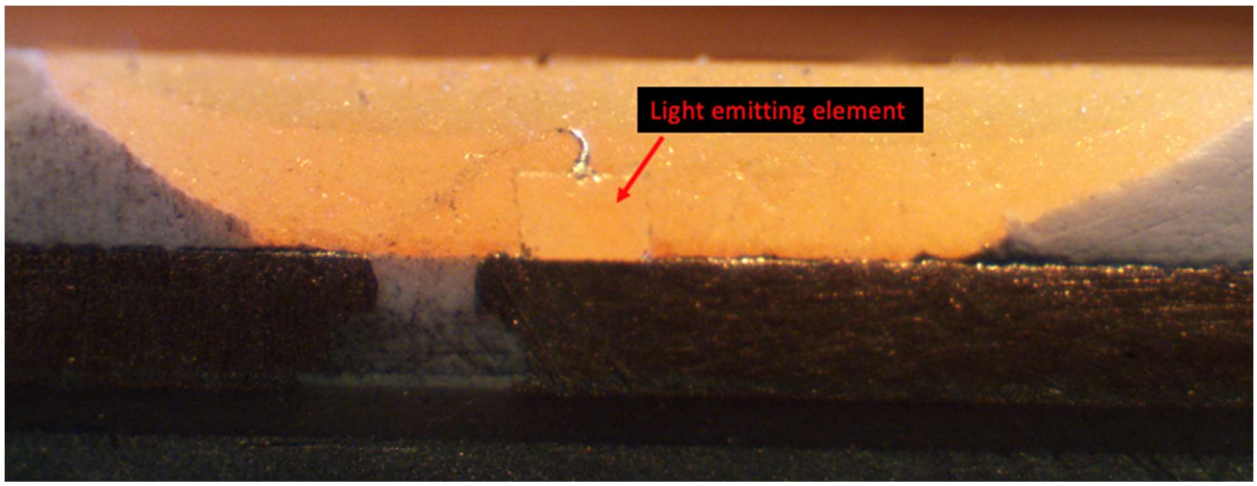
As another non-limiting example, the EcoSmart Dimmable Par38 LED Bulb comprises a "semiconductor light emitting device," as recited in claim 1. *See, e.g.,* https://www.homedepot.com/p/EcoSmart-90-Watt-Equivalent-PAR38-Dimmable-Energy-Star-Flood-LED-Light-Bulb-Bright-White-2-Pack-B7PR38P100ESD12/303574525.

For instance, shown below are top down views of an example phosphor LED from the EcoSmart Dimmable Par38 LED Bulb:

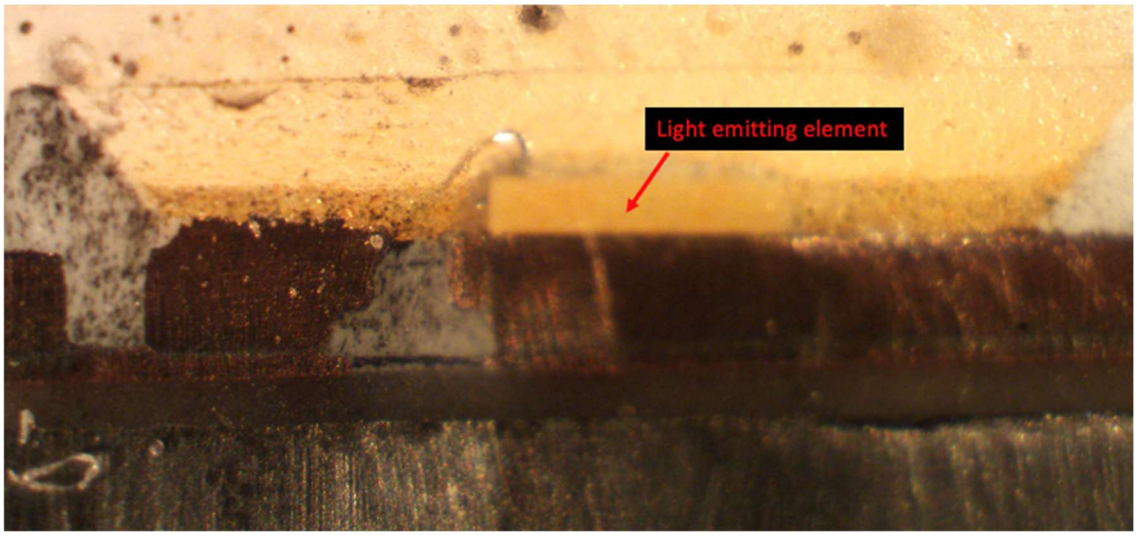



1(b): a semiconductor light emitting element*;*— The EcoSmart 60W A19 Dimmable LED Bulb CCT and the EcoSmart Dimmabe Par38 LED Bulb each comprise a semiconductor light emitting element.

For example, a cross section of a phosphor LED from an EcoSmart 60W A19 Dimmable LED Bulb CCT was taken, and a resulting cross-sectional view is shown below with a semiconductor light emitting element identified



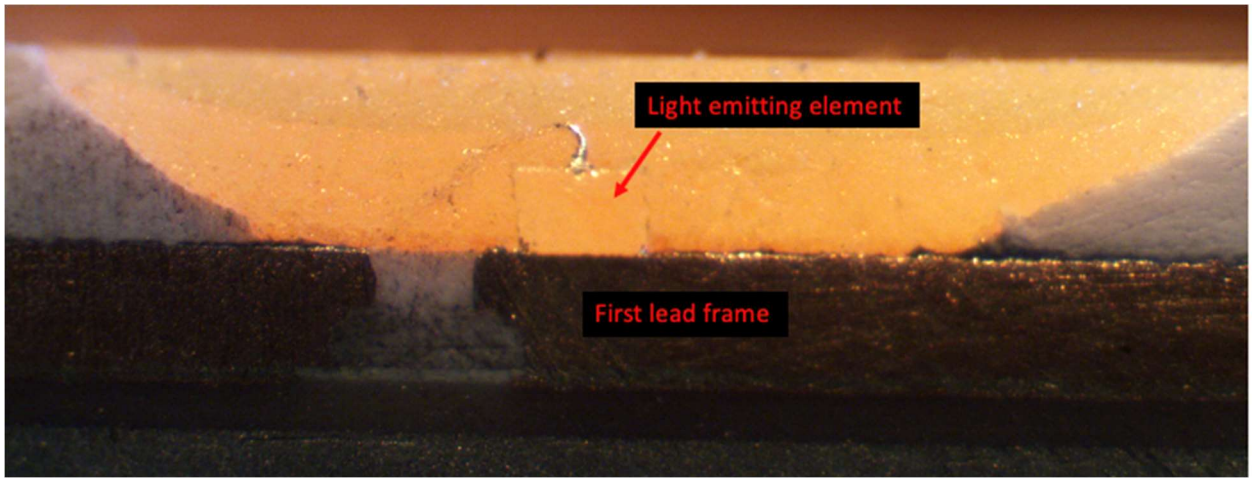
As another example, a cross section of an LED from an EcoSmart Dimmabe Par38 LED Bulb was taken, and a resulting cross-sectional view is shown below with a semiconductor light emitting element identified:



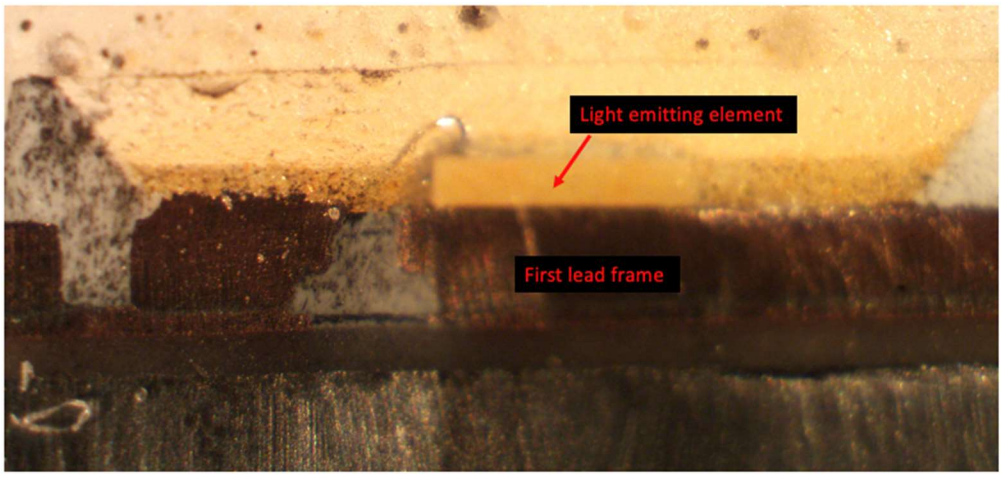
1(c): a first lead frame on which said semiconductor light emitting element is mounted;— The EcoSmart 60W A19 Dimmable LED Bulb CCT and the EcoSmart Dimmable

Par38 LED Bulb each comprise a first lead frame on which said semiconductor light emitting element is mounted.

For example, shown below is the cross-sectional view of the phosphor LED from the EcoSmart 60W A19 Dimmable LED Bulb CCT with an identification of a first lead frame on which the semiconductor light emitting element is mounted:



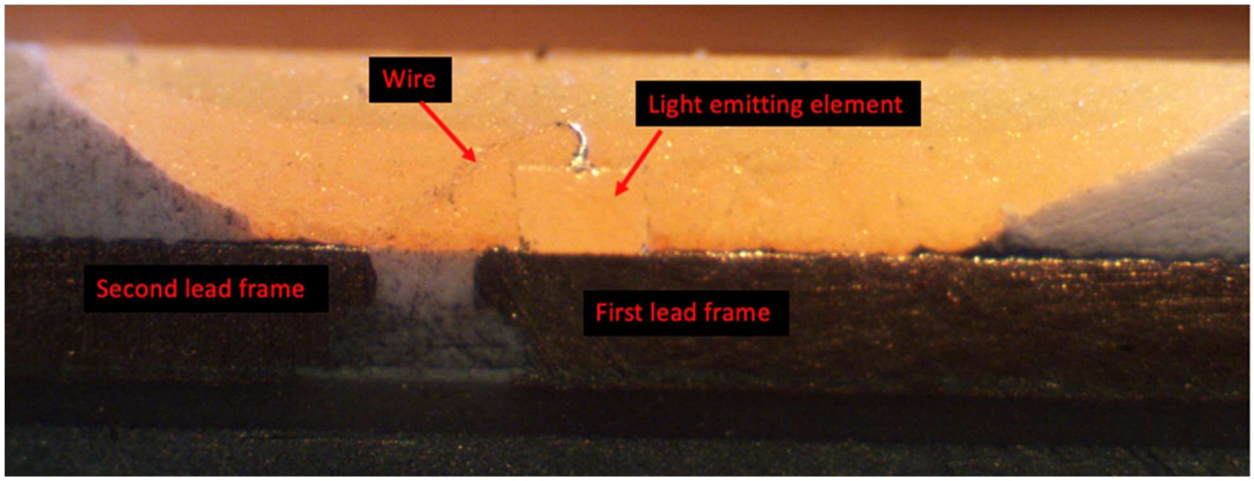
As another example, shown below is a resulting cross-sectional view of one cross-sectioned LED chip from the EcoSmart Dimmable Par38 LED Bulb with a first lead frame having a main surface on which the light-emitting element is mounted:



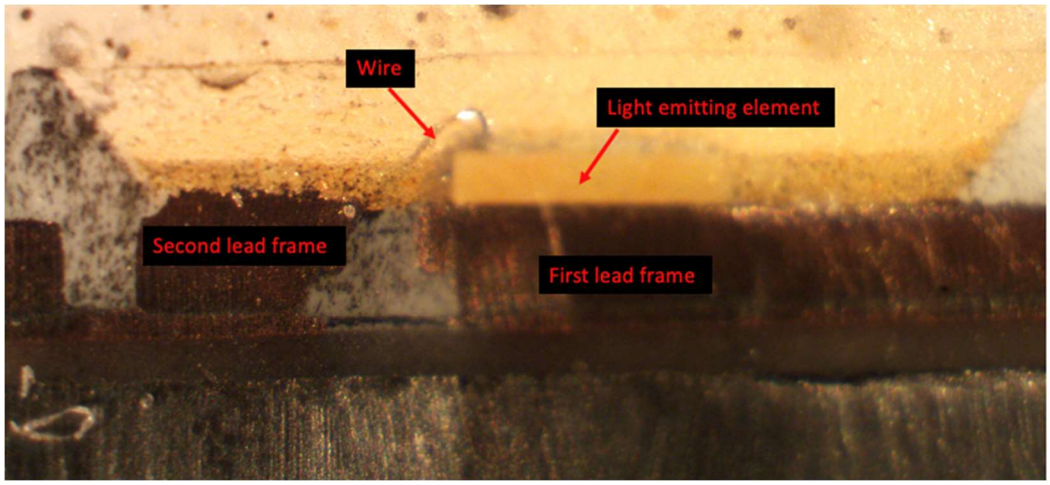
1(d): a second lead frame electrically connected to said semiconductor light emitting element via a wire,; and— The EcoSmart 60W A19 Dimmable LED Bulb CCT and the EcoSmart

Dimmable Par38 LED Bulb each comprise a second lead frame electrically connected to said semiconductor light emitting element via a wire.

For example, shown below is the cross-sectional view of the phosphor LED from the EcoSmart 60W A19 Dimmable LED Bulb CCT with the second lead frame electrically connected to the semiconductor light emitting element via a wire identified:



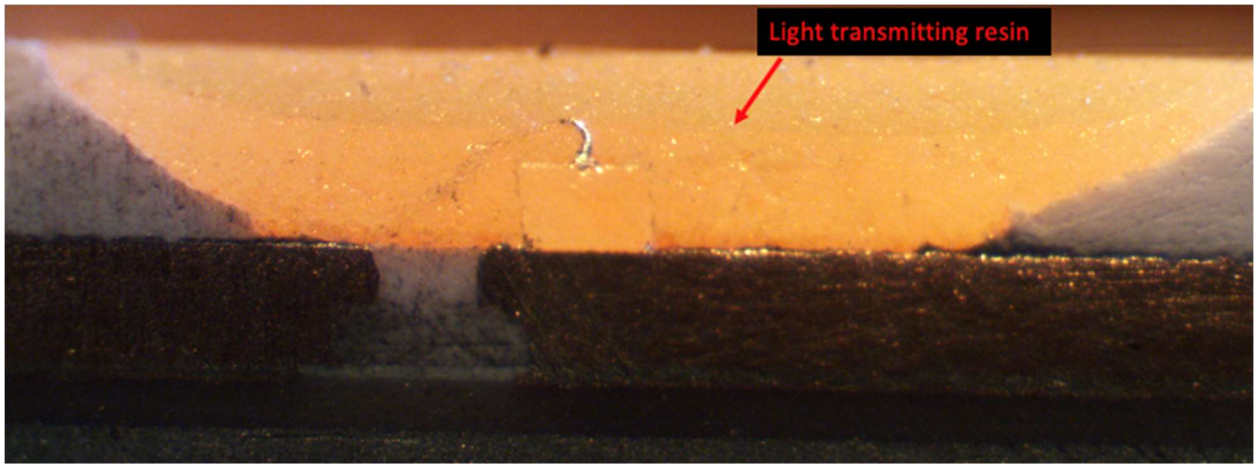
As another example, shown below are cross-sectional views of the phosphor LED chip from the EcoSmart Dimmable Par38 LED Bulb with the second lead frame electrically connected to the semiconductor light emitting element via a wire identified:



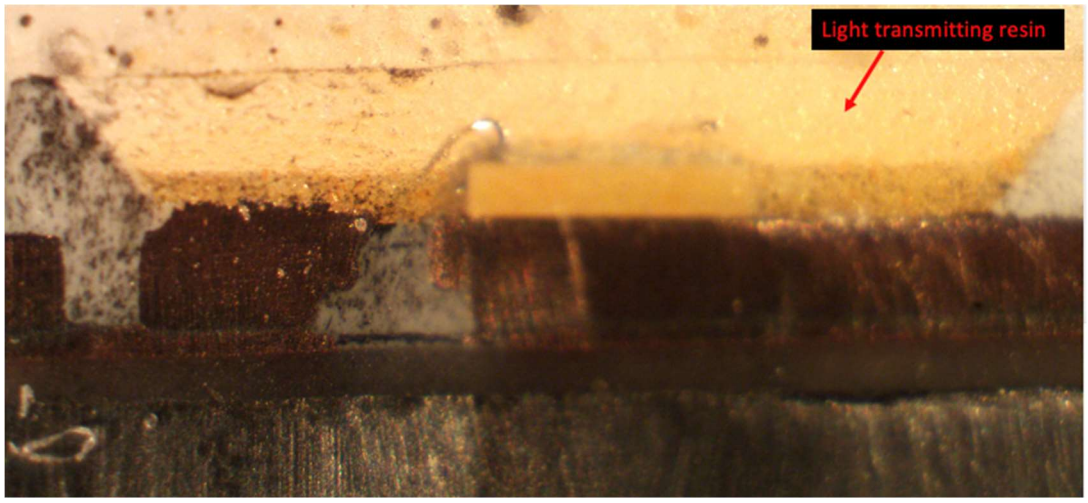
1(e): light transmitting resin formed on said semiconductor light emitting element and on said first and second lead frames,— The EcoSmart 60W A19 Dimmable LED Bulb CCT and

the EcoSmart Dimmable Par38 LED Bulb each comprise a light transmitting resin formed on said semiconductor light emitting element and on said first and second lead frames.

For example, shown below is the cross-sectional view of the phosphor LED from the EcoSmart 60W A19 Dimmable LED Bulb CCT with the light transmitting resin formed on the light emitting element and first and second lead frames identified:



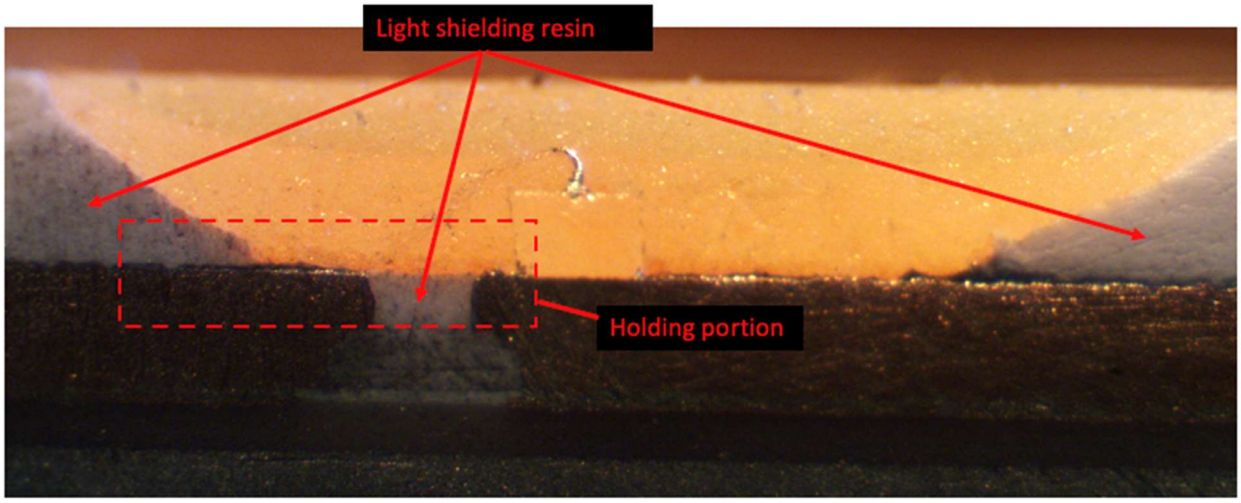
As another example, shown below is the cross-sectional view of the LED from the EcoSmart Dimmable Par38 LED Bulb with the light transmitting resin formed on the light emitting element and first and second lead frames identified:



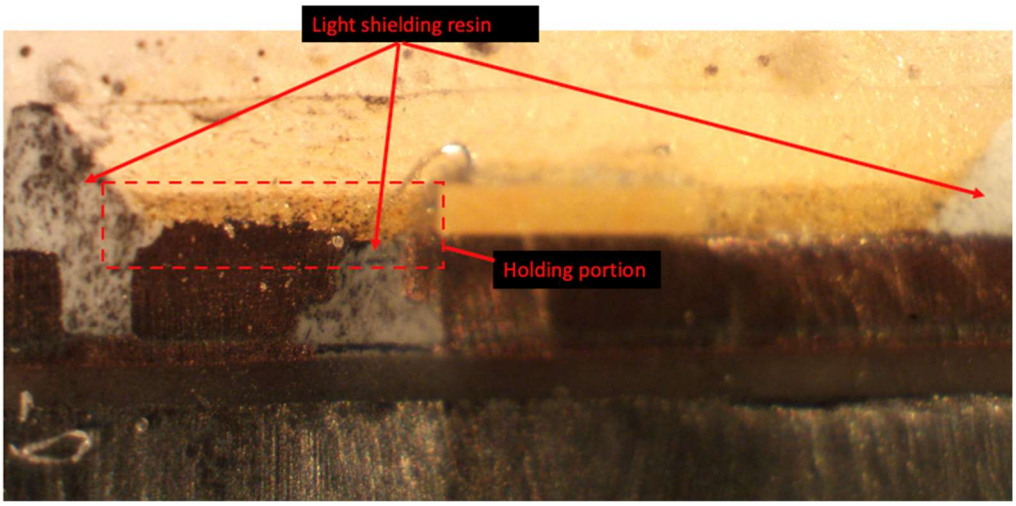
1(f): wherein said light emitting element is surrounded by a light shielding resin, wherein leading ends of said first and second lead frames are inserted into said light transmitting resin

to provide a holding portion holding said first and second lead frames, — In the EcoSmart 60W A19 Dimmable LED Bulb CCT and the EcoSmart Dimmable Par38 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 phosphor LED from the EcoSmart 60W A19 Dimmable LED Bulb CCT with the light shielding resin and holding portion identified:

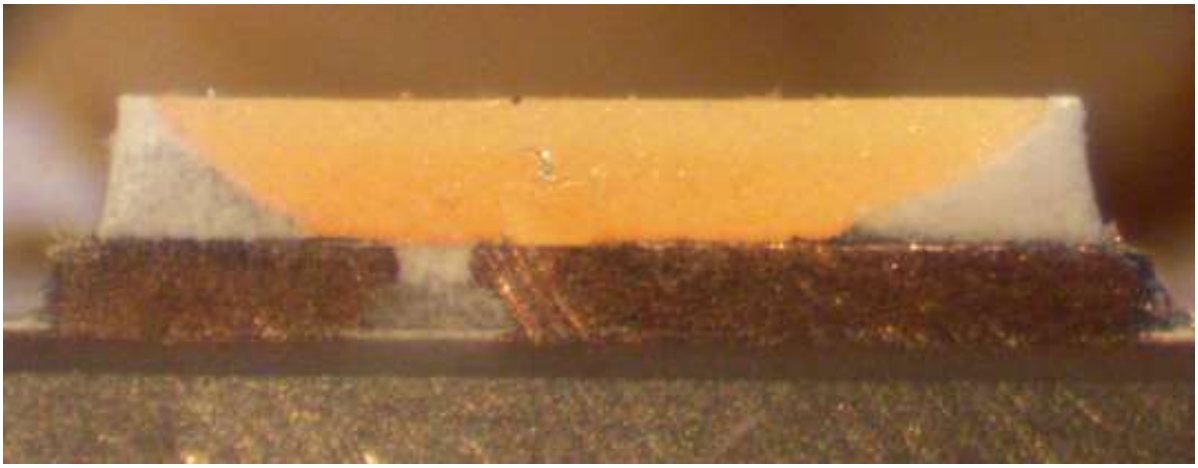


As another example, shown below is the cross-sectional view of the LED from the EcoSmart Dimmable Par38 LED Bulb with the light shielding resin and holding portion identified:

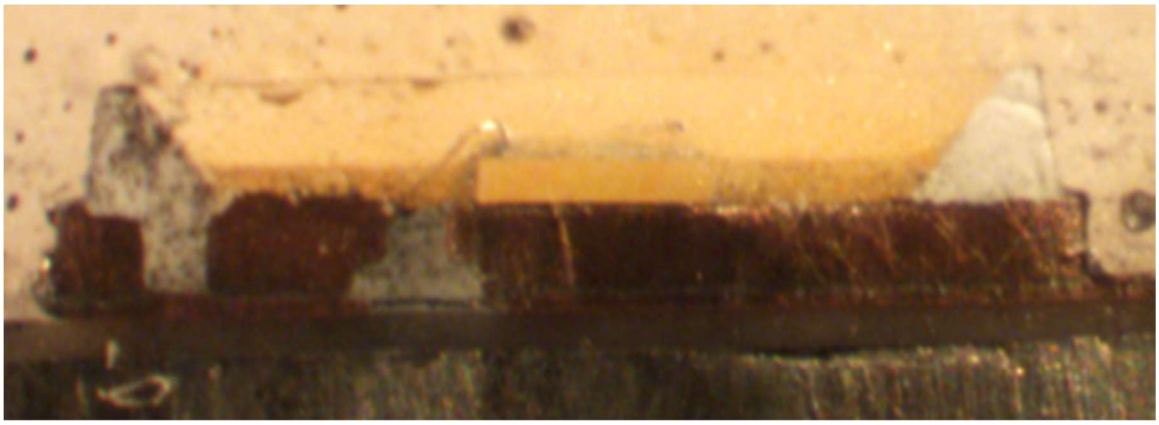


1(g): wherein said light shielding resin has a reflectance higher than a reflectance of said light transmitting resin, and — In the EcoSmart 60W A19 Dimmable LED Bulb CCT and the EcoSmart Dimmable Par38 LED Bulb, the light shielding resin has a reflectance higher than a reflectance of the light transmitting resin.

For example, as shown below, the light shielding resin of EcoSmart 60W A19 Dimmable LED Bulb CCT is opaque and white, whereas the light transmitting resin is largely transparent. Accordingly, on information and belief, the light shielding resin of EcoSmart 60W A19 Dimmable LED Bulb CCT reflects a greater amount of light than the light transmitting resin.

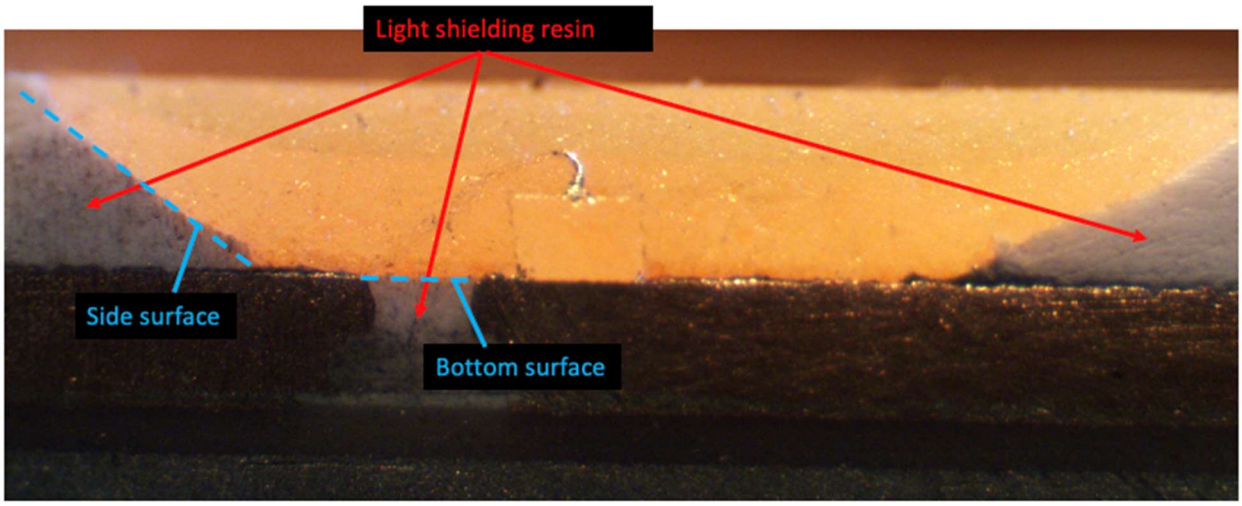


As another example, as shown below, the light shielding resin of the EcoSmart Dimmable Par38 LED Bulb is opaque, whereas the light transmitting resin is largely transparent. Accordingly, on information and belief, the light shielding resin of the EcoSmart Dimmable Par38 LED Bulb reflects a greater amount of light than the light transmitting resin.

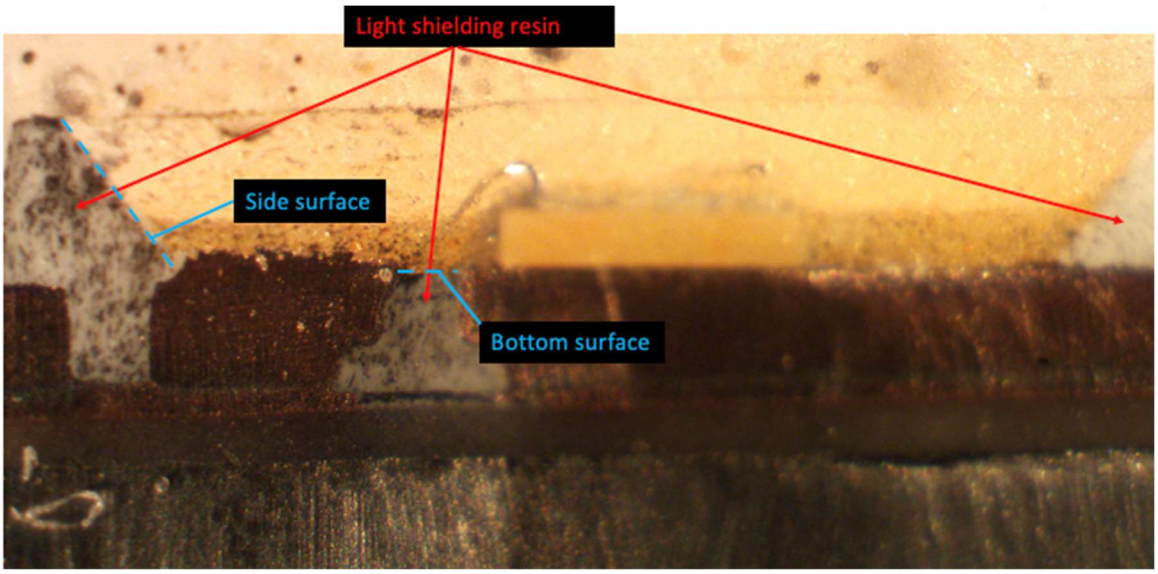


1(h): wherein said light shielding resin is formed to cover a bottom surface and a side surface of said holding portion provided in said light transmitting resin. — In the EcoSmart 60W A19 Dimmable LED Bulb CCT and the EcoSmart Dimmable Par38 LED Bulb, the light shielding resin is formed to cover a bottom 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 phosphor LED from the EcoSmart 60W A19 Dimmable LED Bulb CCT 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 LED from the EcoSmart Dimmable Par38 LED Bulb with the light shielding resin covering a bottom surface and a side surface of the holding portion identified:



96. Defendants' 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.

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

98. LedComm is entitled to recover from Defendants all damages that LedComm has sustained as a result of Defendants' infringement of the '176 Patent, including, without limitation, a reasonable royalty.

COUNT VII: INFRINGEMENT OF U.S. PATENT NO. 7,490,959

99. LedComm incorporates by reference and re-alleges paragraphs 1-62 of the Complaint as if fully set forth herein.

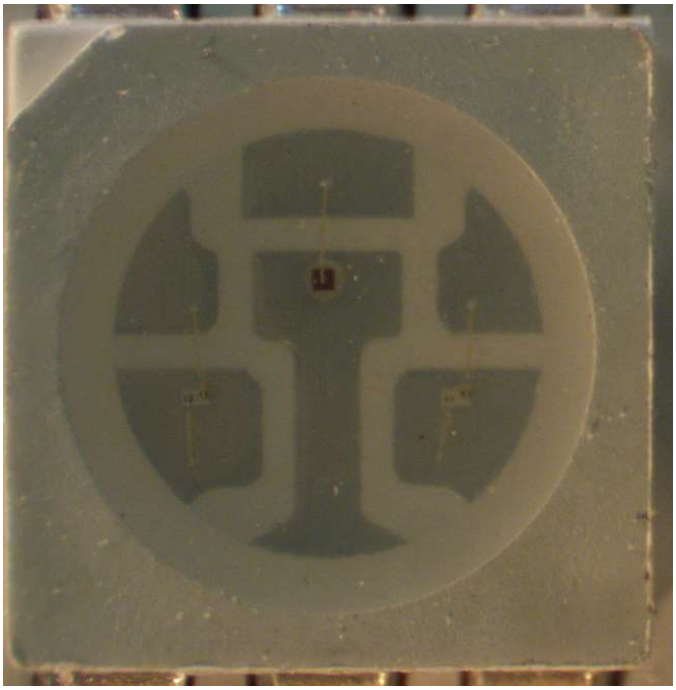
100. Defendants have infringed and are infringing, either literally or under the doctrine of equivalents, the '959 Patent in violation of 35 U.S.C. § 271 et seq., by making, using, offering for sale, and/or selling in the United States, and/or importing into the United States without authority or license, a number of its commercial products including, *inter alia*, Commercial Electric products (*e.g.*, the Commercial Electric 24 inch Color Changing Tape and the Commercial Electric 24 foot Color Changing Tape, among other substantially similar products) (collectively, the "'959 Accused Products").

101. 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 '959 Patent in connection with one of the '959 Accused Products (*e.g.*, the Commercial Electric 24 foot Color Changing Tape). 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 '959 Accused Products that it obtains during discovery.

1(a): A light emitting apparatus, comprising:— Defendants make, use, sell, and/or offer to sell in the United States, and/or import into the United States, semiconductor light emitting devices that are covered by claim 1 of the '959 Patent.

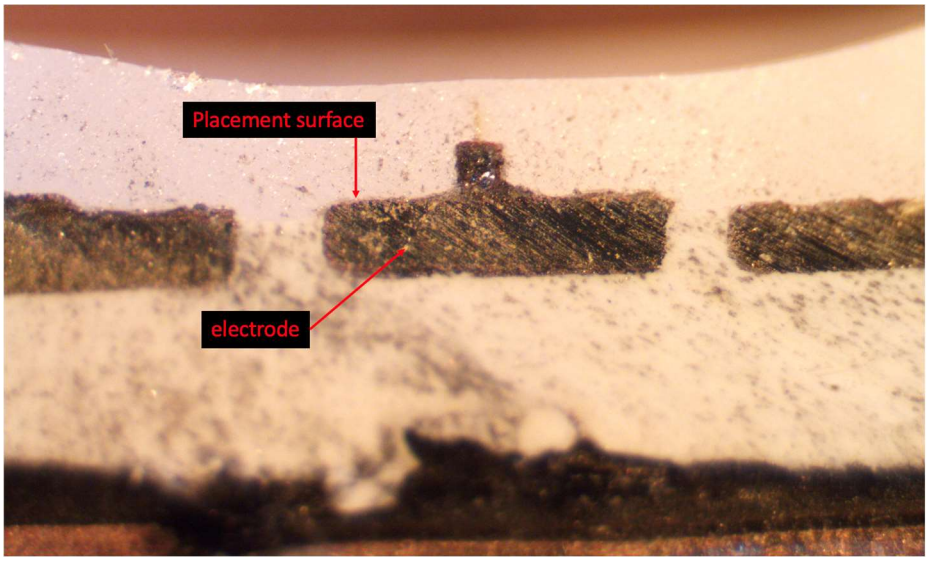
As one non-limiting example, the Commercial Electric 24 foot Color Changing Tape comprises a "semiconductor light emitting apparatus," as recited in claim 1. *See, e.g.,* https://www.homedepot.com/p/Commercial-Electric-24-ft-White-Multicolor-RGB-W-Indoor-Outdoor-LED-Tape-Light-w-Remote-C624340/307883099.

For instance, top-down views of an example multi-color semiconductor light-emitting apparatus from a Commercial Electric 24 foot Color Changing Tape are shown below:



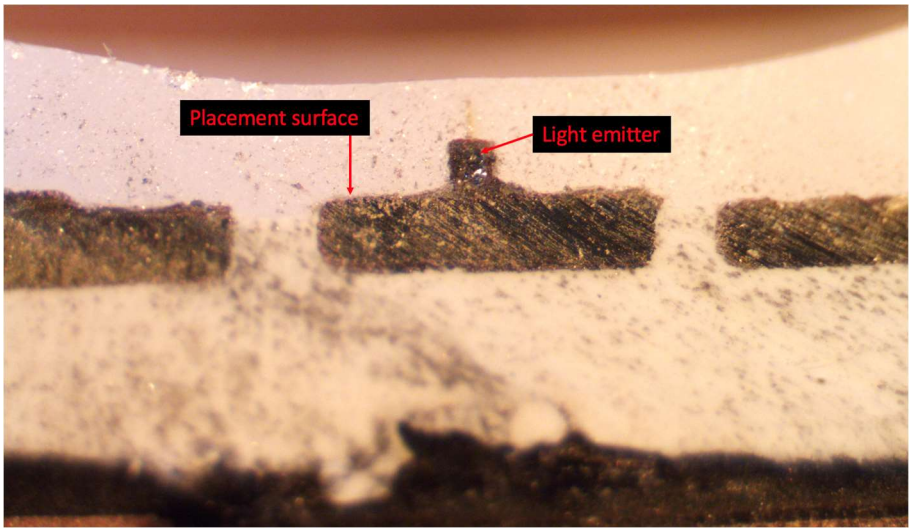
1(b): a placement surface that includes an electrode*;* — The Commercial Electric 24 foot Color Changing Tape comprises a placement surface that includes an electrode.

For example, shown below is a cross-sectional view of an LED from the Commercial Electric 24 foot Color Changing Tape with a placement surface that includes an electrode identified:



1(c): a light emitter that is placed on the placement surface;— The Commercial Electric 24 foot Color Changing Tape comprises a light emitter that is placed on the placement surface;.

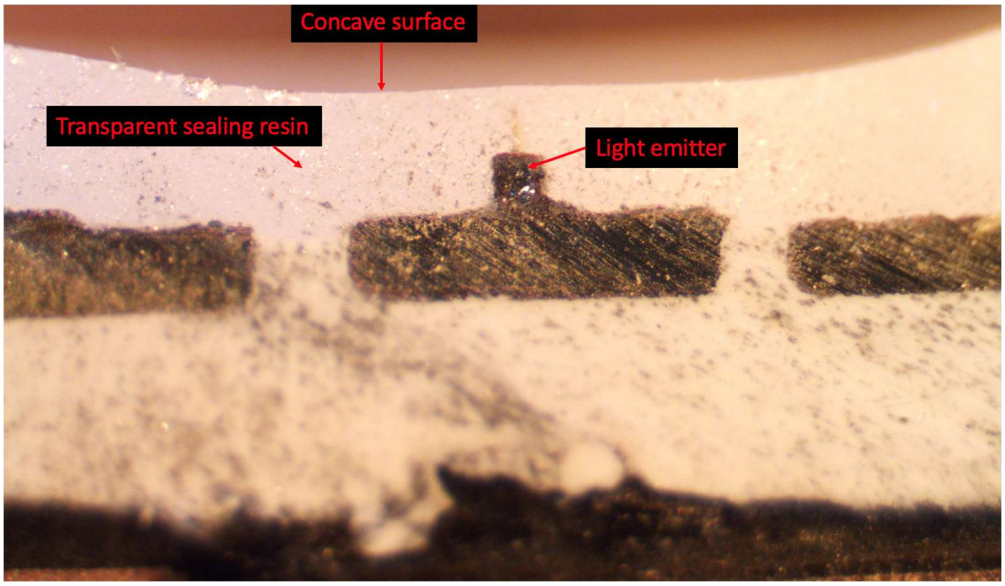
For example, shown below is a cross-sectional view of the LED from the Commercial Electric 24 foot Color Changing Tape with the light emitter placed on the placement surface identified:



1(d): a transparent sealing resin that seals the light emitter, and forms a concave surface that is a light-outgoing surface via which light outgoes,— The Commercial Electric 24 foot Color

Changing Tape each comprises a transparent sealing resin that seals the light emitter, and forms a concave surface that is a light-outgoing surface via which light outgoes.

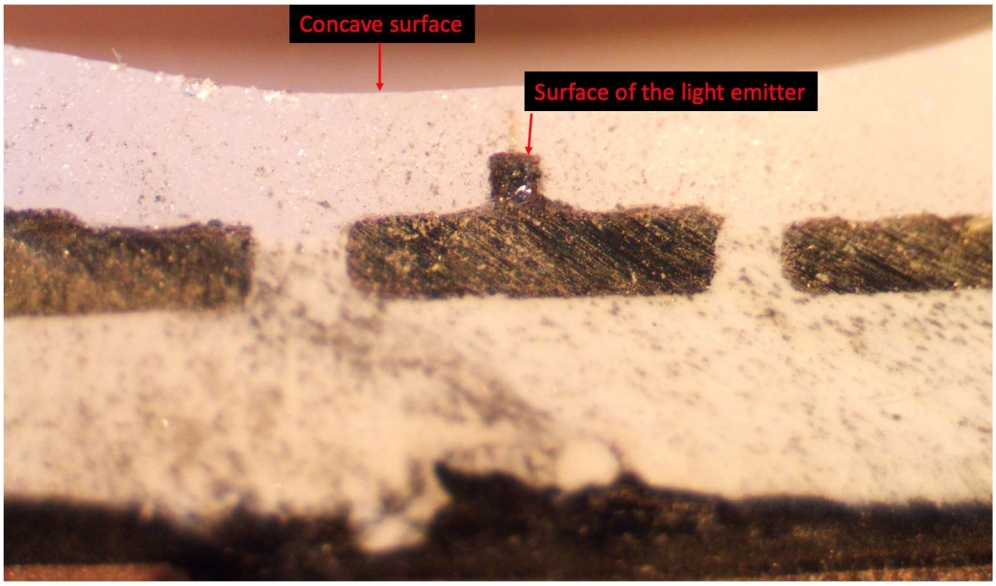
For example, shown below is a cross-sectional view of the LED from the Commercial Electric 24 foot Color Changing Tape with a transparent sealing resin that seals the light emitter and forms a concave surface identified:



As shown above, the formed concave surface is a light-outgoing surface via which light outgoes.

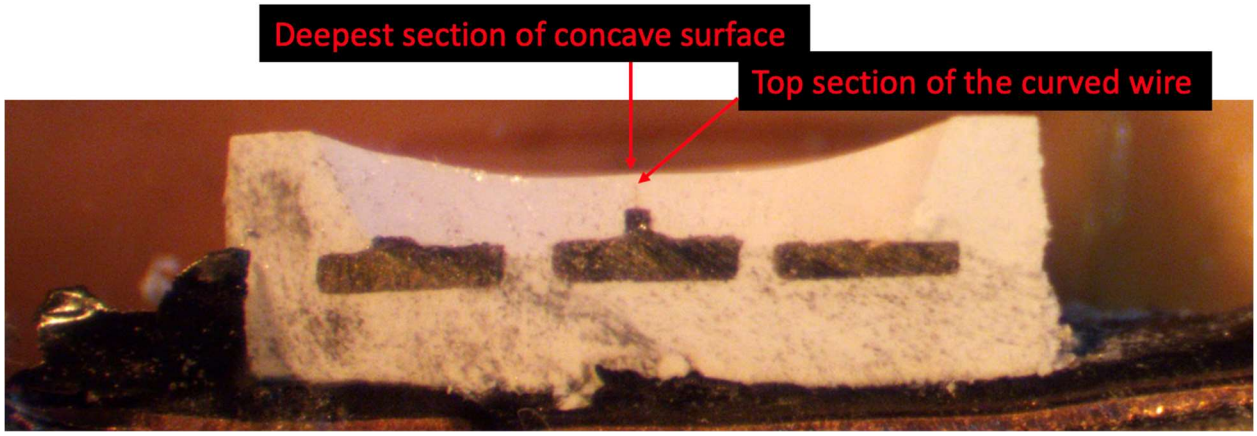
1(e): the concave surface facing a surface of the light emitter, from which surface light is emitted; and— In the Commercial Electric 24 foot Color Changing Tape, the concave surface faces a surface of the light emitter, from which surface light is emitted.

For example, shown below is a cross-sectional view of the LED from the Commercial Electric 24 foot Color Changing Tape with the concave surface facing a surface of the light emitter identified:



1(f): the light emitter and the electrode being connected via a wire that is curved in such a way that a top section of the curved wire substantially coincides with a deepest section of the concave surface,— The Commercial Electric 24 foot Color Changing Tape each includes a light emitter and the electrode being connected via a wire that is curved in such a way that a top section of the curved wire substantially coincides with a deepest section of the concave surface.

For example, shown below is a cross sectional view of the LED from the Commercial Electric 24 foot Color Changing Tape with the light emitter and the electrode connected via a wire that is curved in such a way that a top section of the curved wire substantially coincides with a deepest section of the concave surface:



102. Defendants' infringement of the '959 Patent is exceptional and entitles LedComm to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

103. LedComm is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '959 Patent.

104. LedComm is entitled to recover from Defendants all damages that LedComm has sustained as a result of Defendants' infringement of the '959 Patent, including, without limitation, a reasonable royalty.

JURY DEMAND

LedComm hereby demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff LedComm Communications, LLC respectfully requests:

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

B. An award of damages sufficient to compensate LedComm for Defendants' infringement under 35 U.S.C. § 284;

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: December 16, 2020

MORT LAW FIRM
and
LEE SULLIVAN SHEA & SMITH LLP

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