

**IN THE UNITED STATES DISTRICT COURT FOR
THE NORTHERN DISTRICT OF OHIO**

SemiLED Innovations LLC,

Plaintiff,

V.

Current Lighting Solutions, LLC,

Defendant.

Civil Action No. _____

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff SemiLED Innovations LLC (“SemiLED” or “Plaintiff”), by and through the undersigned counsel, hereby asserts the following claims for patent infringement against Defendant Current Lighting Solutions, LLC (“Current Lighting Solutions” or “Defendant”), and alleges as follows:

SUMMARY

1. Plaintiff is the owner by assignment of all right, title, and interest in United States Patent Nos. 8,309,971; 8,319,246; 8,963,196; and 9,530,942 (collectively, the “Patents-in-Suit”).

2. Defendant infringes the Patents-in-Suit at least by selling, without authorization, Plaintiff's proprietary technologies incorporated in a number of Defendant's residential and commercial products including, *inter alia*, Evolve LED Floodlight, Evolve Roadway Light, Prescolite LB4A, Kim Lighting Floodlight, GE Current Par30 2700k Bulb, Exo Sling Light, Compass CU2 Series Light, Evolve Wall Pack, GE Current 6W A19 and GE Current HID Type B Lamp, 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, Plaintiff seeks to obtain compensation for the harm Plaintiff has suffered, and will continue to suffer, as a result of Defendant'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. Defendant has infringed, and continues to infringe, one or more claims of Plaintiff'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. Plaintiff 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"). Plaintiff seeks monetary damages for Defendant's infringement of the Patents-in-Suit.

THE PARTIES

7. Plaintiff SemiLED Innovations LLC is a Texas limited liability company with a business address at 6841 Virginia Parkway, Suite 103-441, McKinney, Texas 75071. Plaintiff is the owner of the intellectual property rights at issue in this action.

8. Upon information and belief, Defendant Current Lighting Solutions, LLC, is a corporation organized and existing under the laws of the state of Delaware, with a regular and established place of business located at 25825 Science Park, Beachwood, Ohio 44122. Defendant may be served via its registered agent, Corporate Creations Network Inc, 2119 E. Court Street, Cincinnati, Ohio 45202.

9. On information and belief, Defendant 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 Eastern District of Texas, and otherwise directs infringing activities in this District in connection with the Accused Products.

JURISDICTION AND VENUE

10. 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).

11. This Court has general and specific personal jurisdiction over Defendant. Defendant conducts substantial business in the forum, directly and/or through intermediaries, including: (i) at least a portion of the infringing activity alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct and/or deriving substantial revenue from goods and services provided to persons in this District, and (iii) having a regular and established place of business in this state and in this judicial district.

12. Venue is proper in this District under 28 U.S.C. §§ 1391(b) and (c) and 28 U.S.C. § 1400(b), as Defendant has committed substantial acts of infringement in this District and has regular and established places of business in this District.

PATENTS-IN-SUIT

U.S. Patent No. 8,309,971

13. U.S. Patent No. 8,309,971 (the “‘971 Patent”) is titled “Light Emitting Diode Having Electrode Pads” and was issued on Nov 13, 2012. A true and correct copy of the ‘971 Patent is attached as Exhibit A.

14. The ‘971 Patent was filed on December 21, 2010 as U.S. Patent Application No. 12/974,917.

15. Plaintiff is the owner of all rights, title, and interest in and to the ‘971 Patent, with the full and exclusive right to bring suit to enforce the ‘971 Patent, including the right to recover

for past infringement.

16. The '971 Patent is valid and enforceable under United States Patent Laws.

17. The inventors of the '971 Patent recognized problems with the distribution of current in the P-type semiconductor layer. According to the inventors of the '971 Patent, "To solve such problems, a transparent electrode layer having a low resistivity may be formed on the P-type semiconductor layer so as to enhance current spreading." *See* Ex. A. at 1:53-56. This solution increased the light emitting area of the LED.

18. One problem present in the prior art was that "since the transparent electrode layer tends to absorb light, the thickness of the transparent electrode layer may be limited, thereby providing limited current spreading. In particular, in a large LED having an area of about 1 mm² or more for high output, there may be a limit in achieving efficient current spreading through the transparent electrode layer." *Id.* at 1:61-67.

19. The inventions claimed by the '971 Patent addressed these limitations by, e.g., spacing an electrode apart from a semiconductor layer and providing LEDs with various structures of electrode pads and extensions capable of enhancing current spreading. *See id.* at 2:26-28 and 2:32-35. As a result, the '971 Patent offered advantages of, *inter alia*, enhancing current spreading, as well as increasing the luminous efficacy.

U.S. Patent No. 8,319,246

20. U.S. Patent No. 8,319,246 (the "'246 Patent") is titled "Semiconductor Device And Method For Manufacturing Same" and was issued on Nov 27, 2012. A true and correct copy of the '246 Patent is attached as Exhibit B.

21. The '246 Patent was filed on Feb 16, 2010 as U.S. Patent Application No. 12/706,366.

22. Plaintiff is the owner of all rights, title, and interest in and to the '246 Patent, with

the full and exclusive right to bring suit to enforce the ‘246 Patent, including the right to recover for past infringement.

23. The ‘246 Patent is valid and enforceable under United States Patent Laws.

24. The ‘246 Patent recognized problems with existing light emitting diodes (LED) at the time of the inventions of the ‘246 Patent.

25. For instance, the inventors of the ‘246 Patent recognized that flip chip mounting was an optimal method for mounting LEDs since it would allow for optimal heat transmission from the LED to the substrate (1:14-20). However, the prior art flip chip mounting methods needed improvement with respect to LED applications; flip chip mounting was improved from a higher aspect ratio of the columnar metal, but prior art methods increased the aspect ratio of the columnar metal by reducing thickness or increasing height of the material therein, which resulted in worse joining strength, less reliability, and increased cost. Ex. B at 1:29-37.

26. The ‘246 Patent discloses multiple improvements over the prior art. First the ‘246 Patent includes embodiments in which the metal pillars have a higher aspect ratio without increasing height, but by making the metal pillar sufficiently fine resulting in improved stress mitigation and reliability across the components. *Id.* at 4:23-29. Second, the metal pillars taught by the ‘246 Patent can better absorb stress, so, even if the LED is misaligned when mounted on the circuit, there won’t be reliability issues; the methods disclosed therein allow for better joining strength between the external terminal and the circuit substrate resulting in improved reliability *Id.* at 4:14-22. Third, multiple fine metal pillars can be used resulting in increased joining strength, less electrical resistance, improved reliability, and increased aspect ratio of the metal pillar, all without increasing cost. *Id.* at 4:30-49. The Inventors of the ‘246 Patents also disclosed a variety of manufacturing methods and the improvements of their technology. *Id.* at 4:50-9:48.

U.S. Patent No. 8,963,196

27. U.S. Patent No. 8,963,196 (the “‘196 Patent”) is titled “Slim LED Package” and was issued on Feb 24, 2015. A true and correct copy of the ‘196 Patent is attached as Exhibit C.

28. The ‘196 Patent was filed on Jan 22, 2014 as U.S. Patent Application No. 14/161,377.

29. Plaintiff is the owner of all rights, title, and interest in and to the ‘196 Patent, with the full and exclusive right to bring suit to enforce the ‘196 Patent, including the right to recover for past infringement.

30. The ‘196 Patent is valid and enforceable under United States Patent Laws.

31. The ‘196 Patent recognized problems with existing light emitting diode (LED) packages at the time of the inventions of the ‘196 Patent.

32. For instance, the inventors of the ‘196 Patent recognized that prior art light emitting diode packages had issues where the housing supporting the lead frame would have excessive thickness. The added thickness made it difficult to fabricate a thin lead frame type LED package. Additionally, “the encapsulation material of the LED package, which covers the LED chip, undergoes a yellowing phenomenon by energy generated from the LED chip emitting light. Such a yellowing phenomenon is a main cause of decreased luminescence performance and lifetime of the LED package.” Ex. C at 1:53-57. Prior attempts to address these issues involved the use of a heat sink structure, such as a heat dissipation slug inserted into the housing, which complicated the manufacturing process. *See id.* at 1:58-64.

33. The inventors of the ‘196 Patent recognized that a “lead frame on which the LED chip is mounted and the lead frame with which a bonding wire is connected have a significantly increased area exposed to the bottom, so that the LED package has greatly improved thermal dissipation efficiency.” *See id.* at 3:1-5. Additionally, the inventors of the ‘196 Patent describe the

following method to increase LED package slimness: “the LED package is configured to mount an LED chip on a chip mounting recess, which is formed on a predetermined region of a lead frame by reducing the thickness of the predetermined region, such that the thickness of the LED chip partially overlaps the thickness of the lead frame.” *See id.* at 2:62-66.

34. In view of the foregoing, among other advantages over the prior art, the inventions claimed by the ‘196 Patent provide the benefits of “thermal dissipation efficiency” and a reduction of thickness over the prior art by way of the LED chip mounting recess and lead frame area. *See id.* at 2:61-68 and 3:1-5.

U.S. Patent No. 9,530,942

35. U.S. Patent No. 9,530,942 (the “‘942 Patent”) is titled “Slim LED Package” and was issued on December 27, 2016. A true and correct copy of the ‘942 Patent is attached as Exhibit D.

36. The ‘942 Patent was filed on August 3, 2015 as U.S. Patent Application No. 14/816,532.

37. Plaintiff is the owner of all rights, title, and interest in and to the ‘942 Patent, with the full and exclusive right to bring suit to enforce the ‘942 Patent, including the right to recover for past infringement.

38. The ‘942 Patent is valid and enforceable under United States Patent Laws.

39. The ‘942 Patent recognized problems with existing light emitting diode (LED) packages at the time of the inventions of the ‘942 Patent.

40. For instance, the inventors of the ‘942 Patent recognized that prior art light emitting diode packages had issues where the housing supporting the lead frame would have excessive thickness. The added thickness made it difficult to fabricate a thin lead frame type LED package. Additionally, “the encapsulation material of the LED package, which covers the LED chip,

undergoes a yellowing phenomenon by energy generated from the LED chip emitting light. Such a yellowing phenomenon is a main cause of decreased luminescence performance and lifetime of the LED package.” Ex. D at 1:57-62. Prior attempts to address these issues involved the use of a heat sink structure, such as a heat dissipation slug inserted into the housing, which complicated the manufacturing process. *See id.* at 1:64-67 and 2:1.

41. The inventors of the ‘942 Patent recognized that a “lead frame on which the LED chip is mounted and the lead frame with which a bonding wire is connected have a significantly increased area exposed to the bottom, so that the LED package has greatly improved thermal dissipation efficiency.” *See id.* at 3:6-11. Additionally, the inventors of the ‘942 Patent describe the following method to increase LED package slimness, “the LED package is configured to mount an LED chip on a chip mounting recess, which is formed on a predetermined region of a lead frame by reducing the thickness of the predetermined region, such that the thickness of the LED chip partially overlaps the thickness of the lead frame.” *See id.* at 2:67 and 3:1-4.

42. In view of the foregoing, among other advantages over the prior art, the inventions claimed by the ‘942 Patent provide the benefits of “thermal dissipation efficiency” and a reduction of thickness over the prior art by way of the LED chip mounting recess and lead frame area. *See id.* at 2:67, 3:1-4 and 3:6-11.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 8,309,971

43. Plaintiff incorporates by reference and re-alleges 1-42 of the Complaint as if fully set forth herein.

44. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the ‘971 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, products, including but not limited to Evolve LED

46. ***1(a): A light emitting diode, comprising a substrate;***—The exemplary Exo Sling Light contains light emitting diodes, as seen in Figure 1A - 1 and Figure 1A - 2 comprising a substrate.

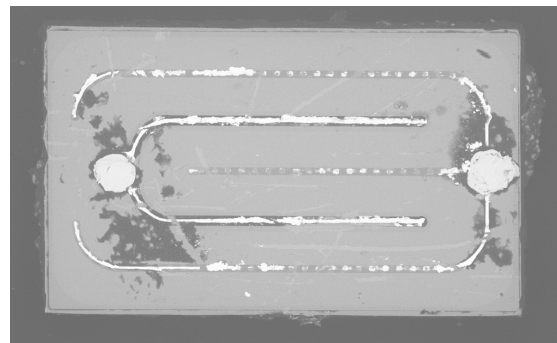


Figure 1A - 2 - LED Chip – Exo Sling Light

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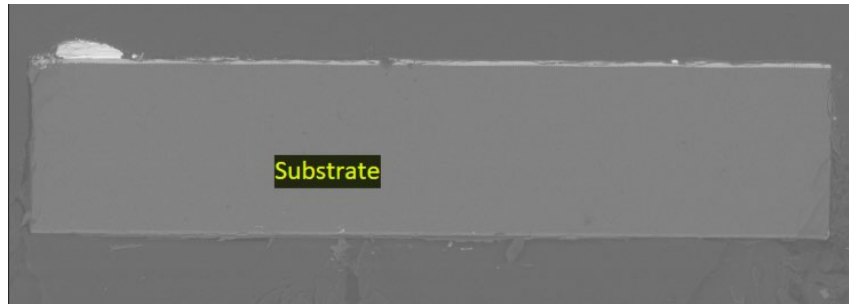


Figure 1B - 1 Exo Sling Light (1)

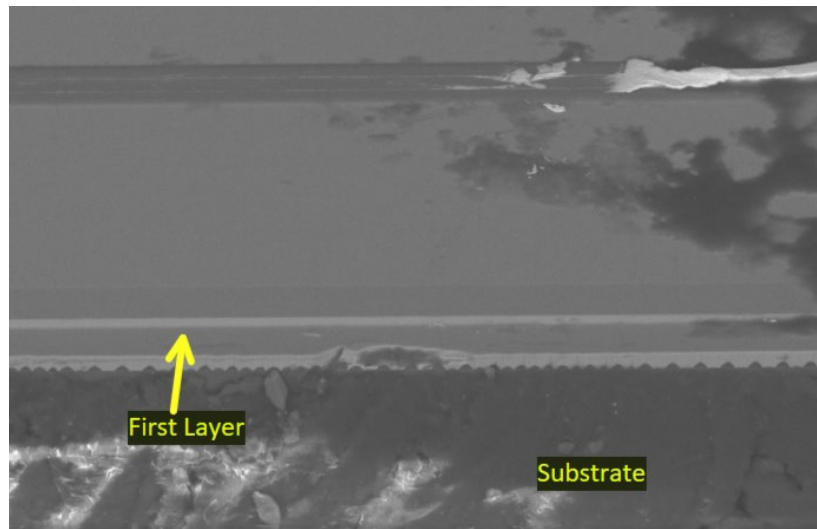


Figure 1B - 2 Exo Sling Light (2)

48. ***1(c): a second conductive type semiconductor layer arranged on the first conductive type semiconductor layer;***—As one non-limiting example, the below SEM image of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B – 3, is annotated to illustrate the second conductive type semiconductor layer arranged on the conductive type semiconductor layer.

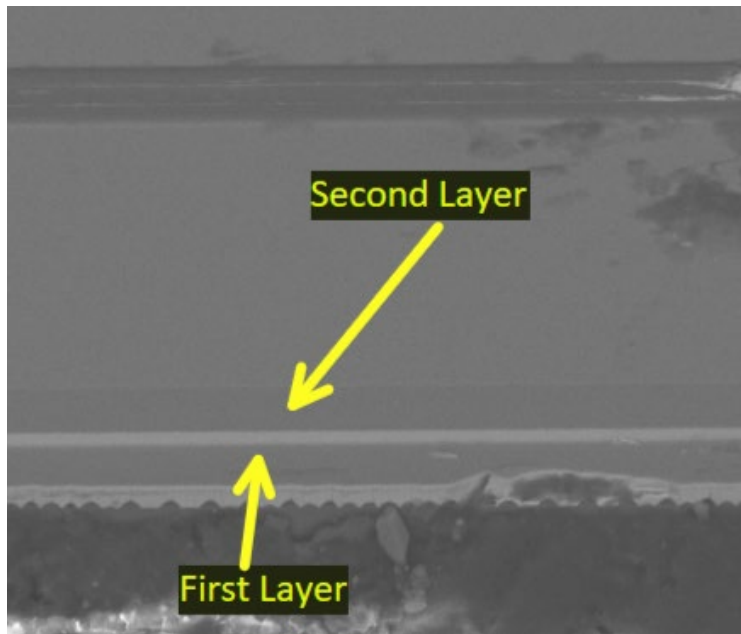


Figure 1B – 3 Exo Sling Light

49. ***1(d): an active layer disposed between the first conductive type semiconductor layer and the second conductive type semiconductor layer;***— As one non-limiting example, the below SEM image of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B - 4, is annotated to illustrate the active layer between the two conductive type semiconductor layers.

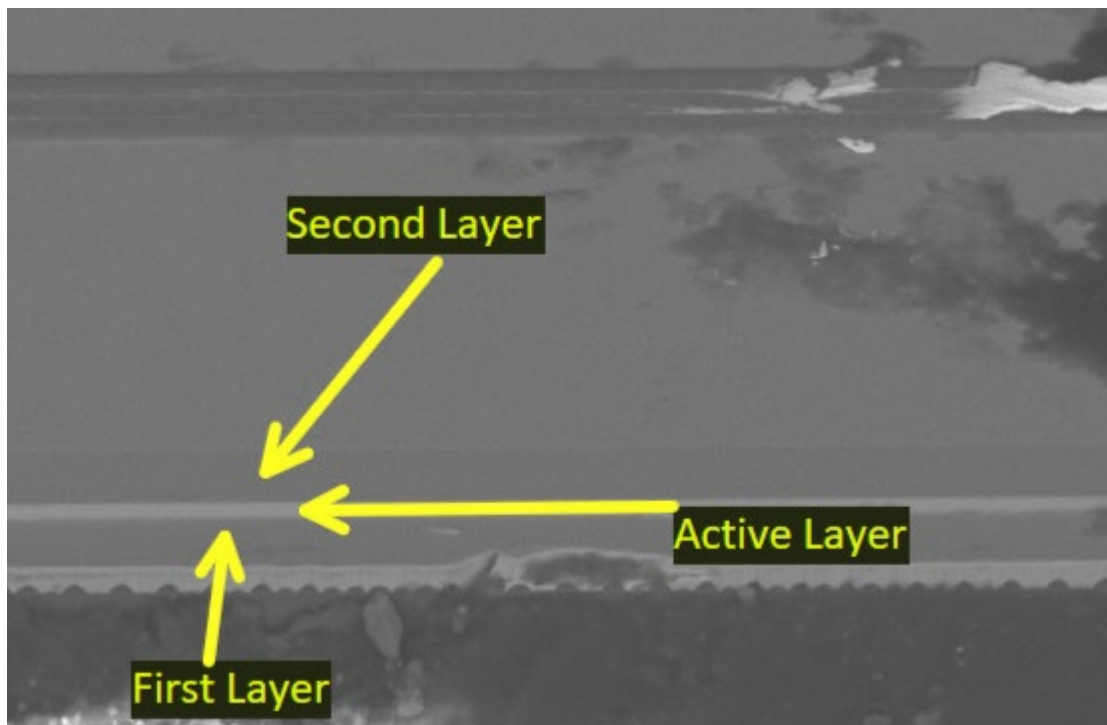


Figure 1B - 4 Exo Sling Light

50. *1(e): a first electrode pad electrically connected to the first conductive type semiconductor layer;*— As one non-limiting example, the below SEM image of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B - 5, is annotated to illustrate the first electrode pad electrically connected to the first conductive type semiconductor layer.

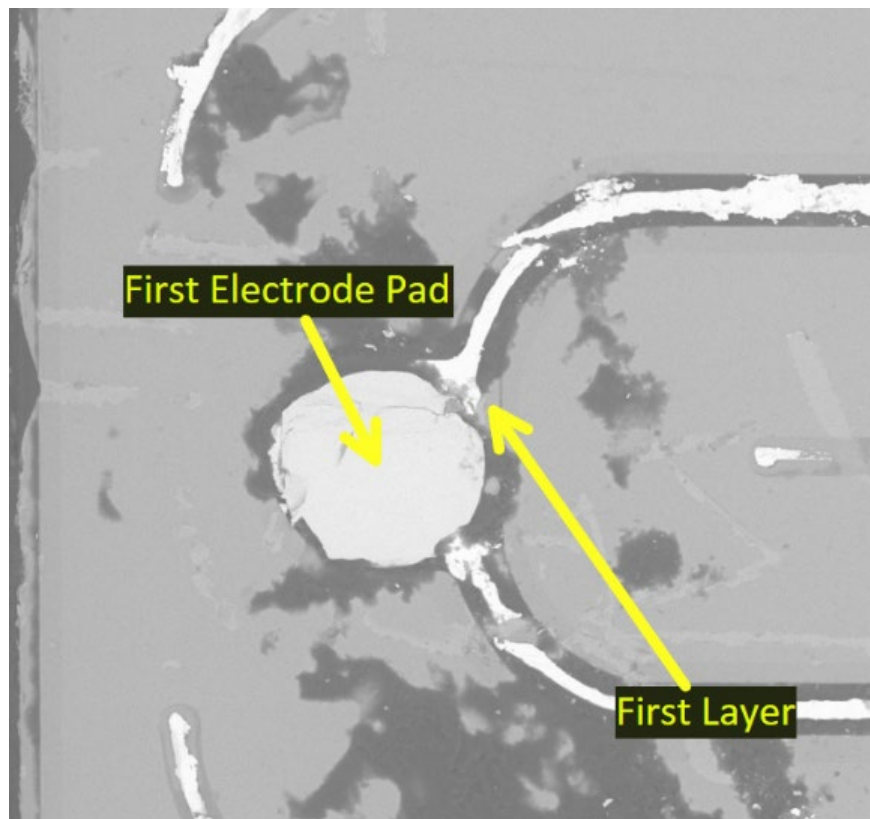


Figure 1B -5 Exo Sling Light

51. *1(f): a second electrode pad arranged on the second conductive type semiconductor layer;*— As one non-limiting example, the below SEM image of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B - 6, is annotated to illustrate the second electrode pad arranged on the second conductive type semiconductor layer.

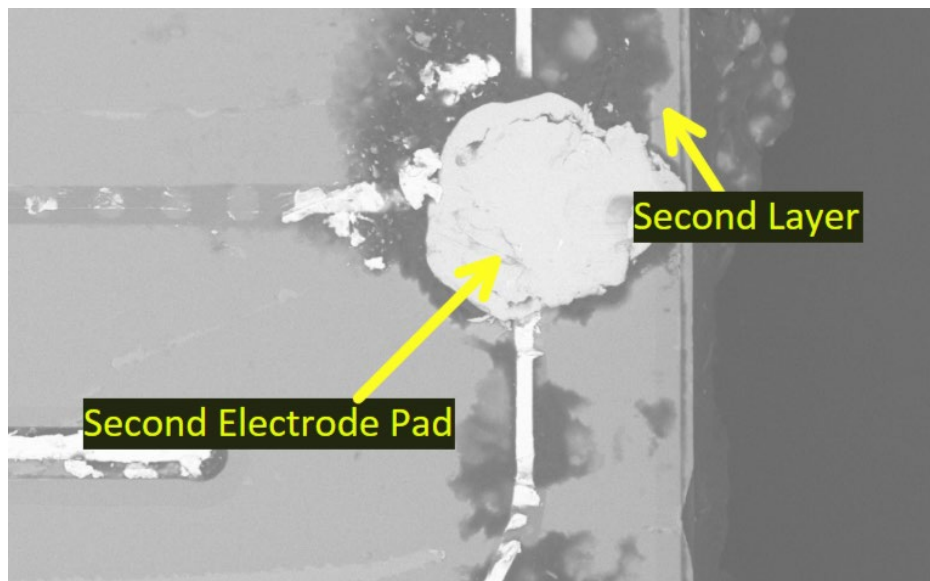


Figure 1B - 6 Exo Sling Light

52. *1(g): an insulation layer disposed between the second conductive type semiconductor layer and the second electrode pad;*— As one non-limiting example, the below SEM image of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B - 7, is annotated to illustrate the insulation layer between the second conductive type semiconductor layer and the second electrode pad.

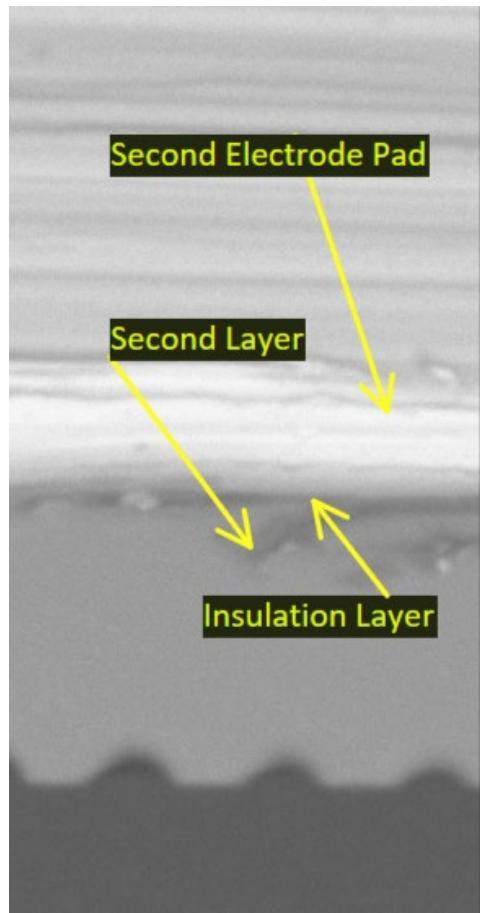


Figure 1B- 7 Exo Sling Light

53. *1(h): and at least one upper extension electrically connected to the second electrode pad, the at least one upper extension being electrically connected to the second conductive type semiconductor layer.*— As one non-limiting example, the below SEM images of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B - 8 and Figure 1B - 9, are annotated to illustrate the upper extension electrically connected to the second electrode pad and second conductive type semiconductor layer.

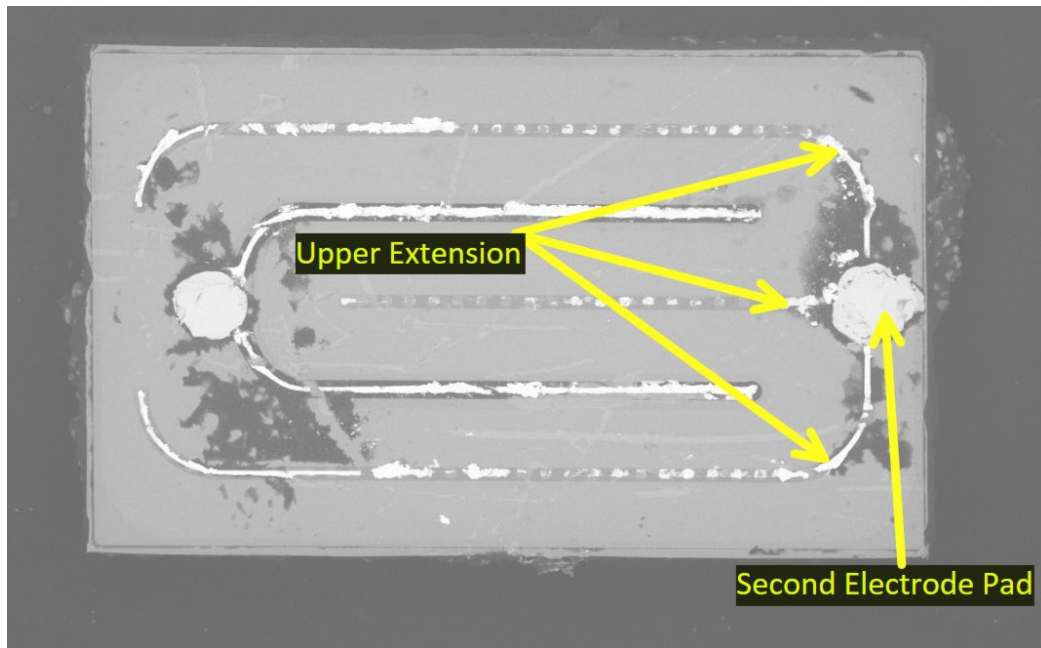


Figure 1B - 8 Exo Sling Light (1)

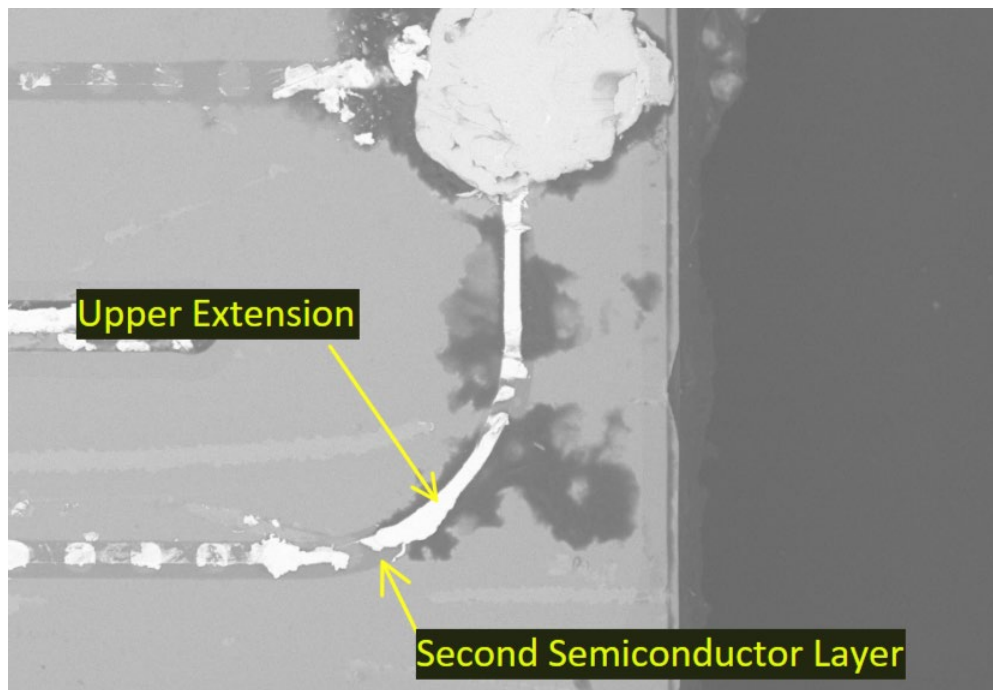


Figure 1B - 9 Exo Sling Light (2)

54. ***Claim 7: The light emitting diode of claim 1, wherein the first electrode pad is arranged to face the second electrode pad.***— As one non-limiting example, the below SEM image of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B -

10, is annotated to illustrate the first electrode pad facing the second electrode pad.

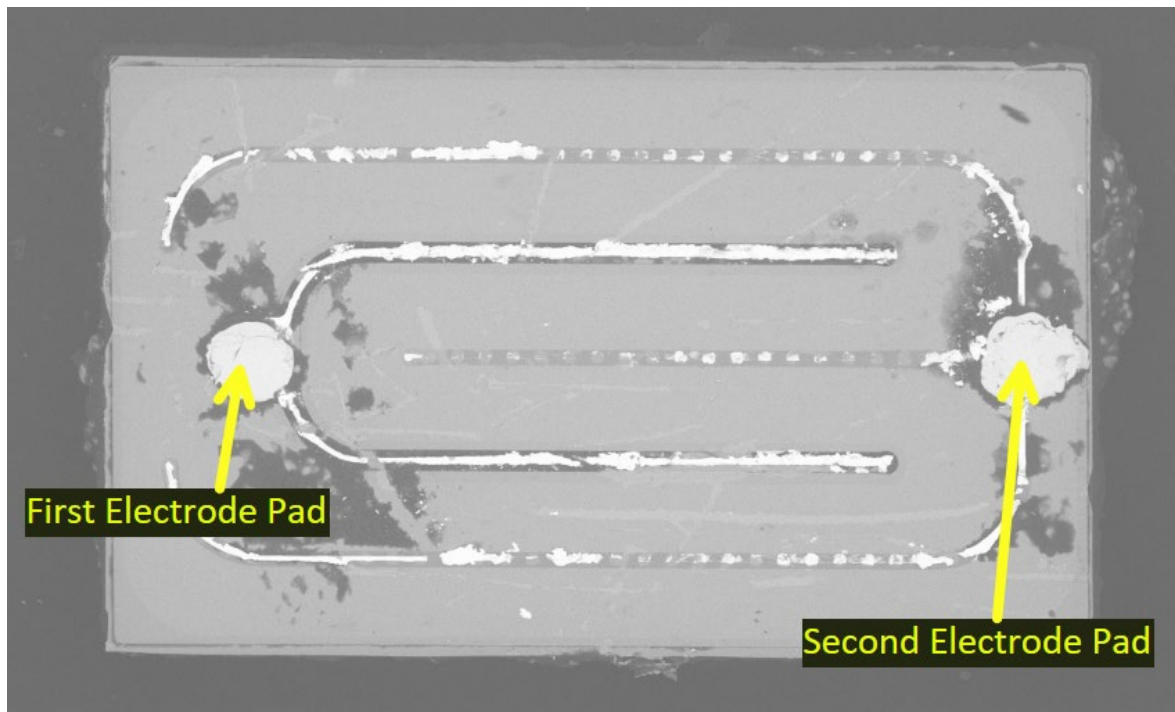


Figure 1B – 10 Exo Sling Light

55. ***Claim 8: The light emitting diode of claim 7, further comprising a first lower extension extending from the first electrode pad towards the second electrode pad, the first lower extension being electrically connected to the first conductive type semiconductor layer.—*** As one non-limiting example, the below SEM images of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B – 11 and Figure 1B-12, are annotated to illustrate the lower extension extending from the first electrode pad towards the second electrode pad, wherein the first lower extension is electrically connected to the first conductive type semiconductor layer.

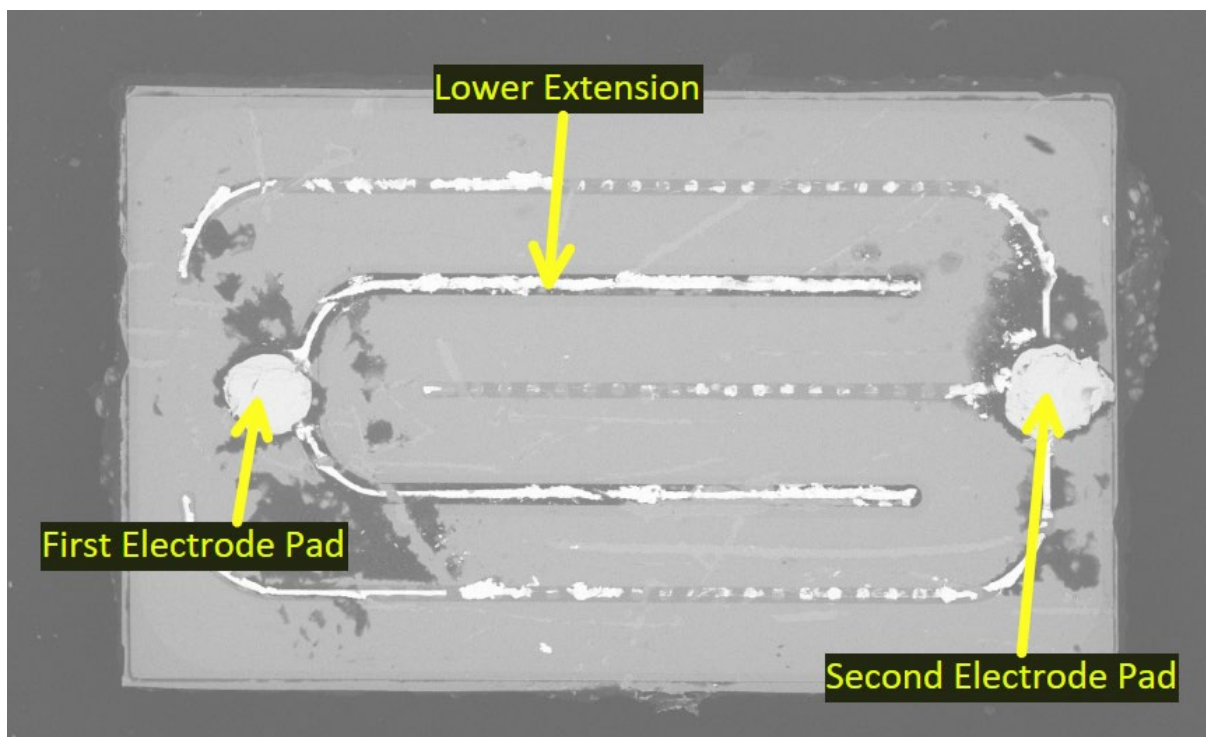


Figure 1B – 11 Exo Sling Light (1)

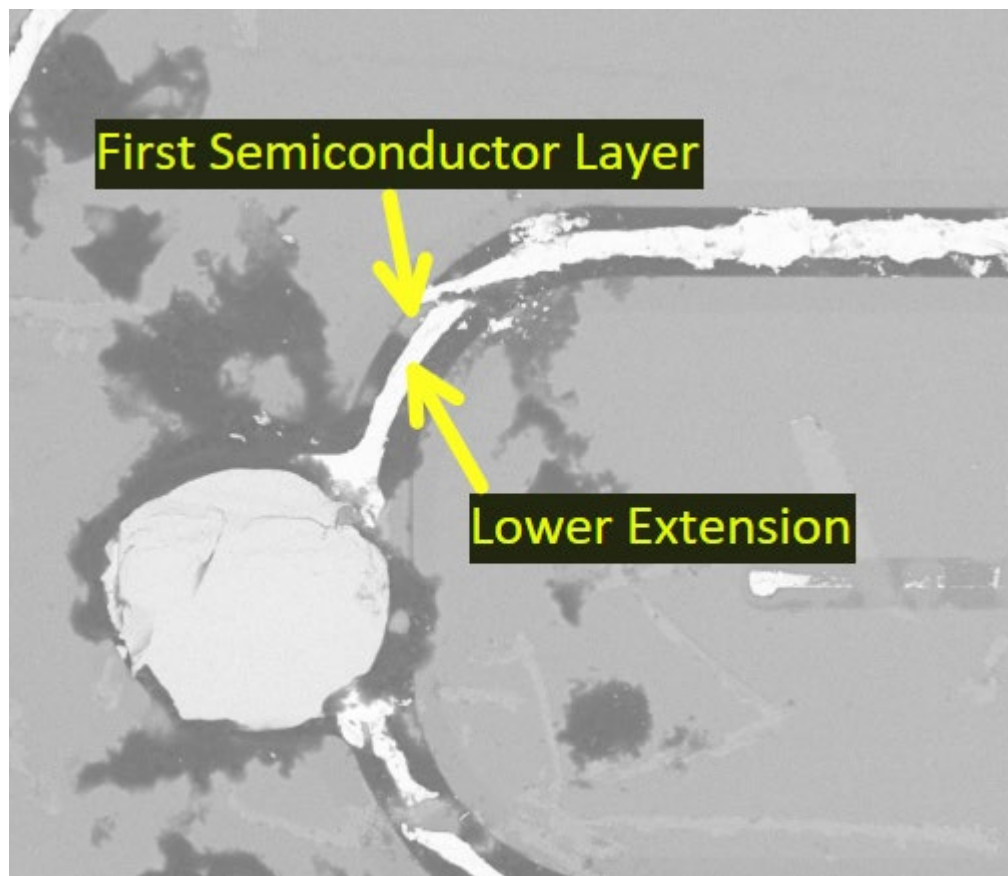


Figure 1B – 12 Exo Sling Light (2)

56. **Claim 9:** *The light emitting diode of claim 8, wherein a distal end of the first lower extension is closer to the second electrode pad than the first electrode pad.*— As one non-limiting example, the below SEM image of an individual light emitting diode from the exemplary Exo Sling Light, as seen in Figure 1B - 13, is annotated to illustrate that the distal end of the first lower extension is closer to the second electrode pad than the first electrode pad.

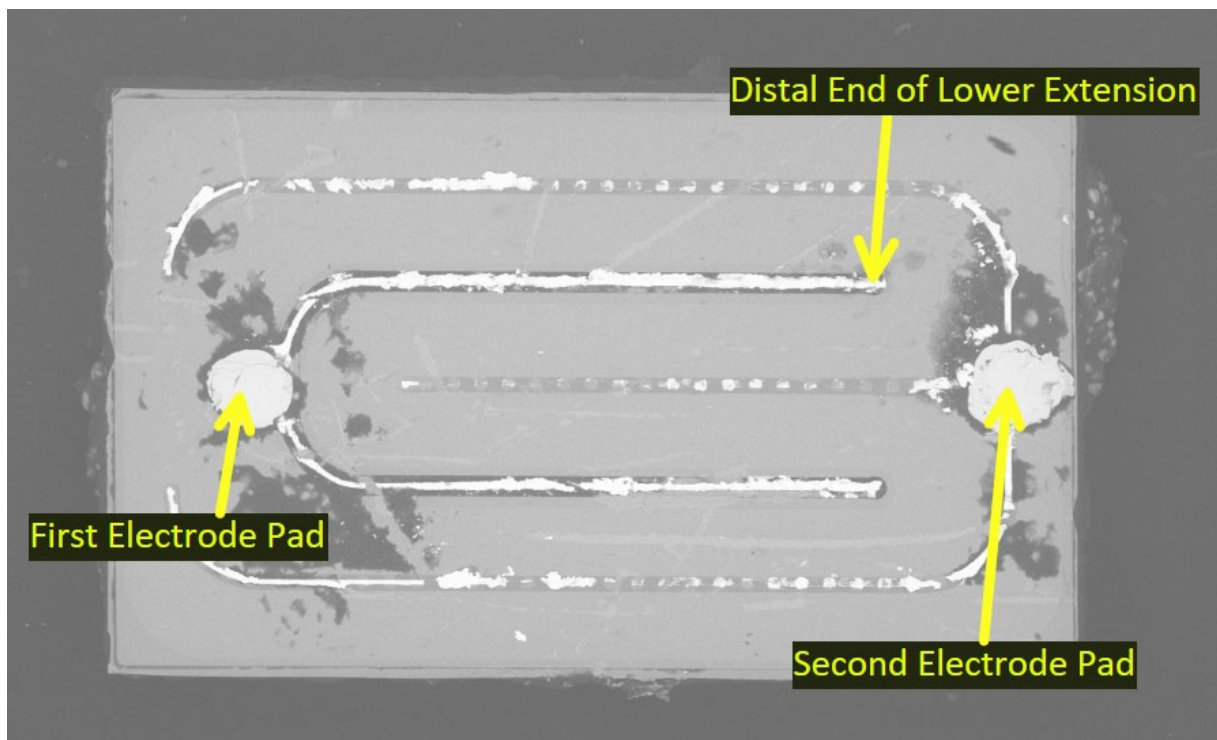


Figure 1B – 13 Exo Sling Light

57. **Claim 11:** *The light emitting diode of claim 1, further comprising a transparent electrode layer arranged on the second conductive type semiconductor layer, the transparent electrode layer forming an ohmic contact with the second conductive type semiconductor layer, wherein the transparent electrode layer is divided into at least two regions, and the second electrode pad is arranged on an exposed region of the second conductive type semiconductor layer between the at least two regions of the transparent electrode layer.*— As one non-limiting example, the below SEM images of an individual light emitting diode from the exemplary Exo

Sling Light, as seen in Figures 1B – 14 through 1B – 16, are annotated to illustrate the transparent electrode layer arranged on the second conductive type semiconductor layer, wherein the transparent electrode forms an ohmic contact with the second conductive type semiconductor layer and is divided into two regions, as well as the second electrode pad being arranged on an exposed region of the second conductive type semiconductor layer between the at least two regions of the transparent electrode layer. As illustrated in Figure 1B – 16, EDS analysis demonstrates that the transparent electrode layer is an Indium Tin Oxide (ITO) layer.

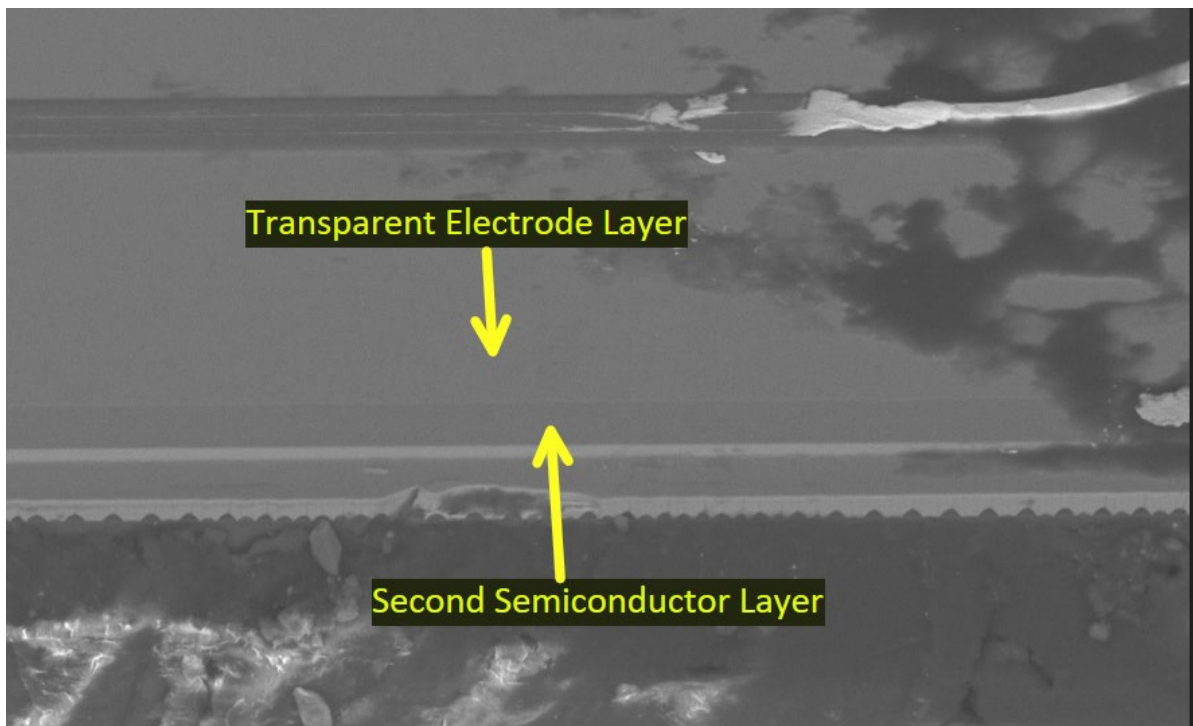


Figure 1B – 14 Exo Sling Light (1)

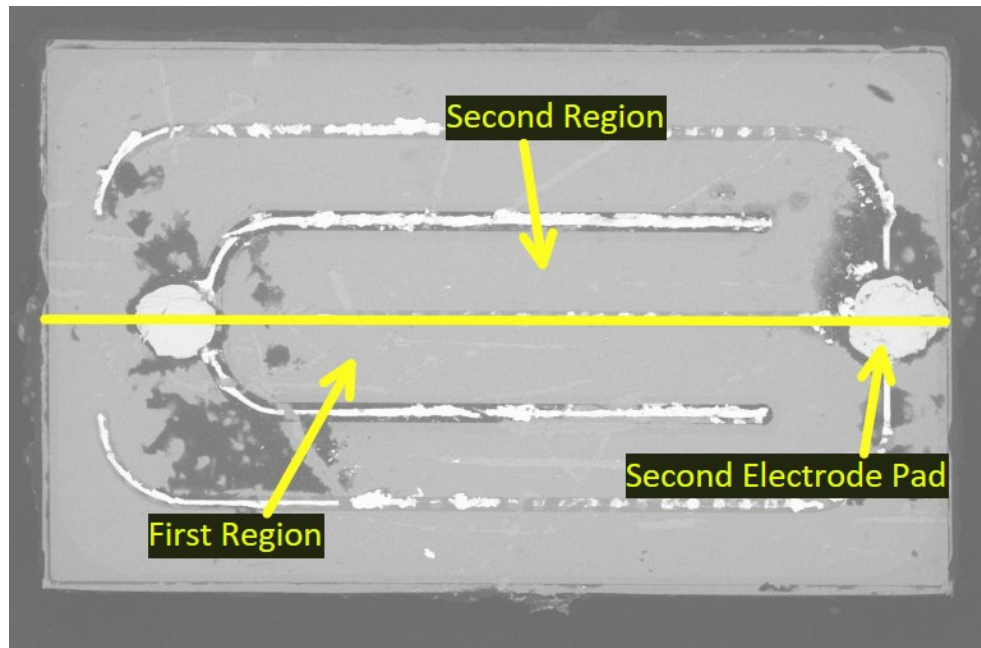


Figure 1B – 15 Exo Sling Light (2)

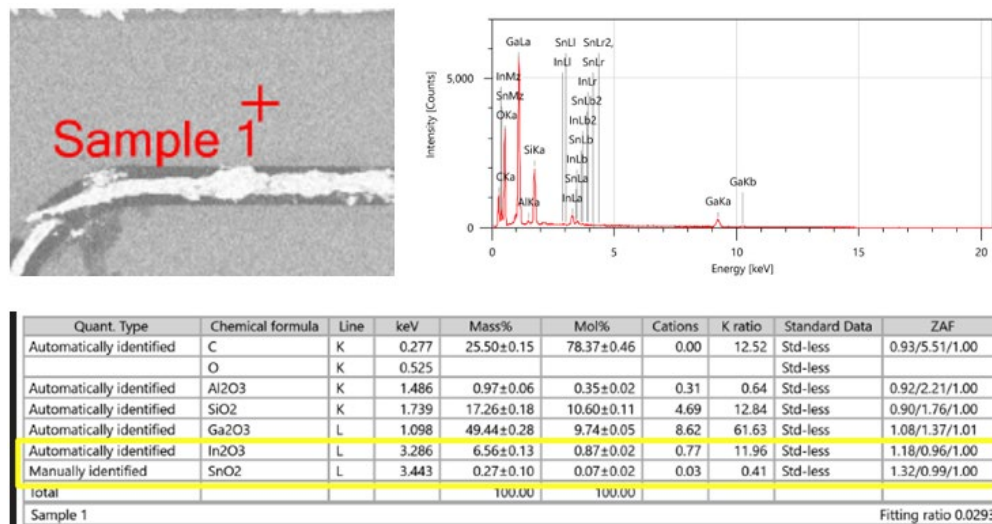


Figure 1B – 16 Exo Sling Light (3)

58. Upon information and belief, Defendant was aware of Plaintiff's LED patent portfolio, which includes the '971 Patent, and the relevance of Plaintiff's patents to Defendant's products since before the complaint was filed as a result of Plaintiff's proactive efforts to engage Defendant in licensing discussions. Defendant, however, did not enter into a license, but instead moved forward with the making, using and selling of products that had an objectively high chance

of infringing one or more of Plaintiff's patents. Plaintiff therefore asserts that Defendant's infringement is willful and entitles Plaintiff to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

59. Plaintiff is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '971 Patent.

60. Plaintiff is entitled to recover from Defendant all damages that Plaintiff has sustained as a result of Defendant's infringement of the '971 Patent, including, without limitation, a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 8,319,246

61. Plaintiff incorporates by reference and re-alleges paragraphs 1-60 of the Complaint as if fully set forth herein.

62. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '246 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 products, including but not limited to the Kim Lighting Floodlight, among other substantially similar products (collectively, the "'246 Accused Products").

63. By way of non-limiting example(s), set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '246 Patent. This description is based on publicly available information. Plaintiff reserves the right to modify this description, including, for example, on the basis of information about the '246 Accused Products that it obtains during discovery.

64. ***1(a): A semiconductor device comprising:***— The exemplary Kim Lighting Floodlight, as seen in Figure 2A - 1 and Figure 2A - 2, comprises a "semiconductor device," as

recited in claim 1:



Figure 2A - 1 - LED Product – Kim Lighting Floodlight

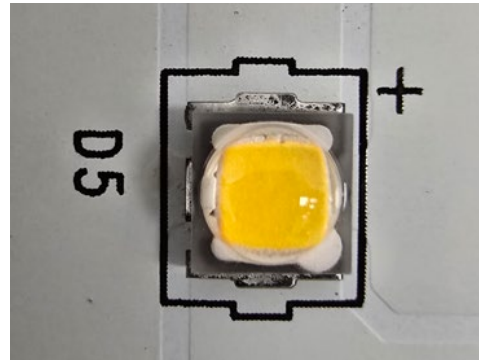


Figure 2A - 2 - LED Product - Kim Lighting Floodlight

65. ***1(b): a semiconductor structure unit including a major surface;***— the below images of an individual light emitting diode from the exemplary Kim Lighting Floodlight, as seen in Figure 2B - 1 to Figure 2B – 4, are annotated to illustrate the semiconductor structure unit including a major surface:

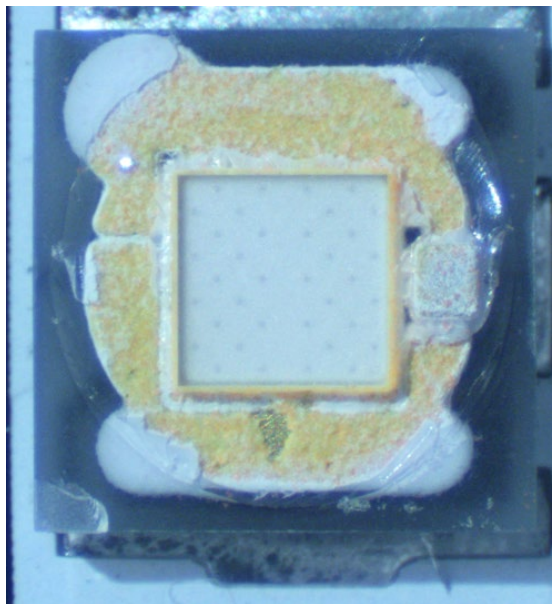


Figure 2B - 1 Kim Lighting Floodlight (1)

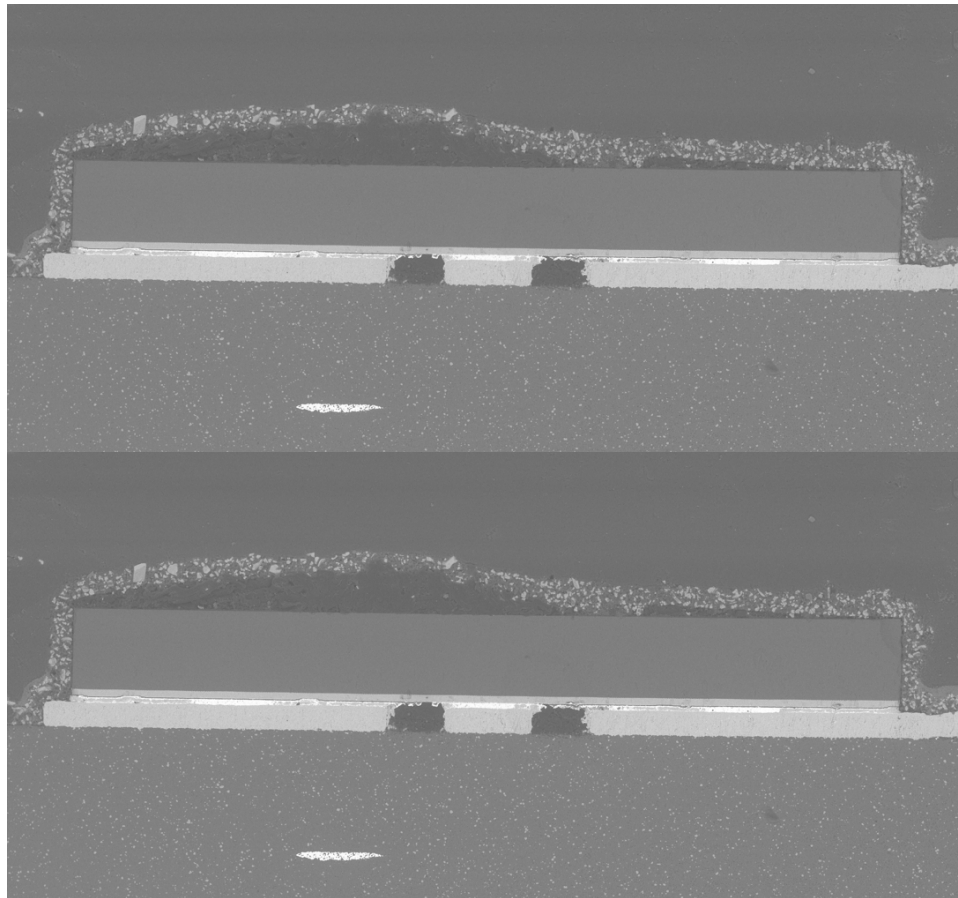


Figure 2B - 2 Kim Lighting Floodlight (2)

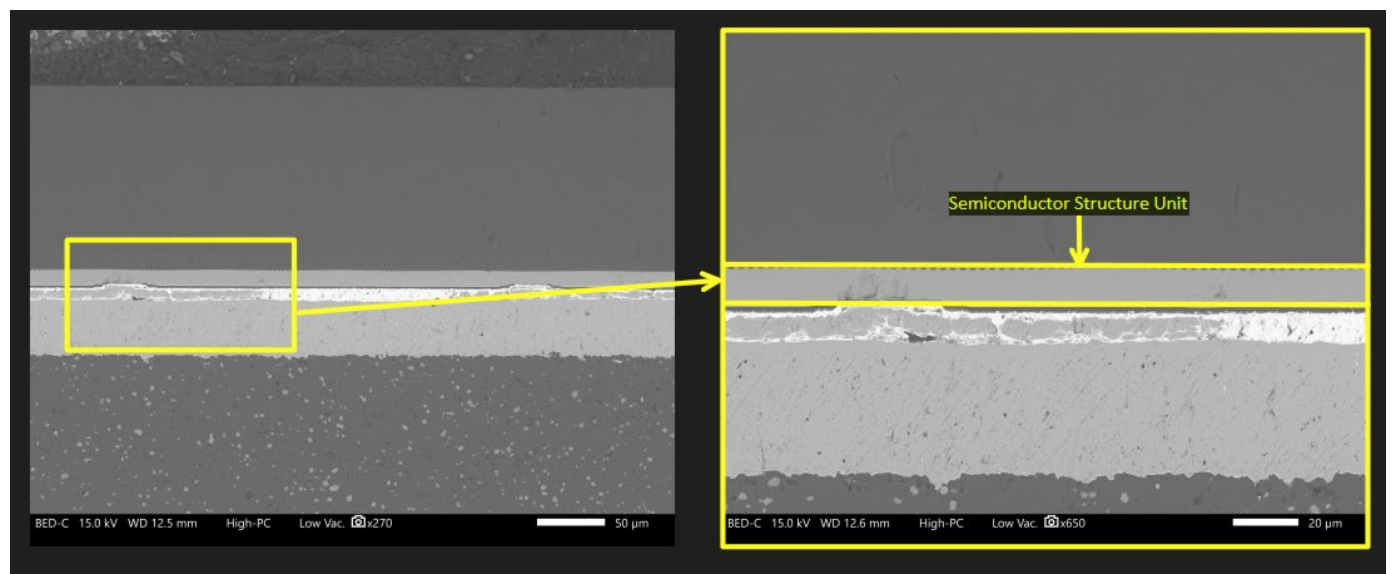


Figure 2B - 3 Kim Lighting Floodlight (3)

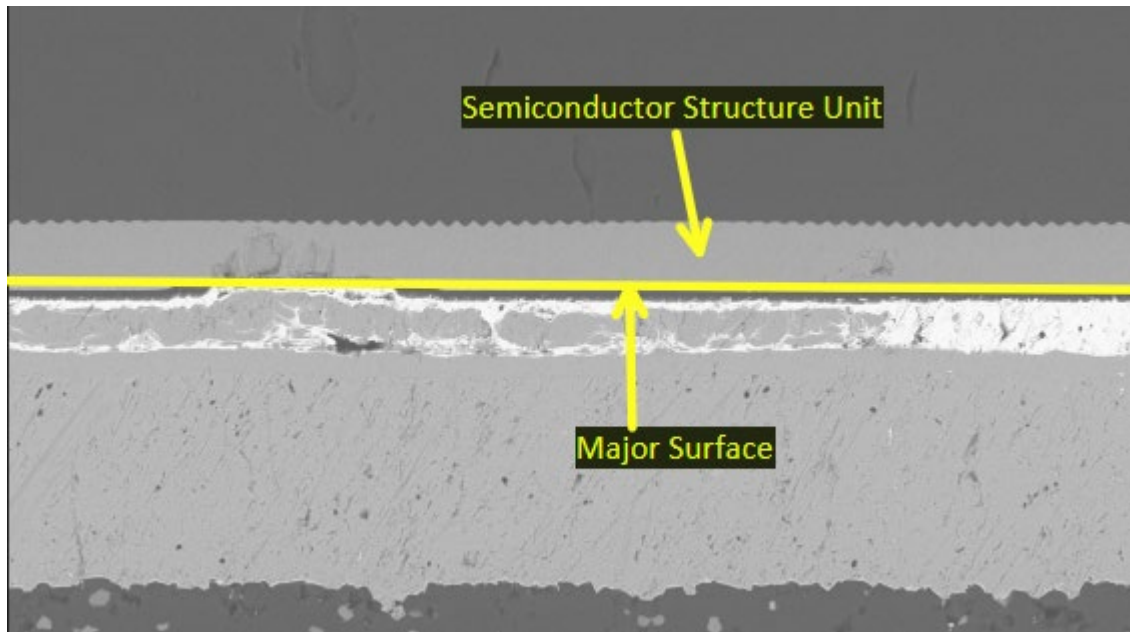


Figure 2B - 4 Kim Lighting Floodlight (4)

66. *1(c): an interconnect layer provided on the major surface side of the semiconductor structure unit;*— the below image of an individual light emitting diode from the exemplary Kim Lighting Floodlight, as seen in Figure 2B - 5, is annotated to illustrate the interconnect layer provided on the major surface side of the semiconductor structure unit.

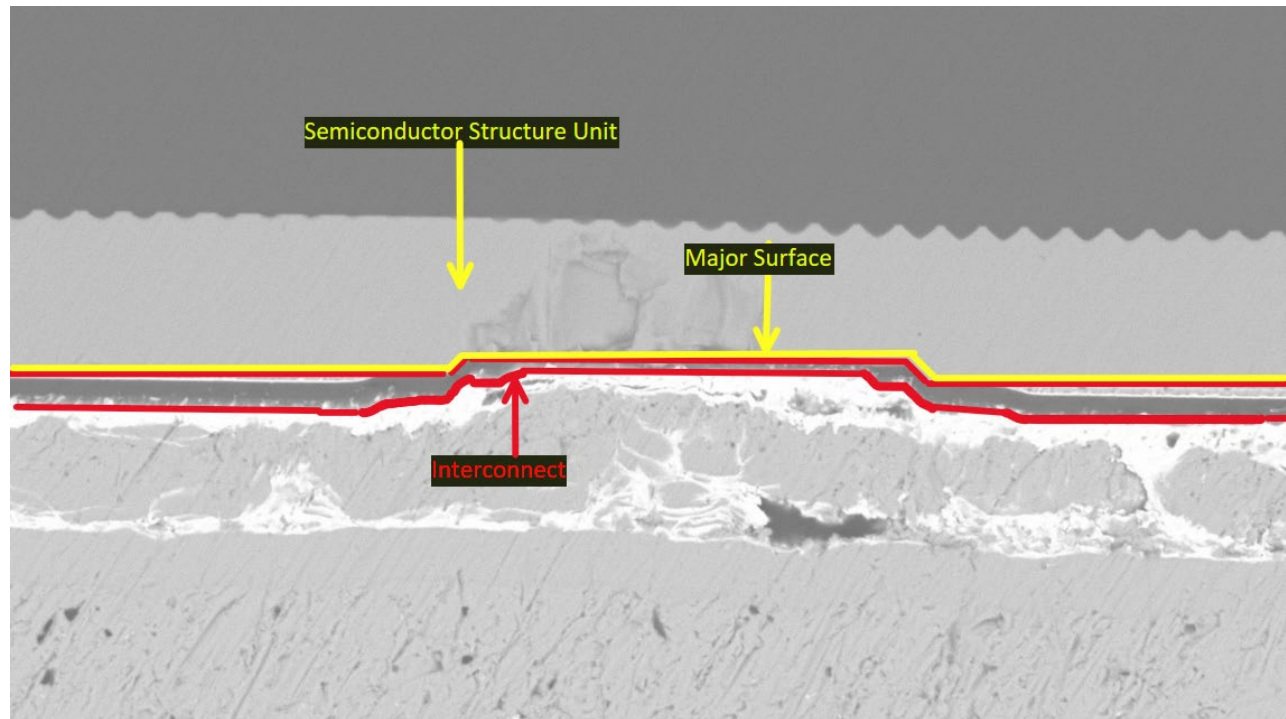


Figure 2B - 5 Kim Lighting Floodlight

67. ***1(d): an electrode pad provided on a surface of the interconnect layer on a side opposite to a surface on which the semiconductor structure unit is provided, and the electrode pad electrically connected to the interconnect layer;***— the below images of an individual light emitting diode from the exemplary Kim Lighting Floodlight, as seen in Figure 2B - 6 to Figure 2B - 8, are annotated to illustrate the electrode pad provided on a surface of the interconnect layer on a side opposite to a surface on which the semiconductor structure unit is provided, and that the electrode pad is electrically connected to the interconnect layer. For example, as shown in Figure 2B - 8, the electrode pad comprises at least Gold and Aluminum.

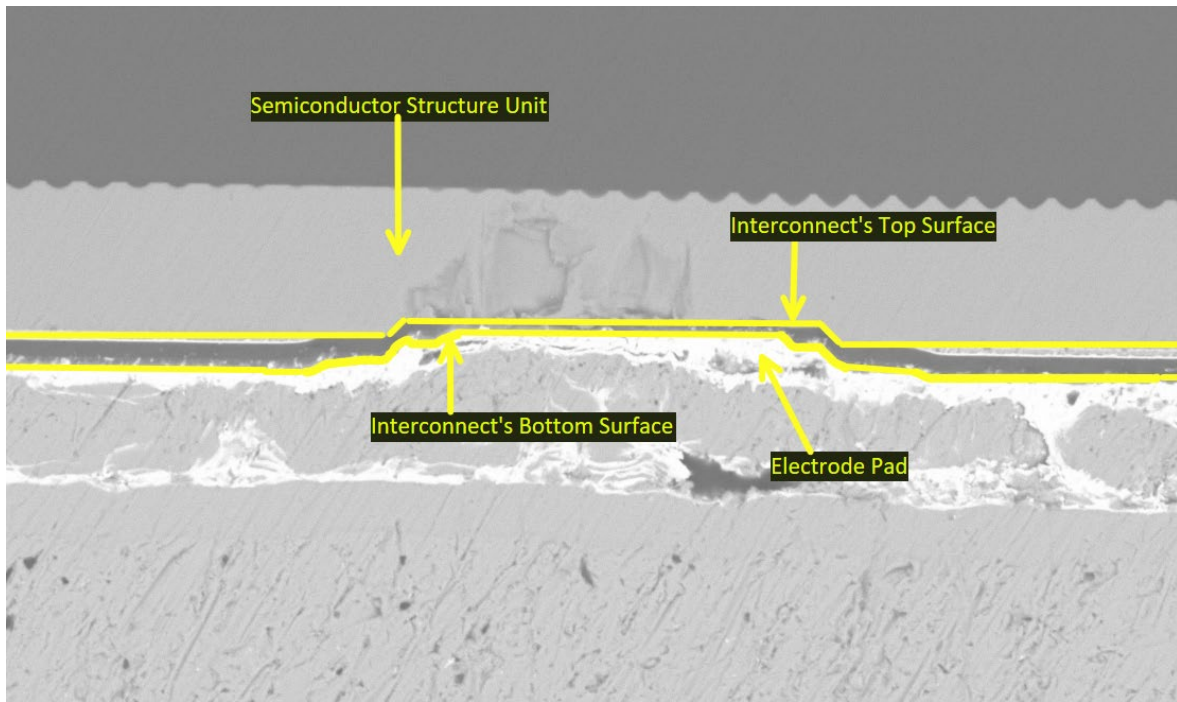


Figure 2B - 6 Kim Lighting Floodlight (1)

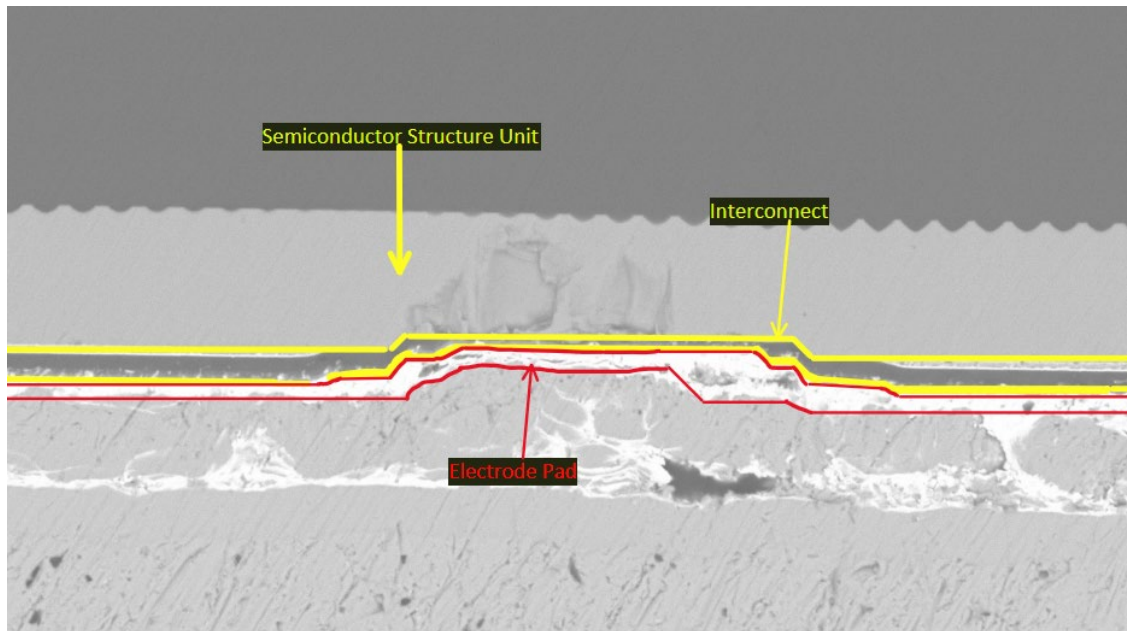
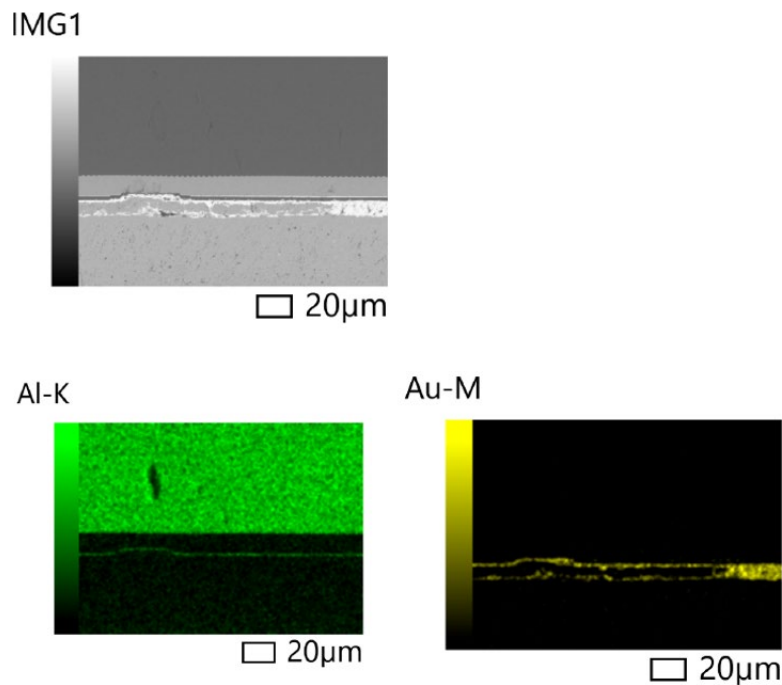


Figure 2B - 7 Kim Lighting Floodlight (2)



68. *1(e): a plurality of metal pillars joined to the electrode pad separately from each other; and*— the below images of an individual light emitting diode from the exemplary Kim Lighting Floodlight, as seen in Figure 2B - 9 to Figure 2B – 12, are annotated to illustrate the plurality of metal pillars joined to the electrode pad separately from each other.

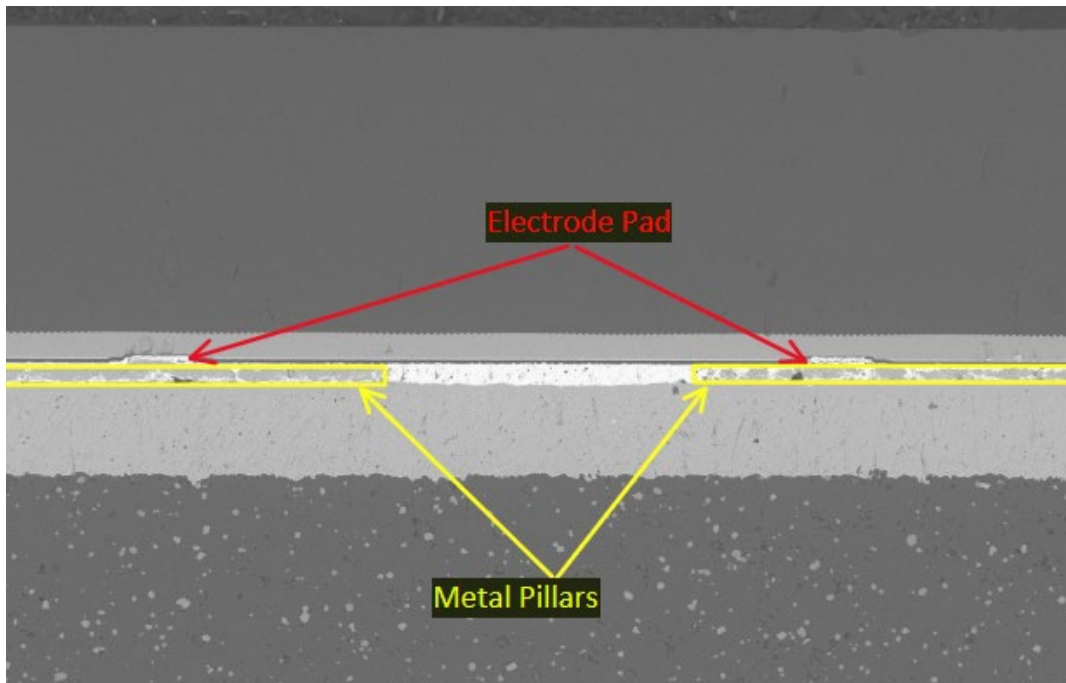
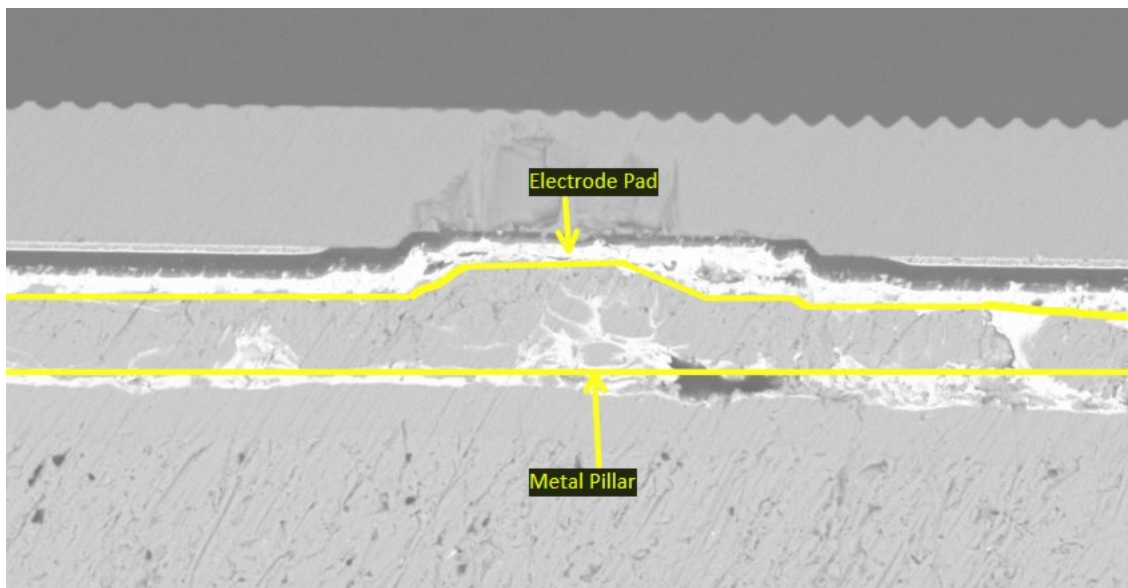
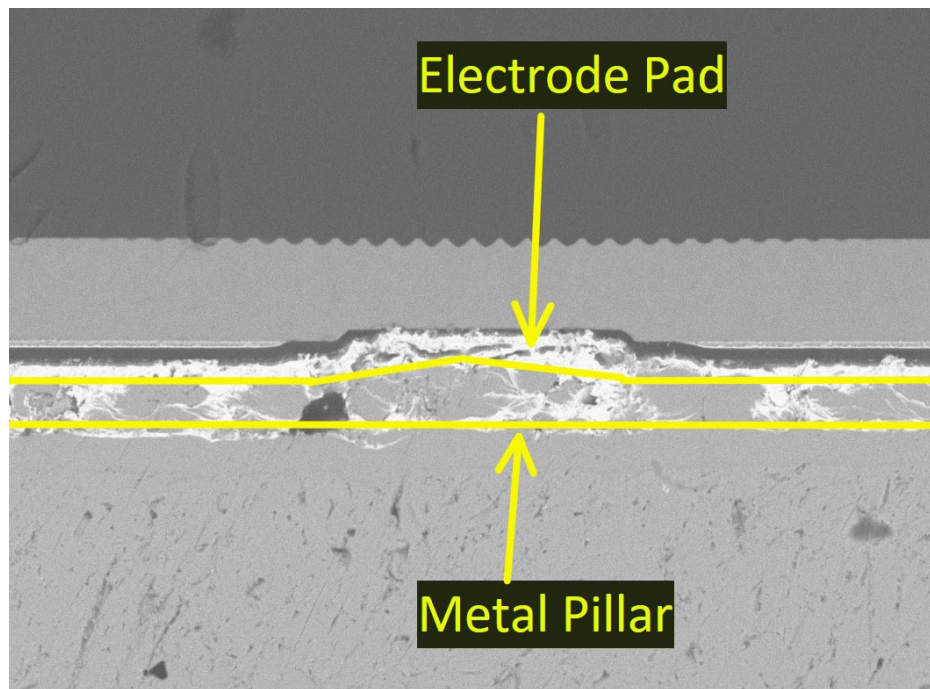


Figure 2B – 9 Kim Lighting Floodlight (1)



A first metal pillar

Figure 2B – 10 Kim Lighting Floodlight (2)



A second metal pillar

Figure 2B – 11 Kim Lighting Floodlight (3)

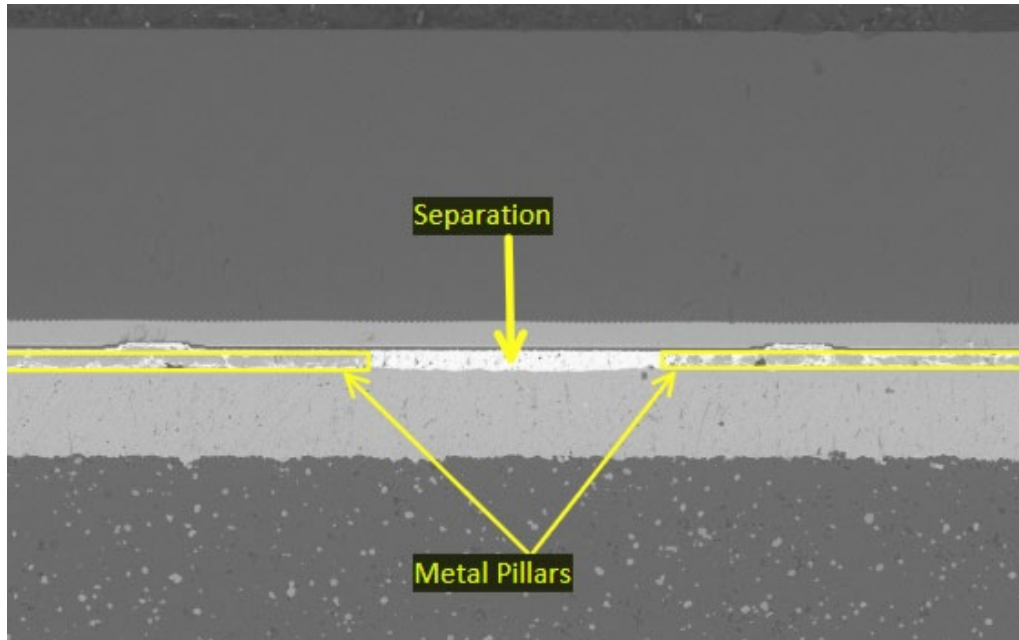


Figure 2B - 12 Kim Lighting Floodlight (4)

69. *1(f): an external terminal provided commonly at tips of the plurality of metal pillars,* — the below images of an individual light emitting diode from the exemplary Kim Lighting Floodlight, as seen in Figure 2B - 13 and Figure 2B – 14, are annotated to illustrate the external

terminal provided commonly at tips of the plurality of metal pillars.

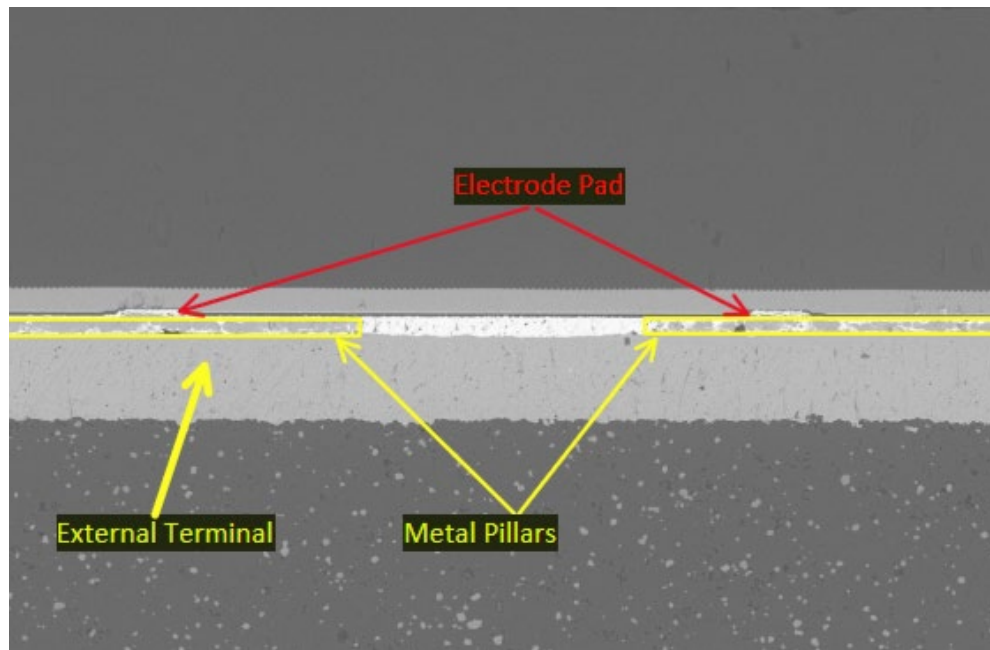


Figure 2B - 13 Kim Lighting Floodlight (1)

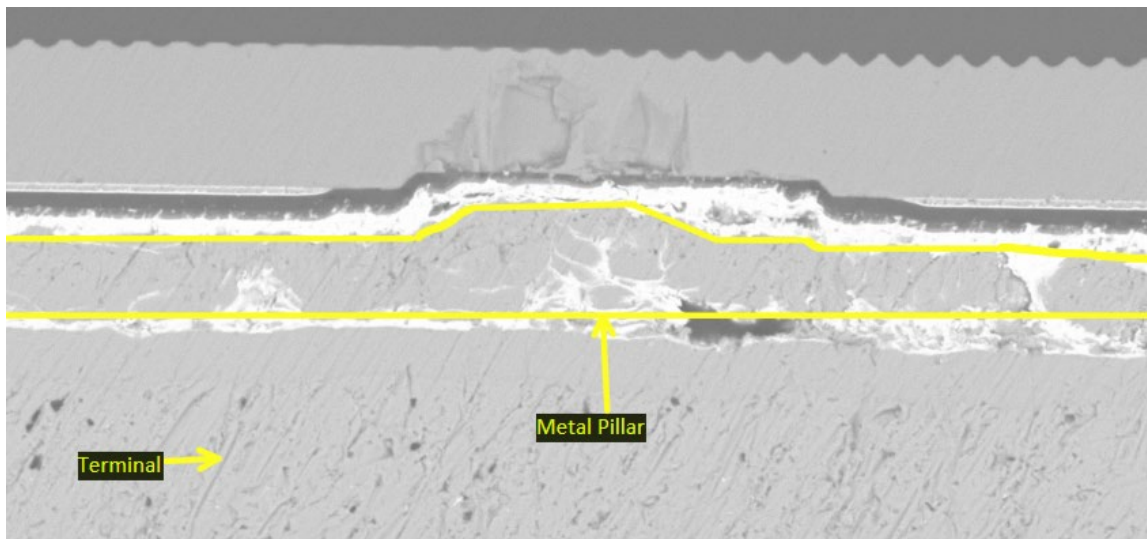


Figure 2B - 14 Kim Lighting Floodlight (2)

70. *1(g): the metal pillars having an area in a plan view smaller than an area in a plan view of the external terminal, — the below images of an individual light emitting diode from the exemplary Kim Lighting Floodlight, as seen in Figure 2B – 14 and Figure 2B - 15, are annotated to illustrate the metal pillars having an area in a plan view smaller than an area in a plan*

view of the external terminal.

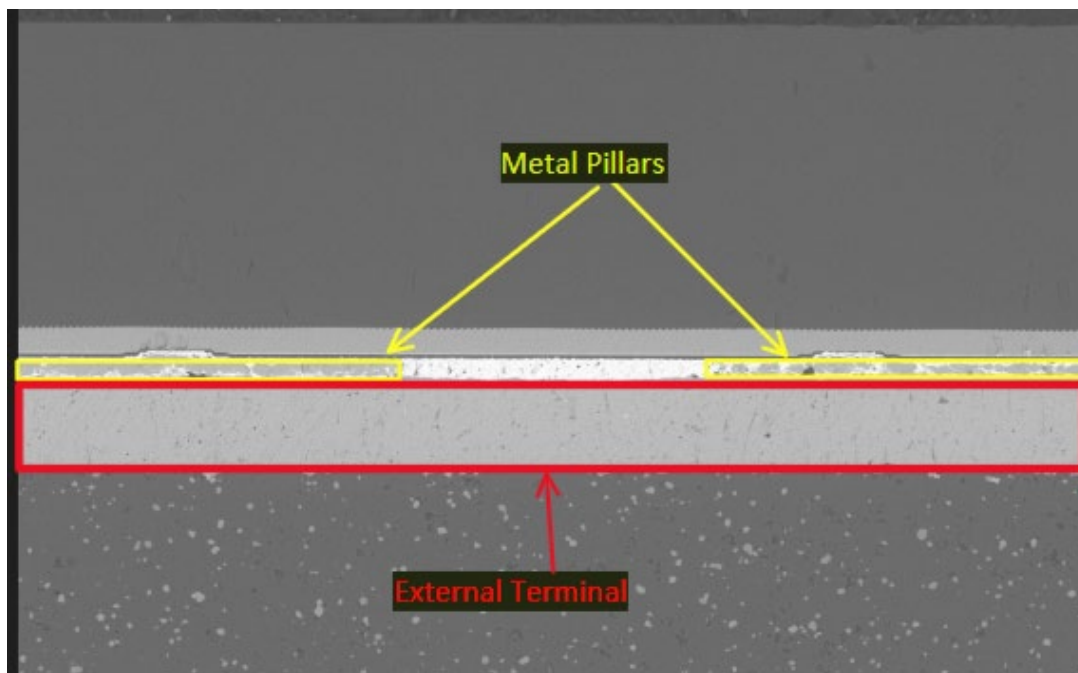


Figure 2B – 14 Kim Lighting Floodlight

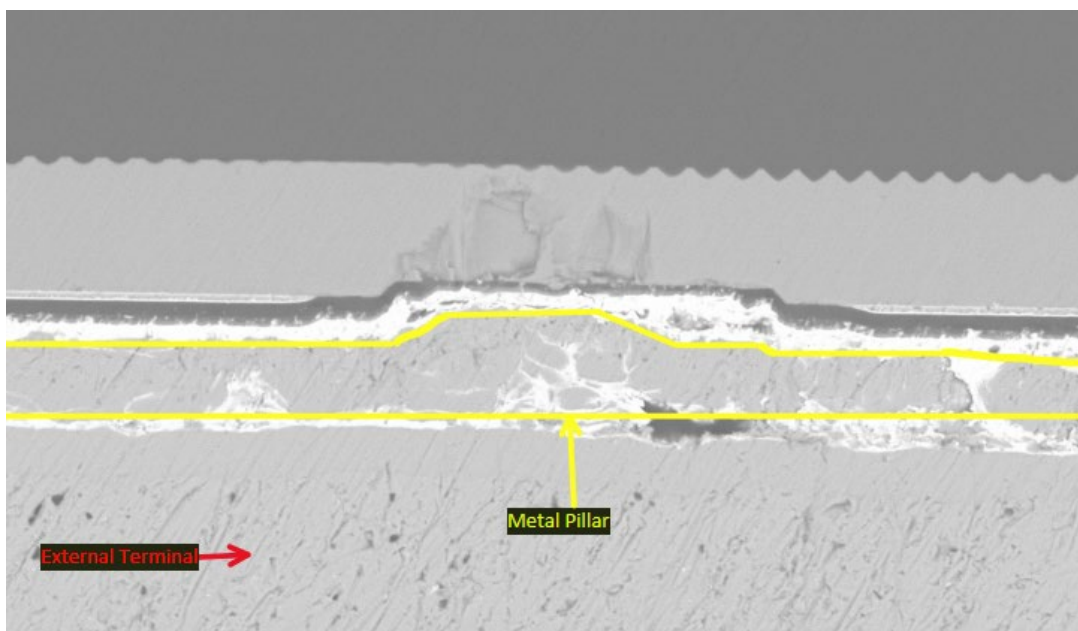


Figure 2B – 15 Kim Lighting Floodlight

71. ***1(h): wherein the semiconductor structure unit includes a light-emitting layer.***

— the below images of an individual light emitting diode from the exemplary Kim Lighting
32

Floodlight, as seen in Figure 2B – 15 and Figure 2B – 16, are annotated to illustrate the semiconductor structure unit including a light-emitting layer. As shown in Figure 2B – 16, the semiconductor structure unit comprises GaN.

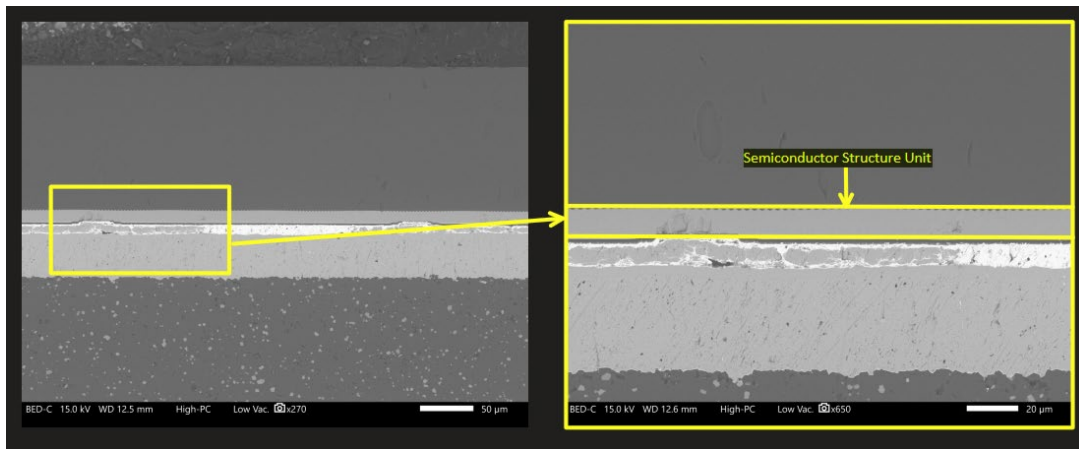


Figure 2B – 15 Kim Lighting Floodlight

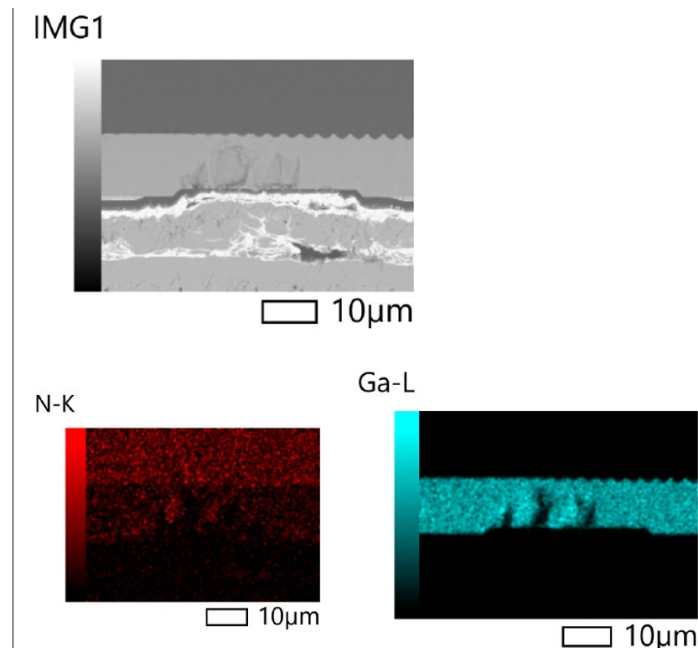


Figure 2B - 16 Kim Lighting Floodlight

72. Upon information and belief, Defendant was aware of Plaintiff's LED patent portfolio, which includes the '246 Patent, and the relevance of Plaintiff's patents to Defendant's products since before the complaint was filed as a result of Plaintiff's proactive efforts to engage

Defendant in licensing discussions. Defendant, however, did not enter into a license, but instead moved forward with the making, using and selling of products that had an objectively high chance of infringing one or more of Plaintiff's patents. Plaintiff therefore asserts that Defendant's infringement is willful and entitles Plaintiff to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

73. Plaintiff is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '246 Patent.

74. Plaintiff is entitled to recover from Defendant all damages that Plaintiff has sustained as a result of Defendant's infringement of the '246 Patent, including, without limitation, a reasonable royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 8,963,196

75. Plaintiff incorporates by reference and re-alleges paragraphs 1-74 of the Complaint as if fully set forth herein.

76. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '196 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 products, including but not limited to the Evolve LED Floodlight, Evolve Roadway Light, Prescolite LB4A, Compass CU2 Series Light, Evolve Wall Pack, and GE Current HID Type B Lamp, among other substantially similar products (collectively, the "'196 Accused Products").

77. By way of non-limiting example(s), set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '196 Patent. This description is based on publicly available information. Plaintiff reserves the right to modify this description, including, for example, on the basis of information about the '196 Accused Products that it obtains

during discovery.

78. ***1(a): A light emitting diode (LED) package, comprising:***— The exemplary Evolve Roadway Light, as seen in Figure 3A - 1 an Figure 3A - 2, comprises a “light emitting diode (LED) package,” as recited in claim 1:

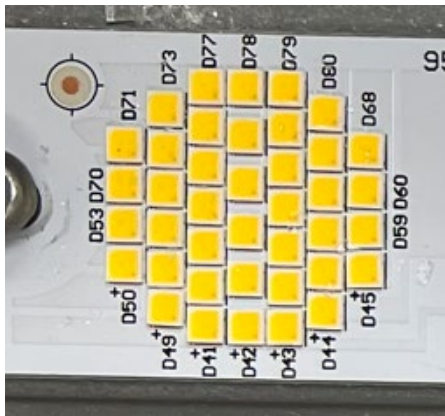


Figure 3A - 1 - LED Product – Evolve Roadway Light

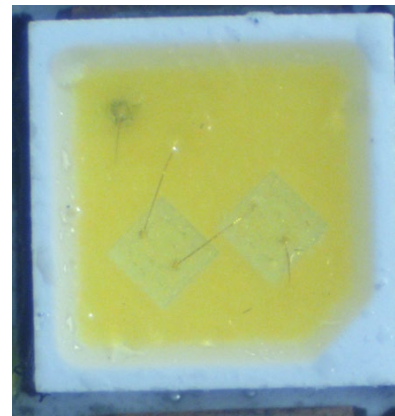


Figure 3A - 2 - LED Product - Evolve Roadway Light

79. ***1(b): a first lead frame and a second lead frame separated from each other;***— The exemplary Evolve Roadway Light comprises a “first lead frame and second lead frame separated from each other,” as seen in Figure 3B - 1 where the first and second lead frames are annotated in yellow:

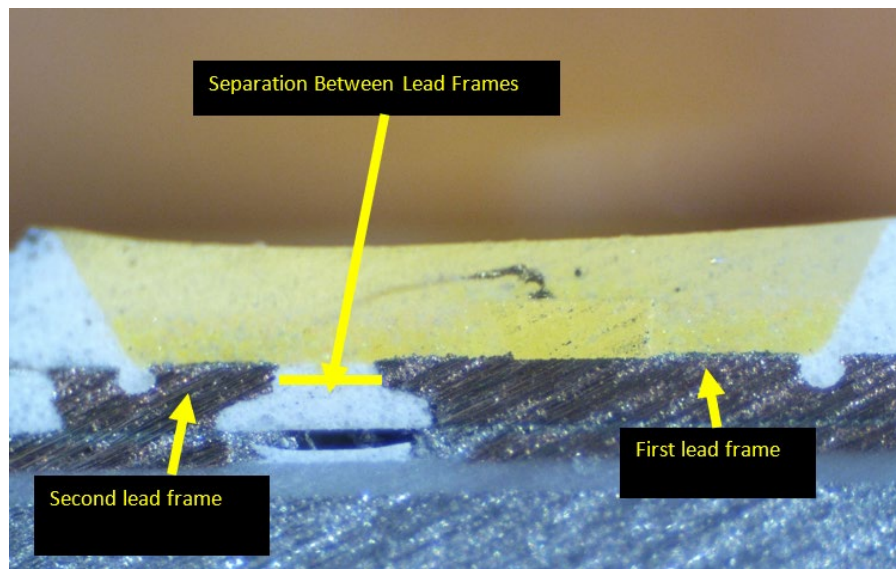


Figure 3B - 1 Evolve Roadway Light

80. ***1(c): an LED Chip disposed on the first lead frame and electrically connected to the first lead frame and the second lead frame; and;***— The exemplary Evolve Roadway Light comprises an “LED Chip disposed on the first lead frame and electrically connected to the first lead frame and the second lead frame,” as seen in Figure 3B - 2 and Figure 3B - 3:

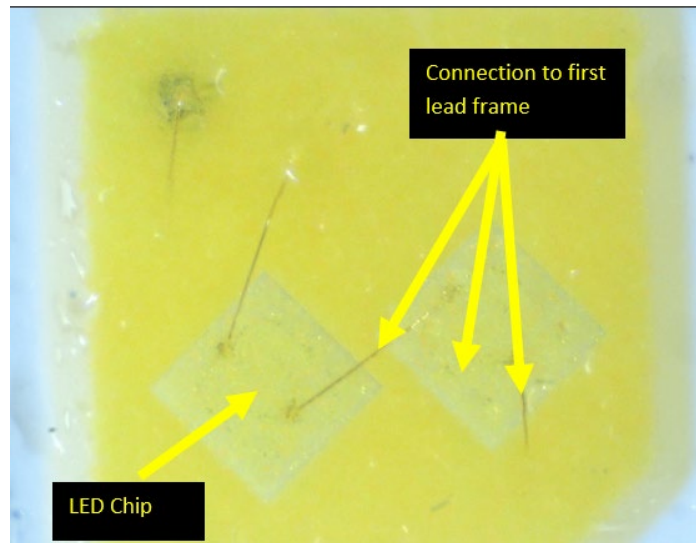


Figure 3B - 2 Evolve Roadway Light (1)

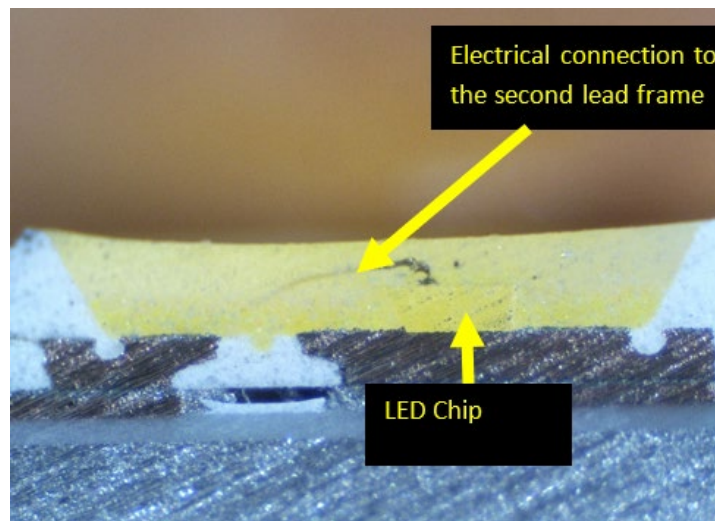


Figure 3B – 3 Evolve Roadway Light (2)

81. ***1(d): a wire connecting the LED chip to the second lead frame;***— The exemplary Evolve Roadway Light comprises “a wire connecting the LED chip to the second lead frame,” as

seen in Figure 3B - 4:

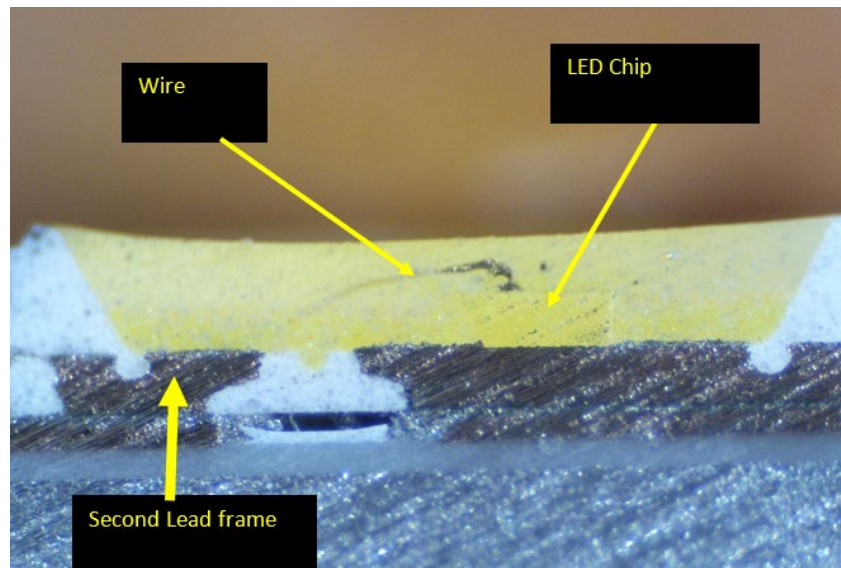


Figure 3B -4 Evolve Roadway Light

82. *1(e): wherein opposing sides of the first lead frame and the second lead frame face each other in a slanted state to the other sides of the lead frame.*— The exemplary Evolve Roadway Light comprises opposing sides of the first and second lead frames that “face each other in a slanted state to the other sides of the lead frame” as seen in Figure 3B – 5 and Figure 3B - 6:

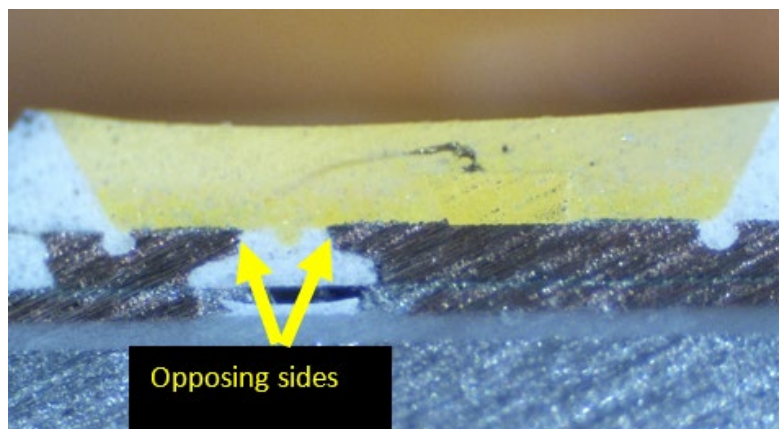


Figure 3B - 5 Evolve Roadway Light (1)

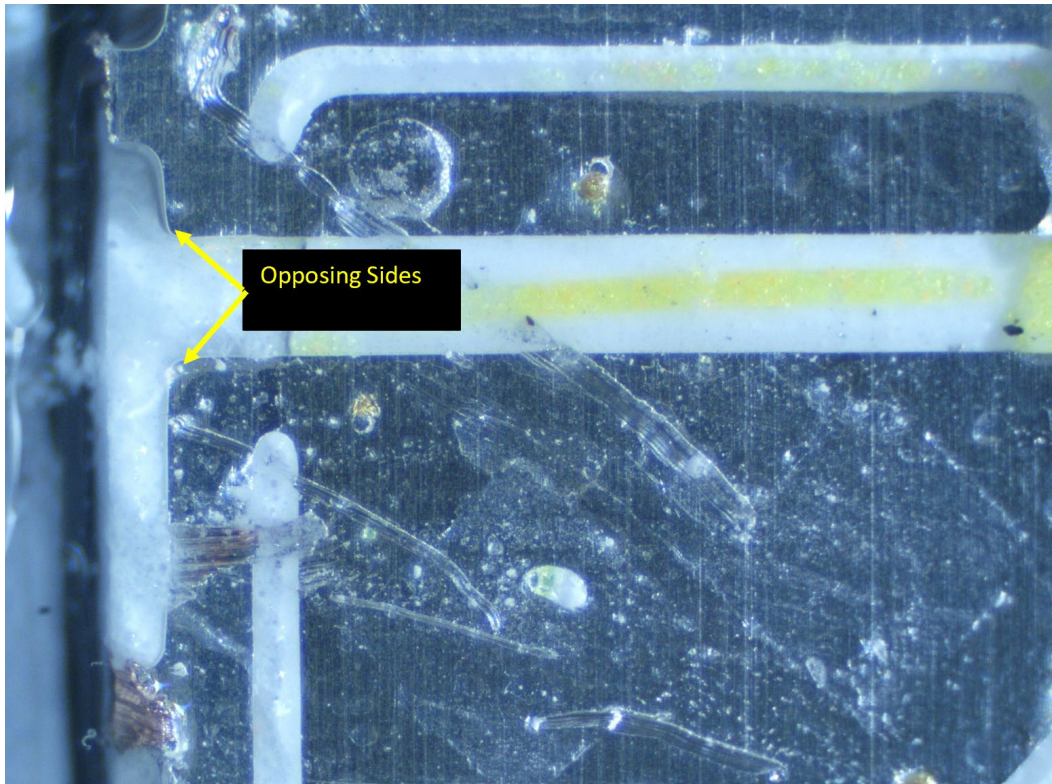


Figure 3B - 6 Evolve Roadway Light (2)

83. Upon information and belief, Defendant was aware of Plaintiff's LED patent portfolio, which includes the '196 Patent, and the relevance of Plaintiff's patents to Defendant's products since before the complaint was filed as a result of Plaintiff's proactive efforts to engage Defendant in licensing discussions. Defendant, however, did not enter into a license, but instead moved forward with the making, using and selling of products that had an objectively high chance of infringing one or more of Plaintiff's patents. Plaintiff therefore asserts that Defendant's infringement is willful and entitles Plaintiff to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

84. Plaintiff is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '196 Patent.

85. Plaintiff is entitled to recover from Defendant all damages that Plaintiff has

sustained as a result of Defendant's infringement of the '196 Patent, including, without limitation, a reasonable royalty.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 9,530,942

86. Plaintiff incorporates by reference and re-alleges paragraphs 1-85 of the Complaint as if fully set forth herein.

87. Defendant has infringed and is infringing, either literally or under the doctrine of equivalents, the '942 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 products, including but not limited to the Evolve LED Floodlight, Evolve Roadway Light, Prescolite LB4A, Compass CU2 Series Light, Evolve Wall Pack, and GE Current HID Type B Lamp, among other substantially similar products (collectively, the "'942 Accused Products").

88. By way of non-limiting example(s), set forth below (with claim language in bold and italics) is exemplary evidence of infringement of claim 1 of the '942 Patent. This description is based on publicly available information. Plaintiff reserves the right to modify this description, including, for example, on the basis of information about the '942 Accused Products that it obtains during discovery.

89. ***1(a): A light emitting diode (LED) package, comprising;***— The exemplary Evolve Roadway Light, as seen in Figure 4A - 1 and Figure 4A - 2, comprises a "light emitting diode (LED) package," as recited in claim 1:

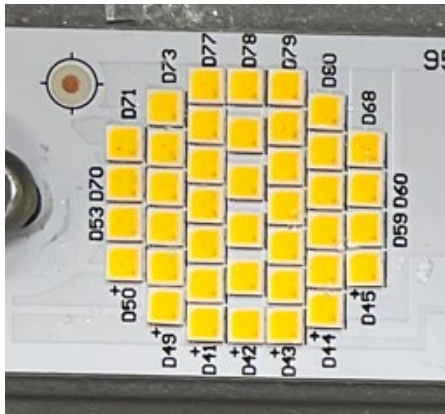


Figure 4A - 1 - LED Product – Evolve Roadway Light

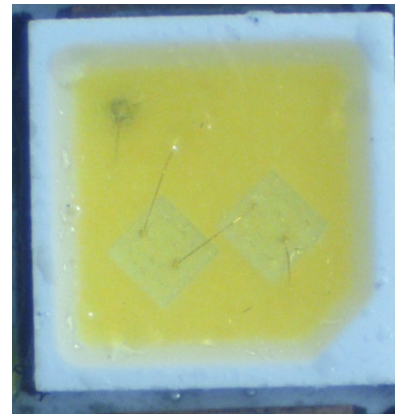


Figure 4A - 2 - LED Product - Evolve Roadway Light

90. ***1(b): a first lead frame and a second lead frame separated from each other;—***
The exemplary Evolve Roadway Light comprises a “first lead frame and second lead frame separated from each other,” as seen in Figure 4B - 1, where the first and second lead frames are annotated in yellow:

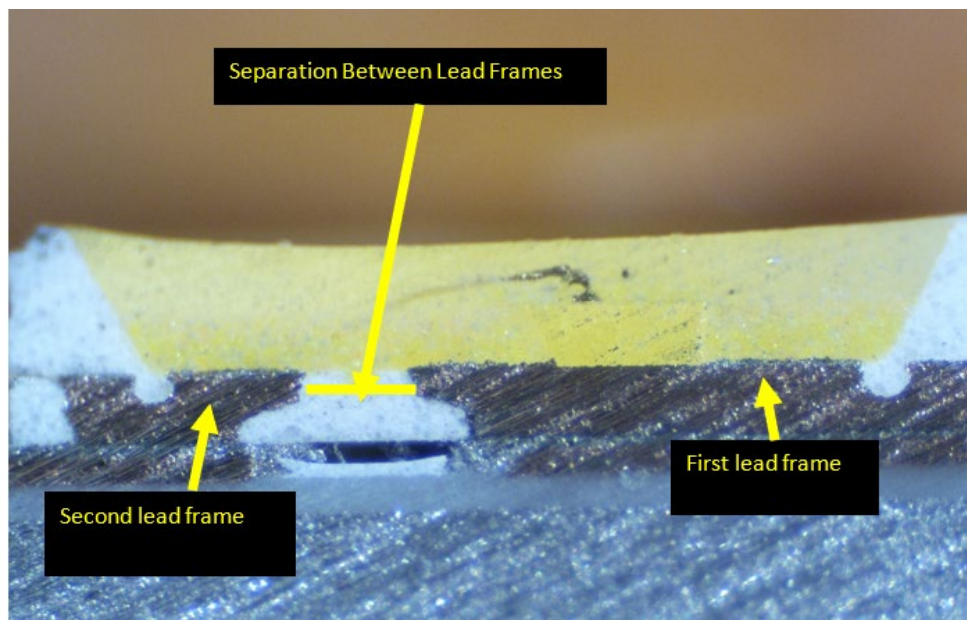


Figure 4B - 1 Evolve Roadway Light

91. ***1(c): an LED Chip disposed on the first lead frame and electrically connected with the second lead frame; and;—*** The exemplary Evolve Roadway Light comprises an “LED Chip disposed on the first lead frame and electrically connected with the second lead frame,” as

seen in Figure 4B - 2:

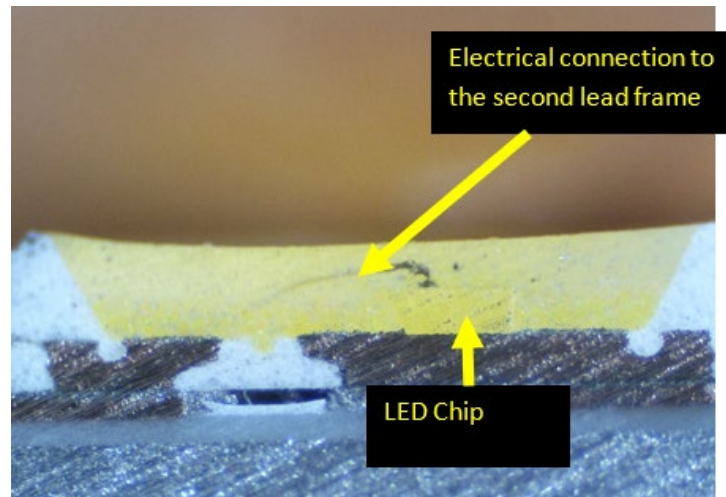


Figure 4B - 2 Evolve Roadway Light

92. ***1(d): a resin covering at least portions of surfaces of the first and second lead frames, wherein;***— The exemplary Evolve Roadway Light comprises “a resin covering at least portions of surfaces of the first and second lead frames,” as seen in Figure 4B - 3:

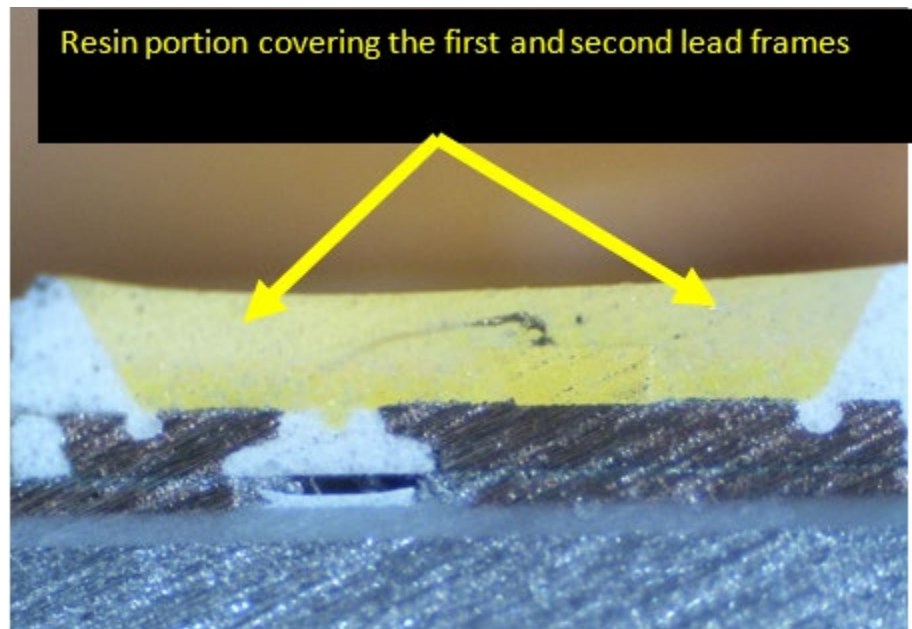


Figure 4B – 3 Evolve Roadway Light

93. ***1(e): at least one of the first and second lead frames comprises a first edge facing***

the other lead frame and a second side opposite the first side;— At least one of the first and second lead frames in the exemplary Evolve Roadway Light comprises “a first edge facing the other lead frame and second side opposite the first side” as seen in Figure 4B - 4 and Figure 4B - 5:

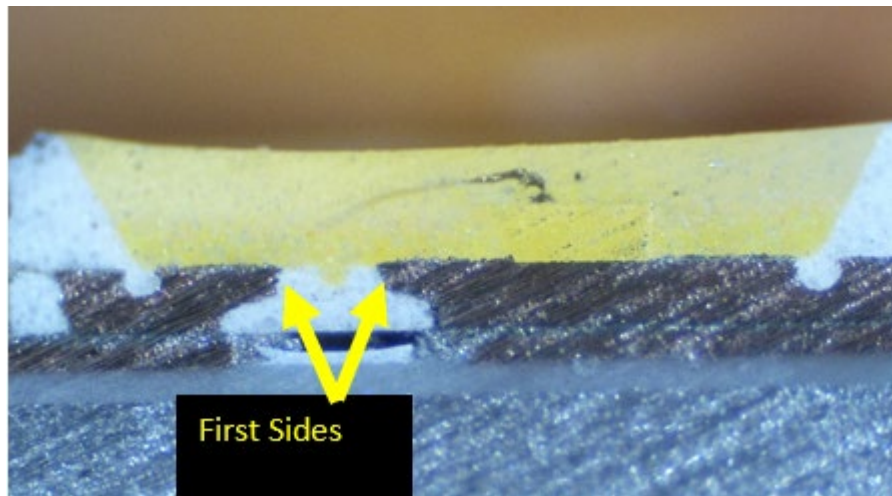


Figure 4B - 4 Evolve Roadway Light (1)

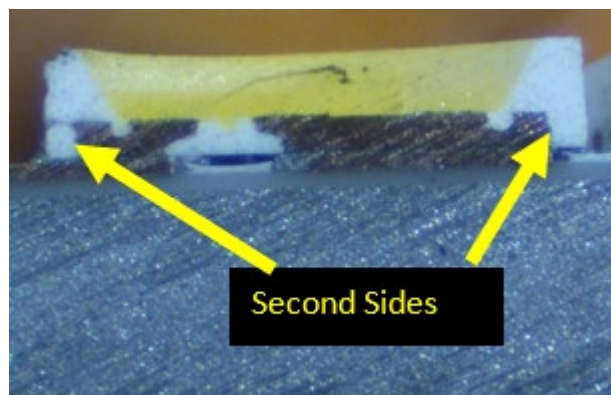


Figure 4B - 5 Evolve Roadway Light (2)

94. *1(f): the first lead frame comprising a first groove disposed on a lower surface thereof, and the second lead frame comprises a second groove disposed on the lower surface thereof;*—The exemplary Evolve Roadway Light comprises a first lead frame with “a first groove disposed on a lower surface thereof,” and second lead frame with “a second groove disposed on a lower surface thereof;” as seen in Figure 4B - 6:

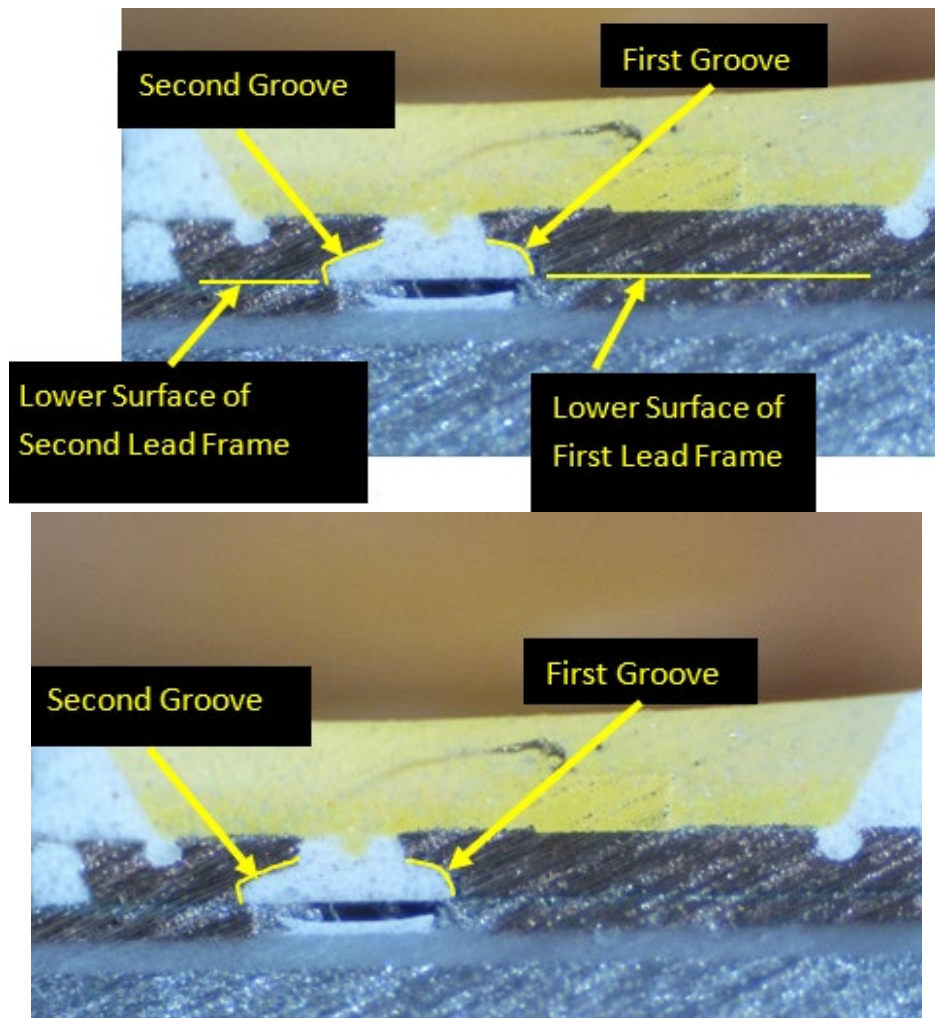


Figure 4B - 6 Evolve Roadway Light

95. *1(g): each of the first and second grooves is open only on the lower surfaces of the first and second lead frames, respectively; and;*—The exemplary Evolve Roadway Light comprises first and second grooves that are “open only on the lower surfaces of the first and second lead frames, respectively,” as seen in Figure 4B - 7:

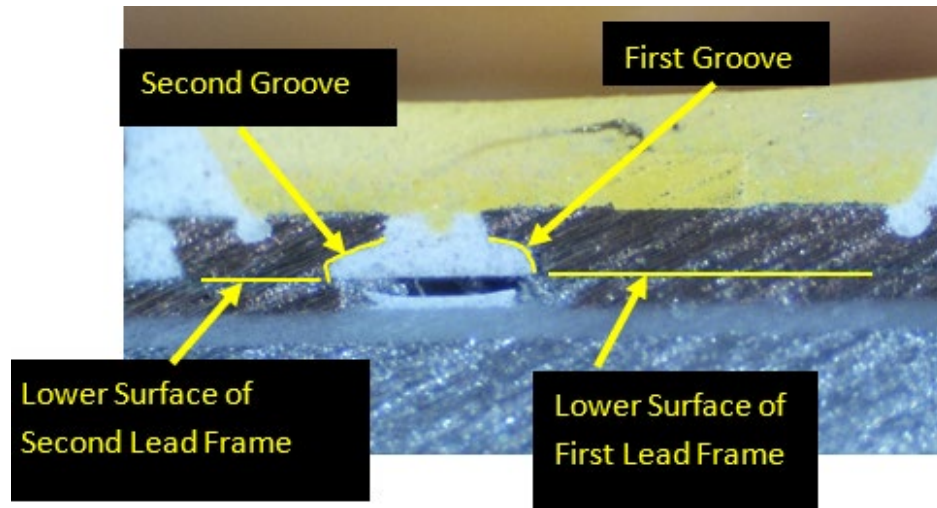


Figure 4B - 7 Evolve Roadway Light

96. *1(h): a depth of the first groove is equal to a depth of the second groove.*—The exemplary Evolve Roadway Light contains a first and second groove with equal depths, as seen in Figure 4B – 8:

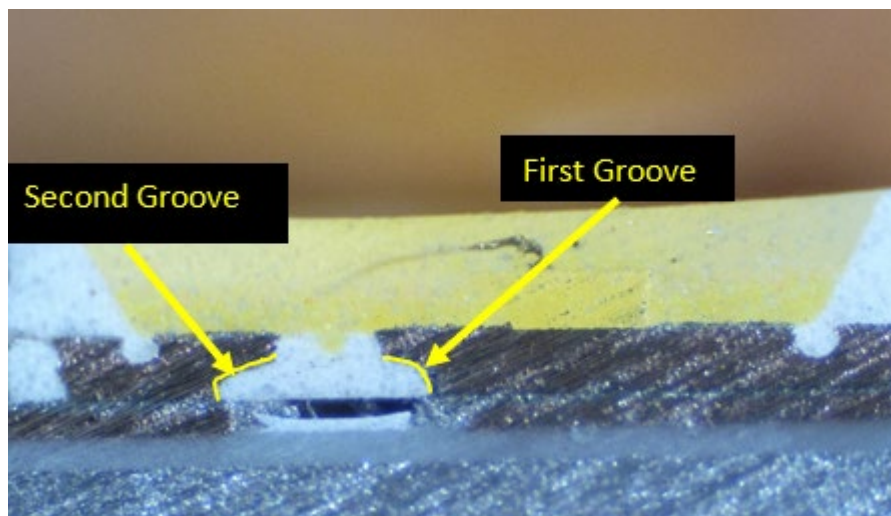


Figure 4B – 8 Evolve Roadway Light

97. Upon information and belief, Defendant was aware of Plaintiff's LED patent portfolio, which includes the '942 Patent, and the relevance of Plaintiff's patents to Defendant's products since before the complaint was filed as a result of Plaintiff's proactive efforts to engage

Defendant in licensing discussions. Defendant, however, did not enter into a license, but instead moved forward with the making, using and selling of products that had an objectively high chance of infringing one or more of Plaintiff's patents. Plaintiff therefore asserts that Defendant's infringement is willful and entitles Plaintiff to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

98. Plaintiff is in compliance with any applicable marking and/or notice provisions of 35 U.S.C. § 287 with respect to the '942 Patent.

99. Plaintiff is entitled to recover from Defendant all damages that Plaintiff has sustained as a result of Defendant's infringement of the '942 Patent, including, without limitation, a reasonable royalty.

JURY DEMAND

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

PRAYER FOR RELIEF

WHEREFORE, Plaintiff respectfully requests:

- A. That Judgment be entered that Defendant 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 Plaintiff for Defendant's infringement under 35 U.S.C. § 284;
- C. That the case be found exceptional under 35 U.S.C. § 285 and that Plaintiff 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,

/s/ Paul R. Kerridge

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