



2. Defendants have infringed the Patents-in-suit by making and using the apparatuses and methods claimed by the Patents-in-suit by making, using, importing, providing, supplying, distributing, selling, and/or offering for sale at least the Huawei Honor 8 smartphone device and the Huawei Mate 9 smartphone device, (collectively, the “Accused Devices”). Lemaire Illumination seeks damages for patent infringement.

### **THE PARTIES**

3. Plaintiff **Lemaire Illumination** is a Texas limited liability company organized and existing under the laws of the State of Texas, having a principal place of business at 14565 Grand Avenue, Burnsville, Minnesota 55306.

4. Defendant **Huawei Device USA** is a Texas corporation with its principal place of business at 5700 Tennyson Parkway, Suite 300, Plano, Texas 75024, having an assumed name of Huawei Mobile USA. Huawei Device USA designs, manufactures, uses, provides, supplies, distributes, imports into the United States, sells, and/or offers for sale in the United States cell phones, smartphones, tablets, and other computing devices that include at least a camera and flash system. Huawei Tech USA can be served with process, by serving CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201.

5. Defendant **Huawei Device Dongguan** is a Chinese corporation with its principal place of business at B2-5 of Nanfang Factory, No. 2 of Xincheng Road, Songshan Lake Science and Technology Industrial Zone, Dongguan, Guangdong, 523000, China. Huawei Device Dongguan designs, manufactures, uses, provides, supplies, distributes, imports into the United States, sells, and/or offers for sale in the United States cell phones, smartphones, tablets, and other computing devices that include at least a camera and flash system. Huawei Device Dongguan can

be served with process, by serving in accordance with the Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents, in accordance with FED. R. CIV. P. 4(f).

6. Defendant **Huawei Device Shenzhen** is a Chinese corporation with a principal place of business at Building 2, Section B, Huawei Industrial Base, Bantian, Longgang District, Shenzhen, Guangdong, 518129, China. Huawei Device Shenzhen designs, manufactures, uses, provides, supplies, distributes, imports into the United States, sells, and/or offers for sale in the United States cell phones, smartphones, tablets, and other computing devices that include at least a camera and flash system. Huawei Device Shenzhen can be served with process, by serving in accordance with the Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents, in accordance with FED. R. CIV. P. 4(f).

#### **JURISDICTION AND VENUE**

7. This is an action for patent infringement in violation of the Patent Act of the United States, 35 U.S.C. § 1 *et seq.*, including 35 U.S.C. §§ 271(a)-(c) and 281-285.

8. The Court has original and exclusive subject matter jurisdiction over the patent infringement claims for relief under 28 U.S.C. §§ 1331 and 1338(a).

9. This Court has personal jurisdiction over Defendants. Defendants have conducted and continue to conduct business within the State of Texas. Defendants, directly or through subsidiaries or intermediaries (including distributors, retailers, and others), ship, distribute, offer for sale, sell, design, manufacture, and advertise products and/or services that infringe the Patents-in-suit in the United States, the State of Texas, and the Eastern District of Texas. Defendant Huawei Device USA is a Texas corporation with established regular places of business in the State of Texas and this District. On information and belief, each of Defendants Huawei Device Dongguan and Huawei Device Shenzhen has directly or through subsidiaries or intermediaries

(including distributors, retailers, and others), ship, distribute, offer for sale, sell, design, manufacture, and advertise products and/or services that infringe the Patents-in-suit in the United States, the State of Texas, and the Eastern District of Texas.

10. Defendants, directly and/or through subsidiaries and intermediaries, have purposefully and voluntarily placed one or more of their infringing Accused Devices, as described below, into the stream of commerce with the expectation that they will be purchased and used by consumers in the Eastern District of Texas. These infringing Accused Devices have been and continue to be purchased and used by consumers in the Eastern District of Texas. Defendants have committed acts of patent infringement within the State of Texas and, more particularly, within the Eastern District of Texas.

11. Venue is proper in the Eastern District of Texas pursuant to 28 U.S.C. § 1391 and 28 U.S.C. § 1400(b). Venue is proper in this District under 28 U.S.C. §1400(b) with respect to Defendant Huawei Device USA. Defendant Huawei Device USA is subject to personal jurisdiction in this district, and as a Texas corporation has its principal place of business in Plano, Texas. Defendant Huawei Device USA resides in this District. Further, Defendant Huawei Device USA has committed acts of infringement and has a regular and established place of business in this District, i.e., Plano, Texas. Additionally, venue is proper in the Eastern District of Texas because each of Defendants Huawei Device Dongguan and Huawei Device Shenzhen is a foreign corporation that may be sued in this judicial district under 28 U.S.C. § 1391(c)(3). Further, a substantial part of the events or omissions giving rise to the claims alleged herein occurred in this judicial district.

## **FACTUAL BACKGROUND**

### **A. Inventor Charles A. Lemaire**

12. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

13. Mr. Charles A. Lemaire is one of the inventors of each of the Patents-in-suit as well as the director and a member of Lemaire Illumination.

14. Passionate about computers, optics, semiconductors, and electronics, Mr. Lemaire has spent more than three decades developing and perfecting a range of high-performance computers and other technologies.

15. Mr. Lemaire received his undergraduate degree in electrical engineering from the University of Minnesota with an emphasis on very-large-scale integration (“VLSI”) circuits and integrated circuit fabrication. Fascinated about the area and willing to solidify his training in electronics, Mr. Lemaire went on to take numerous graduate courses in electronics, lasers, magnetics, and coding theory.

16. Mr. Lemaire continued his education earning an MBA from the College of St. Thomas and a law degree from William Mitchell College of Law.

17. Upon obtaining his undergraduate electronics degree, Mr. Lemaire completed an internship with Lawrence Livermore National Laboratory in California. After numerous graduate-school courses, he practiced as an electronics and software engineer with the IBM Corporation for more than seventeen years. After earning his law degree, Lemaire practiced patent law with the Intellectual Property Group at the law firm of Schwegman, Lundberg and Woessner, P.A. Mr. Lemaire is currently the founder and president of the Lemaire Patent Law Firm, PLLC.

18. Mr. Lemaire began working on his very first patented co-invention in the early 1980s and he continues to this day to use his knowledge and his vast experience to innovate and improve various technologies.

**B. Mr. Lemaire's Inventions related to LEDs**

19. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

20. Prior to Mr. Lemaire's work, LEDs were typically driven by a voltage supply that supplied current through a current-limiting resistor. The brightness changed as the voltage changed; for example, as a battery drained, LEDs grew dimmer. Some companies at that time used pulsed electrical current to drive red LEDs to obtain monochrome images that were analyzed for machine-vision automation applications. Other companies used varying pulse widths to change the relative amounts of pulsed electrical current to drive red-, green-, and blue-light LEDs to obtain mixes of colors, but not while maintaining the illumination at a given level, nor to obtain color balance for digital color photos.

21. Over a period of approximately eight years, Mr. Lemaire worked with a team that included Mr. Lemaire's future co-inventors, Mr. Gary A. Lebens and Mr. Charles T. Bourn, to contribute to several innovations covering the LED field. Mr. Lebens, Mr. Bourn, and Mr. Lemaire considered how to drive LEDs more efficiently, how to maintain illumination brightness over a range of input voltages, and how to obtain and use various color spectra that were newly enabled by gallium nitride ("GaN") LEDs.

22. Mr. Lemaire's wide-ranging engineering background enabled him to envision new applications for the pulsed LED illumination and new ways to modify and control the color

spectrum while maintaining a given brightness. As a result, Mr. Lemaire, together with Mr. Lebens and Mr. Bourn, co-invented several related inventions involving various applications for LEDs.

23. An initial patent application, U.S. Application No. 09/044,559, filed on March 19, 1998 (the “’559” Application), described several inventions that contributed greatly to methods, devices, and applications related to LED technology that extended way beyond the old premise of supplying pulsed current to LEDs. The ’559 Application duly and legally issued as the ’661 Patent on August 1, 2000.

24. While the ’559 Application was still pending, the first of several divisional and continuation patent applications was filed, each duly and legally claiming priority to the original ’559 Application. These additional patent applications form a portfolio that contains claims to other inventions described in the specification and drawings of the original ’559 Application.

25. On October 28, 2004, Mr. Lemaire purchased the entire portfolio of patents related to the initial ’661 Patent, including a related pending patent application at the time and all future applications based on the original ’661 Patent filed in the United States and all foreign countries, including the ’390 Patent and the ’266 Patent.

### **C. Lemaire Illumination**

26. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

27. In 2011, following his entrepreneurial spirit, Mr. Lemaire co-founded Lemaire Illumination Technologies, LLC with the intent to develop and license various LED technologies based on the LED patents co-invented and owned by Mr. Lemaire.

28. Today, Lemaire Illumination owns a diverse portfolio of electrical patents, including the Patents-in-suit.

29. Over the last six and a half years, Lemaire Illumination's portfolio has increased substantially through Mr. Lemaire's efforts to strengthen the color-spectrum-control and color-balance technology and better understand and address the needs of the LED industry.

**D. Lemaire Illumination Patents**

30. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

31. The United States Patent and Trademark Office (the "USPTO") has recognized the contributions of Mr. Lemaire to the public domain and it has awarded Mr. Lemaire numerous patents.

32. Lemaire Illumination is the owner of the entire right, title, and interest in and to the '661 Patent entitled "Method and Apparatus for an L.E.D. Flashlight" that issued on August 1, 2000. Lemaire Illumination holds the exclusive rights to bring suit with respect to any past, present, and future infringement of the '661 Patent. A copy of the '661 Patent is attached as Exhibit A hereto.

33. Claim 32 of the '661 Patent, which depends from claim 31, is exemplary and recites as follows: An illumination source, comprising: (a) a light-emitting diode (LED) housing comprising one or more LEDs; (b) a source of electrical power; and (c) a control circuit that selectively applies power from a source of electric power to the one or more LEDs to substantially maintain a predetermined color spectrum of the one or more LEDs as a voltage of the source of electric power varies over a range that would otherwise vary the light output color spectrum, wherein: the one or more LEDs comprise one or more LEDs having a first characteristic color spectrum output and one or more LEDs having a second characteristic color spectrum output, the first characteristic color spectrum output different from the second characteristic color spectrum



output; and wherein the control circuit controls a pulse characteristic in order to control the proportion of light output having the first characteristic color spectrum output to that having the second characteristic color spectrum output.

34. Claim 34 of the '661 Patent is exemplary and recites as follows: An illumination source, comprising: (a) a light-emitting diode (LED) housing comprising one or more LEDs; and (b) an electrical control circuit that selectively applies pulsed power from a DC voltage source of electric power to the LEDs to control a light output color spectrum of the one or more LEDs and maintain a predetermined light output level of the LED units as a charge on the DC voltage source varies.

35. Claim 35 of the '661 Patent recites: The illumination source of claim 34, wherein: the one or more LEDs comprise one or more LEDs having a first characteristic color spectrum output and one or more LEDs having a second characteristic color spectrum output, the first characteristic color spectrum output different from the second characteristic color spectrum output; and wherein the control circuit controls one or more pulse characteristics in order to control the proportion of light output having the first characteristic color spectrum output to that having the second characteristic color spectrum output.

36. Lemaire Illumination is the owner of the entire right, title, and interest in and to the '390 Patent entitled "Color-Adjusted Camera Light and Method" that issued on December 3, 2002. Lemaire Illumination holds the exclusive rights to bring suit with respect to any past, present, and future infringement of the '390 Patent. A copy of the '390 Patent is attached as Exhibit B hereto.

37. Claim 8 of the '390 Patent, which depends from claim 1, is exemplary and recites as follows: A portable video camera and illumination source system, comprising: a housing; one or more light-emitting diodes (LEDs) attached to the housing; a video camera imaging device

attached to the housing; a control circuit that selectively applies a plurality of pulses from a source of electric power to the one or more LEDs; and a feedback signal coupled to the control circuit, wherein the control circuit changes a characteristic of each one of the plurality of pulses to control a light output characteristic of the LEDs based on the feedback signal, wherein the feedback signal is based on a color balance of a output signal from the imaging device and the control circuit separately adjusts the light output characteristic of each of a plurality of different color LEDs.

38. Claim 40, which depends from claim 35, of the '390 Patent is exemplary and recites as follows: A method for illuminating a scene comprising: controlling one or more light output pulses, directed towards the scene, of one or more light-emitting diodes (LEDs); obtaining a video image of the scene; and generating feedback, wherein the controlling maintains a characteristic of the illumination on the scene by varying the pulses of the LEDs based on the feedback, wherein the feedback is based at least in part on a measurement of color.

39. Lemaire Illumination is the owner of the entire right, title, and interest in and to the '266 Patent entitled "Pulsed L.E.D. Illumination Apparatus and Method" and issued on August 25, 2015. Lemaire Illumination holds the exclusive rights to bring suit with respect to any past, present, and future infringement of the '266 Patent. A copy of the '266 Patent is attached as Exhibit C hereto.

40. Claim 2 of the '266 Patent, which depends from claim 1, is exemplary and recites: An apparatus comprising: a device that includes an electronic camera configured to output an image signal; a measurement unit configured to measure a color balance of the image signal; a plurality of light-emitting diodes (LEDs) mounted to the device, wherein the plurality of light-emitting diodes includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, wherein the first characteristic spectrum is different

from the second characteristic spectrum; a control circuit, operably coupled to the measurement unit and to the plurality of light emitting diodes, wherein the control circuit controls a pulse characteristic to the one or more LEDs having a first characteristic spectrum in order to change a proportion of light output having the first characteristic spectrum to that having the second characteristic spectrum that is different than the first spectrum based at least in part on the measured color balance of the image signal; a DC voltage source, wherein the control circuit generates the series of pulses such that the average intensity of the light from the light-emitting diodes is kept constant as a voltage of the DC voltage source changes.

41. Claim 5 of the '266 Patent, which depends from claim 1, is exemplary and recites: An apparatus comprising: a device that includes an electronic camera configured to output an image signal; a measurement unit configured to measure a color balance of the image signal; a plurality of light-emitting diodes (LEDs) mounted to the device, wherein the plurality of light-emitting diodes includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, wherein the first characteristic spectrum is different from the second characteristic spectrum; a control circuit, operably coupled to the measurement unit and to the plurality of light emitting diodes, wherein the control circuit controls a pulse characteristic to the one or more LEDs having a first characteristic spectrum in order to change a proportion of light output having the first characteristic spectrum to that having the second characteristic spectrum that is different than the first spectrum based at least in part on the measured color balance of the image signal, wherein the control circuit also controls a pulse width of pulses applied to the plurality of light-emitting diodes based on a measured light output intensity of the plurality of light-emitting diodes.

42. Claim 17 of the '266 Patent, which depends from claim 16, is exemplary and recites: An apparatus comprising: a device that includes an electronic camera configured to output an image signal; a measurement unit configured to measure a color balance of the image signal; a plurality of light-emitting diodes mounted to the device, wherein the plurality of light-emitting diodes includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, wherein the first characteristic spectrum is different from the second characteristic spectrum; means for adjusting a color spectrum of light from the plurality of light-emitting diodes based at least in part on the measured color balance, wherein the means for adjusting the color spectrum comprises: means for generating a feedback signal based on the color balance of light from the plurality of light-emitting diodes, wherein the means for generating of the series of pulses includes means for controlling the color of light from the plurality of light-emitting diodes using means for adjusting an amount of current through the plurality of light-emitting diodes based on the feedback signal.

43. On information and belief, the Defendants were well aware of the '661 Patent family, including the '661 Patent, the '390 Patent and the '266 Patent, since at least mid to late 2015. On information and belief, on or about September 2015 Lemaire Illumination informed Tao Zhang, in-house counsel and Director of IP Strategy for Defendants of the '661 Patent family.

#### **E. Conduct by Defendants**

##### **i. The Huawei Honor 8 Smartphone Device**

44. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

45. On information and belief, on or about August 16, 2016, Defendants unveiled the Huawei Honor 8 smartphone device in the United States with a launch event in San Francisco, California. *See* Exhibit D.

46. On information and belief, on or about August 17, 2016, Defendants began making, using, importing, providing, supplying, distributing, selling, and/or offering for sale the Huawei Honor 8 smartphone device in the United States. *See id.*

47. On information and belief, the Huawei Honor 8 smartphone device includes, among other things, a housing, an electrical control circuit, a measurement unit (which can be a processor and/or a sensor), a camera, a dual LED flash that includes one or more LEDs, and a battery that provides DC voltage to the one or more LEDs of the Huawei Honor 8 smartphone device. *See* Exhibit D; *see also* Exhibit E.

48. On information and belief, when the camera of the Huawei Honor 8 smartphone device is activated to capture an image, the electrical control circuit selectively provides a set of pulses from the battery to the dual LED flash, which generates a light output of the one or more LEDs. This set of pulses changes to control a color spectrum of the light output of the one or more LEDs of the dual LED flash and to maintain the light output as the DC voltage source (i.e., the battery) charge varies. Further, the control circuit adjusts a height of the pulses to control a color spectrum of the LED output light and adjusts an LED on-time proportion to control an amount of the output light. *See* Exhibit D; *see also* Exhibit E.

49. On information and belief, at least the camera of the Huawei Honor 8 smartphone device outputs an image signal, and the measurement unit measures a color balance of the image signal. *See* Exhibit E.

**ii. The Huawei Mate 9 Smartphone Device**

50. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

51. On information and belief, on or about November 3, 2016, Defendants unveiled the Huawei Mate 9 smartphone device at a global launch event in Munich, Germany. *See* Exhibit F.

52. On information and belief, on or about January 7, 2017, Defendants began making, using, importing, providing, supplying, distributing, selling, and/or offering for sale the Huawei Mate 9 smartphone device in the United States. *See* Exhibit G.

53. On information and belief, the Huawei Mate 9 smartphone device includes, among other things, a housing, an electrical control circuit, a measurement unit (which can be a processor and/or a sensor), a camera, a dual LED flash that includes one or more LEDs, and a battery that provides DC voltage to the one or more LEDs of the Huawei Mate 9 smartphone device. *See* Exhibit H.

54. On information and belief, when the camera of the Huawei Mate 9 smartphone device is activated to capture an image, the electrical control circuit selectively provides a set of pulses from the battery to the dual LED flash, which generates a light output of the one or more LEDs. This set of pulses changes to control a color spectrum of the light output of the one or more LEDs of the dual LED flash and to maintain the light output as the DC voltage source (i.e., the battery) charge varies. Further, the control circuit adjusts a height of the pulses to control a color spectrum of the LED output light and adjusts an LED on-time proportion to control an amount of the output light. *See* Exhibit F; *see also* Exhibit H.

55. On information and belief, at least the camera of the Huawei Mate 9 smartphone device outputs an image signal, and the measurement unit measures a color balance of the image signal. *See id.*

## COUNT I

### INFRINGEMENT OF UNITED STATES PATENT NO. 6,095,661

56. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

57. On August 1, 2000, the '661 Patent entitled "Method and Apparatus for an L.E.D. Flashlight" was duly and legally issued by the USPTO.

58. Lemaire Illumination owns the '661 Patent by assignment and possesses all rights of recovery under the '661 Patent, including the exclusive right to sue for infringement, recover damages, and obtain injunctive relief.

59. Lemaire Illumination has not licensed or otherwise authorized, explicitly or implicitly, the '661 Patent in any way to Defendants.

60. Defendants, directly or through intermediaries, have been, among other things, making, using, importing, providing, supplying, distributing, selling, and/or offering for sale apparatuses including, without limitation, the Accused Devices that are covered by one or more claims of the '661 Patent, in the State of Texas, in this judicial district, and elsewhere in the United States. In doing so, Defendants infringe one or more claims of the '661 Patent, literally or under the doctrine of equivalents, under 35 U.S.C. § 271(a), including claims 32, 34, and 35 of the '661 Patent.

61. For example, each of the Accused Devices directly infringes claim 32 of the '661 Patent because each Accused Device is an illumination source and has at least a light-emitting

diode (LED) housing comprising one or more LEDs, i.e., each of the Accused Devices has a dual LED flash having one or more LEDs and supporting case structure; a source of electrical power, i.e., each of the Accused Devices has at least a battery, which is a source of electrical power; and a control circuit that selectively applies power from a source of electric power to the one or more LEDs to substantially maintain a predetermined color spectrum of the one or more LEDs as a voltage of the source of electric power varies over a range that would otherwise vary the light output color spectrum, i.e., each of the Accused Devices includes a control circuit that selectively applies power from a source of electric power to the one or more LEDs to substantially maintain a predetermined color spectrum of the one or more LEDs as a voltage of the source of electric power varies over a range that would otherwise vary the light output color spectrum; wherein: the one or more LEDs comprise one or more LEDs having a first characteristic color spectrum output and one or more LEDs having a second characteristic color spectrum output, the first characteristic color spectrum output different from the second characteristic color spectrum output, i.e., in each of the Accused Devices one or more LEDs in the dual flash having a first characteristic color spectrum output and one or more LEDs having a second characteristic color spectrum output, the first characteristic color spectrum output different from the second characteristic color spectrum output; and wherein the control circuit controls a pulse characteristic in order to control the proportion of light output having the first characteristic color spectrum output to that having the second characteristic color spectrum output, i.e., the control circuit in each of the Accused Devices controls a pulse characteristic in order to control the proportion of light output having the first characteristic color spectrum output to that having the second characteristic color spectrum output.

*See Exhibits A, D-H.*



62. For example, each of the Accused Devices directly infringes claim 34 of the '661 Patent because each Accused Device is an illumination source and has at least a light-emitting diode (LED) housing comprising one or more LEDs, i.e., each of the Accused Devices has a dual LED flash having one or more LEDs and supporting case structure, and an electrical control circuit that selectively applies pulsed power from a DC voltage source of electric power to the LEDs to control a light output color spectrum of the one or more LEDs and maintain a predetermined light output level of the LED units as a charge on the DC voltage source varies, i.e., each of the Accused Devices has an electrical control circuit that selectively provides a set of pulses from the battery to the dual LED flash, which generates a light output of the one or more LEDs of the dual LED flash. This set of pulses changes to control a color spectrum of the light output of the one or more LEDs of the dual LED flash and maintains the light output as the DC voltage source (i.e., the battery) charge varies. *See* Exhibits A, D-H.

63. For example, each of the Accused Devices directly infringes claim 35 of the '661 Patent because each Accused Devices includes all limitations of claim 34 and wherein: the one or more LEDs comprise one or more LEDs having a first characteristic color spectrum output and one or more LEDs having a second characteristic color spectrum output, the first characteristic color spectrum output different from the second characteristic color spectrum output, i.e., the one or more LEDs of the dual flash of each Accused Devices comprise one or more LEDs having a first characteristic color spectrum output and one or more LEDs having a second characteristic color spectrum output, the first characteristic color spectrum output different from the second characteristic color spectrum output; and wherein the control circuit controls one or more pulse characteristics in order to control the proportion of light output having the first characteristic color spectrum output to that having the second characteristic color spectrum output, i.e., in each of the

Accused Devices the control circuit controls one or more pulse characteristics in order to control the proportion of light output having the first characteristic color spectrum output to that having the second characteristic color spectrum output. *See* Exhibits A, D-H.

64. On information and belief, Defendants infringed the '661 Patent by inducing others, including at least users of the Accused Devices, through their advertising, publications, instructions, manuals, and/or technical support to infringe claims 32, 34, and 35 of the '661 Patent in violation of 35 U.S.C. § 271(b). *See, e.g.,* Exhibits D-H.

65. On information and belief, Defendants took active steps to induce infringement of claims 32, 34, and 35 of the '661 Patent by others, including their customers, authorized resellers, distributors, and users of the Accused Devices, and Defendants took such active steps knowing that those steps would induce, encourage, and facilitate direct infringement by others. Such active steps included, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, etc.), promoting, and instructing others to use and/or how to use at least the camera and flash systems of the Accused Devices. *See id.*

66. On information and belief, Defendants knew or should have known that such activities would induce others to directly infringe claims 32, 34, and 35 of the '661 Patent, including for example, by encouraging them to use and/or how to use at least the camera and flash systems of the Accused Devices.

67. On information and belief, Defendants contributed to the infringement of claims 32, 34, and 35 of the '661 Patent by others, including their customers, authorized resellers, and distributors, and users of the Accused Devices. Acts by Defendants that contributed to the infringement by others included, but are not limited to, the sale, offer for sale, and/or import by Defendants of at least the Accused Devices for use in the claimed processes of the '661 Patent

and/or the camera and flash component systems of the Accused Devices which are not staple articles or capable of substantial non-infringing uses, and constitute a material part of the inventions claimed in claims 32, 34, and 35 of the '661 Patent. Defendants knew or should have known that at least the Accused Devices and/or the camera and flash component systems of the Accused Devices were especially made or adapted for use in an infringement of claims 32, 34, and 35 of the '661 Patent.

68. Defendants undertook infringing actions despite knowing that such activities infringed the '661 Patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least mid to late 2015, Defendants have been aware that their actions constituted and continue to constitute infringement of the '661 Patent, and that the '661 Patent is valid. Despite their knowledge that their actions constitute infringement, Defendants continued their infringing activities in a willful, wanton, malicious, bad-faith, deliberate, consciously wrongful or flagrant manner, which is an egregious case of culpable behavior. As such, Defendants willfully infringed the '661 Patent.

69. Lemaire Illumination has been injured and has been caused significant financial damage as a direct and proximate result of the Defendants' infringement of the '661 Patent.

70. Unless enjoined by this Court, Defendants will continue to infringe the '661 Patent, and thus cause irreparable injury and damage to Lemaire Illumination.

71. Lemaire Illumination is entitled to recover from Defendants the damages sustained by Lemaire Illumination as a result of the Defendants' wrongful acts in an amount subject to proof at trial.

72. Lemaire Illumination has been irreparably injured and is entitled to seek injunctive relief, in addition to all other legal and equitable remedies.

**COUNT II**

**INFRINGEMENT OF UNITED STATES PATENT NO. 6,488,390**

73. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

74. On December 3, 2002, the '390 Patent entitled "Color-Adjusted Camera Light and Method" was duly and legally issued by the USPTO.

75. Lemaire Illumination owns the '390 Patent by assignment and possesses all rights of recovery under the '390 Patent, including the exclusive right to sue for infringement, recover damages, and obtain injunctive relief.

76. Lemaire Illumination has not licensed or otherwise authorized, explicitly or implicitly, the '390 Patent in any way to Defendants.

77. Defendants, directly or through intermediaries, have been, among other things, making, using, importing, providing, supplying, distributing, selling, and/or offering for sale apparatuses including, without limitation, the Accused Devices that are covered by one or more claims of the '390 Patent, in the State of Texas, in this judicial district, and elsewhere in the United States. In doing so, Defendants infringe one or more claims of the '390 Patent, literally or under the doctrine of equivalents, under 35 U.S.C. § 271(a), including claims 8 and 40 of the '390 Patent.

78. For example, each of the Accused Devices directly infringes claim 8 of the '390 Patent because each of the Accused Devices is a portable video camera and illumination source system that has at least a housing; one or more light-emitting diodes (LEDs) attached to the housing, i.e., each of the Accused Devices has a dual flash that includes one or more LEDs attached to the housing; a video camera imaging device attached to the housing, i.e., each of the Accused Devices has a video camera imaging devices attached to the housing; a control circuit that

selectively applies a plurality of pulses from a source of electric power to the one or more LEDs; and a feedback signal coupled to the control circuit, i.e., each of the Accused Devices has a control circuit that selectively applies a plurality of pulses from at least a battery to the dual flash that has one or more LEDs; and a feedback signal coupled to the control circuit; wherein the control circuit changes a characteristic of each one of the plurality of pulses to control a light output characteristic of the LEDs based on the feedback signal, i.e., wherein the control circuit of each of the Accused Devices changes a characteristic of each one of the plurality of pulses to control a light output characteristic of the LEDs based on the feedback signal; wherein the feedback signal is based on a color balance of a output signal from the imaging device and the control circuit separately adjusts the light output characteristic of each of a plurality of different color LEDs, i.e., the feedback signal of each of the Accused Devices is based on a color balance of a output signal from the imaging device and the control circuit separately adjusts the light output characteristic of each of a plurality of different color LEDs. *See* Exhibits B, D-H.

79. For example, each of the Accused Devices directly infringes claim 40 of the '390 Patent because each of the Accused Devices performs a method for illuminating a scene that includes at least the steps of: controlling one or more light output pulses, directed towards the scene, of one or more light-emitting diodes (LEDs), i.e., each of the Accused Devices controls one or more light output pulses, directed towards the scene, of one or more light-emitting diodes (LEDs) of a dual flash; obtaining a video image of the scene, i.e., each of the Accused Devices obtains a video image of the scene; and generating feedback, wherein the controlling maintains a characteristic of the illumination on the scene by varying the pulses of the LEDs based on the feedback, wherein the feedback is based at least in part on a measurement of color, i.e., each of the Accused Devices generates feedback, wherein the controlling maintains a characteristic of the

illumination on the scene by varying the pulses of the LEDs of the dual flash based on the feedback, wherein the feedback is based at least in part on a measurement of color. *See* Exhibits B, D-H.

80. On information and belief, Defendants infringed the '390 Patent by inducing others, including at least users of the Accused Devices, through their advertising, publications, instructions, manuals, and/or technical support to infringe claims 8 and 40 of the '390 Patent in violation of 35 U.S.C. § 271(b). *See, e.g.,* Exhibits D-H.

81. On information and belief, Defendants took active steps to induce infringement of claims 8 and 40 of the '390 Patent by others, including their customers, authorized resellers, distributors, and users of the Accused Devices, and Defendants took such active steps knowing that those steps would induce, encourage, and facilitate direct infringement by others. Such active steps included, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, etc.), promoting, and instructing others to use and/or how to use at least the camera and flash systems of the Accused Devices. *See id.*

82. On information and belief, Defendants knew or should have known that such activities would induce others to directly infringe claims 8 and 40 of the '390 Patent, including for example, by encouraging them to use and/or how to use at least the camera and flash systems of the Accused Devices.

83. On information and belief, Defendants contributed to the infringement of claims 8 and 40 of the '390 Patent by others, including their customers, authorized resellers, and distributors, and users of the Accused Devices. Acts by Defendants that contributed to the infringement by others include, but are not limited to, the sale, offer for sale, and/or import by Defendants of at least the Accused Devices for use in the claimed processes of the '390 Patent and/or the camera and flash component systems of each of the Accused Devices which are not

staple articles or capable of substantial non-infringing uses, and constitute a material part of the inventions claimed in claims 8 and 40 of the '390 Patent. Defendants knew or should have known that at least each of the Accused Devices were especially made or adapted for use in an infringement of claims 8 and 40 of the '390 Patent.

84. Defendants undertook their infringing actions despite knowing that such activities infringe the '390 Patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least mid to late 2015, Defendants have been aware that their actions constituted and continue to constitute infringement of the '390 Patent, and that the '390 Patent is valid. Despite their knowledge that their actions constitute infringement in a willful, wanton, malicious, bad-faith, deliberate, consciously wrongful or flagrant manner, Defendants continued their infringing activities, which is an egregious case of culpable behavior. As such, Defendants willfully infringed the '390 Patent.

85. Lemaire Illumination has been injured and has been caused significant financial damage as a direct and proximate result of the Defendants' infringement of the '390 Patent.

86. Unless enjoined by this Court, Defendants will continue to infringe the '390 Patent, and thus cause irreparable injury and damage to Lemaire Illumination.

87. Lemaire Illumination is entitled to recover from Defendants the damages sustained by Lemaire Illumination as a result of the Defendants' wrongful acts in an amount subject to proof at trial.

88. Lemaire Illumination has been irreparably injured and is entitled to seek injunctive relief, in addition to all other legal and equitable remedies.

**COUNT III**

**INFRINGEMENT OF UNITED STATES PATENT NO. 9,119,266**

89. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

90. On August 25, 2015, the '266 Patent entitled "Pulsed L.E.D. Illumination Apparatus and Method" was duly and legally issued by the USPTO.

91. Lemaire Illumination owns the '266 Patent by assignment and possesses all rights of recovery under the '266 Patent, including the exclusive right to sue for infringement, recover damages, and obtain injunctive relief.

92. Lemaire Illumination has not licensed or otherwise authorized, explicitly or implicitly, the '266 Patent in any way to Defendants.

93. Defendants, directly or through intermediaries, have been, among other things, making, using, importing, providing, supplying, distributing, selling, and/or offering for sale apparatuses including, without limitation, the Accused Devices that are covered by one or more claims of the '266 Patent, in the State of Texas, in this judicial district, and elsewhere in the United States. In doing so, Defendants infringe one or more claims of the '266 Patent, literally or under the doctrine of equivalents, under 35 U.S.C. § 271(a), including claims 2, 5, and 17 of the '266 Patent.

94. For example, each of the Accused Devices directly infringes claim 2 of the '266 Patent because each Accused Device is an apparatus that includes at least a device that includes an electronic camera configured to output an image signal; a measurement unit configured to measure a color balance of the image signal, i.e., each of the Accused Devices includes a measurement unit configured to measure a color balance of the image signal; a plurality of light-



emitting diodes (LEDs) mounted to the device, i.e., each of the Accused Devices has a dual flash that includes a plurality of light-emitting diodes (LEDs) mounted to the device, wherein the plurality of light-emitting diodes includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, i.e., the dual flash of each of the Accused Devices includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, wherein the first characteristic spectrum is different from the second characteristic spectrum, i.e., for each of the Accused Devices the first characteristic spectrum is different from the second characteristic spectrum; a control circuit, operably coupled to the measurement unit and to the plurality of light emitting diodes, i.e., each of the Accused Devices includes a control circuit, operably coupled to the measurement unit and to the plurality of light emitting diodes, wherein the control circuit controls a pulse characteristic to the one or more LEDs having a first characteristic spectrum in order to change a proportion of light output having the first characteristic spectrum to that having the second characteristic spectrum that is different than the first spectrum based at least in part on the measured color balance of the image signal, i.e., the control signal of each of the Accused Devices controls a pulse characteristic to the one or more LEDs having a first characteristic spectrum in order to change a proportion of light output having the first characteristic spectrum to that having the second characteristic spectrum that is different than the first spectrum based at least in part on the measured color balance of the image signal; a DC voltage source, wherein the control circuit generates the series of pulses such that the average intensity of the light from the light-emitting diodes is kept constant as a voltage of the DC voltage source changes, i.e., each of the Accused Devices includes at least a battery which is a DC voltage source, wherein the control circuit

generates the series of pulses such that the average intensity of the light from the light-emitting diodes is kept constant as a voltage of the DC voltage source changes. *See* Exhibits C-H.

95. For example, each of the Accused Devices directly infringes claim 5 of the '266 Patent because each Accused Device is an apparatus that includes at least a device that includes an electronic camera configured to output an image signal; a measurement unit configured to measure a color balance of the image signal, i.e., each of the Accused Devices includes a measurement unit configured to measure a color balance of the image signal; a plurality of light-emitting diodes (LEDs) mounted to the device, i.e., each of the Accused Devices has a dual flash that includes a plurality of light-emitting diodes (LEDs) mounted to the device, wherein the plurality of light-emitting diodes includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, i.e., the dual flash of each of the Accused Devices includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, wherein the first characteristic spectrum is different from the second characteristic spectrum, i.e., for each of the Accused Devices the first characteristic spectrum is different from the second characteristic spectrum; a control circuit, operably coupled to the measurement unit and to the plurality of light emitting diodes, i.e., each of the Accused Devices includes a control circuit, operably coupled to the measurement unit and to the plurality of light emitting diodes, wherein the control circuit controls a pulse characteristic to the one or more LEDs having a first characteristic spectrum in order to change a proportion of light output having the first characteristic spectrum to that having the second characteristic spectrum that is different than the first spectrum based at least in part on the measured color balance of the image signal, i.e., the control signal of each of the Accused Devices controls a pulse characteristic to the one or more LEDs having a first characteristic spectrum in order to change a

proportion of light output having the first characteristic spectrum to that having the second characteristic spectrum that is different than the first spectrum based at least in part on the measured color balance of the image signal; wherein the control circuit also controls a pulse width of pulses applied to the plurality of light-emitting diodes based on a measured light output intensity of the plurality of light-emitting diodes, i.e., the control circuit of each of the Accused Devices also controls a pulse width of pulses applied to the plurality of light-emitting diodes of the dual flash based on a measured light output intensity of the plurality of light-emitting diodes of the dual flash. *See Exhibits C-H.*

96. For example, each of the Accused Devices directly infringes claim 17 of the '266 Patent because each Accused Device is an apparatus that includes at least a device that includes an electronic camera configured to output an image signal; a measurement unit configured to measure a color balance of the image signal, i.e., each of the Accused Devices has a measurement unit configured to measure a color balance of the image signal; a plurality of light-emitting diodes mounted to the device, i.e., each of the Accused Devices has a dual flash that includes a plurality of light-emitting diodes mounted to the device, wherein the plurality of light-emitting diodes includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, wherein the first characteristic spectrum is different from the second characteristic spectrum, i.e., the dual flash having one or more LEDs of each of the Accused Devices includes one or more LEDs having a first characteristic spectrum and one or more LEDs having a second characteristic spectrum, wherein the first characteristic spectrum is different from the second characteristic spectrum; means for adjusting a color spectrum of light from the plurality of light-emitting diodes based at least in part on the measured color balance, i.e., each of the Accused Devices includes a means for adjusting a color spectrum of light from the plurality of

light-emitting diodes based at least in part on the measured color balance, wherein the means for adjusting the color spectrum comprises: means for generating a feedback signal based on the color balance of light from the plurality of light-emitting diodes, i.e., the means for adjusting the color spectrum of each of the Accused Devices includes at least means for generating a feedback signal based on the color balance of light from the plurality of light-emitting diodes of the dual flash; wherein the means for generating of the series of pulses includes means for controlling the color of light from the plurality of light-emitting diodes using means for adjusting an amount of current through the plurality of light-emitting diodes based on the feedback signal, i.e., the means for generating of the series of pulses of each of the Accused Devices includes means for controlling the color of light from the plurality of light-emitting diodes using means for adjusting an amount of current through the plurality of light-emitting diodes based on the feedback signal. *See* Exhibits C-H.

97. On information and belief, Defendants infringed the '266 Patent by inducing others, including at least users of the Accused Devices, through their advertising, publications, instructions, manuals, and/or technical support to infringe one or more of at least claims 2, 5, and 17 of the '266 Patent in violation of 35 U.S.C. § 271(b). *See, e.g.,* Exhibits D-H.

98. On information and belief, Defendants took active steps to induce infringement of claims 2, 5, and 17 of the '266 Patent by others, including their customers, authorized resellers, distributors, and users of the Accused Devices, and Defendants took such active steps knowing that those steps would induce, encourage, and facilitate direct infringement by others. Such active steps included, but are not limited to, encouraging, advertising (including by internet websites, television, store displays, etc.), promoting, and instructing others to use and/or how to use at least the camera and flash systems of the Accused Devices. *See id.*

99. On information and belief, Defendants knew or should have known that such activities would induce others to directly infringe claims 2, 5, and 17 of the '266 Patent, including for example, by encouraging them to use and/or how to use at least the camera and flash systems of the Accused Devices.

100. On information and belief, Defendants contributed to the infringement of claims 2, 5, and 17 of the '266 Patent by others, including their customers, authorized resellers, and distributors, and users of the Accused Devices. Acts by Defendants that contributed to the infringement by others included, but are not limited to, the sale, offer for sale, and/or import by Defendants of at least the Accused Devices for use in the claimed processes of the '266 Patent and/or the camera and flash component systems of the Accused Devices which are not staple articles or capable of substantial non-infringing uses, and constitute a material part of the inventions claimed in claims 2, 5, and 17 of the '266 Patent. Defendants knew or should have known that at least the Accused Devices and/or the camera and flash component systems of the Accused Devices were especially made or adapted for use in an infringement of claims 2, 5, and 17 of the '266 Patent.

101. Defendants undertook their infringing actions despite knowing that such activities infringed the '266 Patent, which has been duly issued by the USPTO, and is presumed valid. For example, since at least mid to late 2015, Defendants have been aware that their actions constituted and continue to constitute infringement of the '266 Patent, and that the '266 Patent is valid. Despite their knowledge that their actions constitute infringement, Defendants continued their infringing activities in a willful, wanton, malicious, bad-faith, deliberate, consciously wrongful or flagrant manner, which is an egregious case of culpable behavior. As such, Defendants willfully infringed the '266 Patent.

102. Lemaire Illumination has been injured and has been caused significant financial damage as a direct and proximate result of the Defendants' infringement of the '266 Patent.

103. Unless enjoined by this Court, Defendants will continue to infringe the '266 Patent, and thus cause irreparable injury and damage to Lemaire Illumination.

104. Lemaire Illumination is entitled to recover from Defendants the damages sustained by Lemaire Illumination as a result of the Defendants' wrongful acts in an amount subject to proof at trial.

105. Lemaire Illumination has been irreparably injured and is entitled to seek injunctive relief, in addition to all other legal and equitable remedies.

**EXCEPTIONAL CASE**

106. Lemaire Illumination restates and re-alleges each of the allegations set forth herein and incorporates them herein.

107. This is an exceptional case warranting an award of attorney's fees to Lemaire Illumination under 35 U.S.C. § 285.

108. The Defendants have willfully and deliberately infringed, induced others to infringe, and/or contributed to the infringement of the Patents-in-suit with full knowledge and wanton disregard of Lemaire Illumination's rights thereunder, rendering this an "exceptional" case within the meaning of 35 U.S.C. § 285.

109. Lemaire Illumination has incurred attorneys' fees, costs, and expenses in the prosecution of this action. Pursuant to 35 U.S.C. § 285, Lemaire Illumination is entitled to recover its reasonable and necessary fees and expenses.

**DEMAND FOR TRIAL BY JURY**

110. Lemaire Illumination, specifically requests a trial by jury on all issues so triable, pursuant to Rule 38 of the Federal Rules of Civil Procedure.

**PRAYER FOR RELIEF**

111. WHEREFORE, Plaintiff Lemaire Illumination respectfully requests that judgment be entered in its favor and against Defendants and that the Court grant the following relief to Plaintiff:

- A. Judgment that Defendants have infringed the '661 Patent;
- B. Judgment that Defendants have infringed the '390 Patent;
- C. Judgment that Defendants have infringed the '266 Patent;
- D. That the Court award general and special damages to Lemaire Illumination for Defendants' infringing activities, which include but are not limited to Lemaire Illumination a reasonable royalty;
- E. Judgment that this case is exceptional;
- F. That this Court award Lemaire Illumination increased damages in an amount not less than three times the amount of damages found by the jury or assessed by this Court, for Defendants' willful infringement pursuant to 35 U.S.C. § 285;
- G. That the Court enter a preliminary and thereafter a permanent injunction against Defendants, their officers, directors, agents, servants, employees, parent companies, affiliates, subsidiaries, divisions, branches, attorneys, representatives, and all others acting in concert or privity with them, from direct infringement of the '661 Patent;

H. That the Court enter a preliminary and thereafter a permanent injunction against Defendants' active inducements of infringement and/or contributory infringements of the '661 Patent by others;

I. That the Court enter a preliminary and thereafter a permanent injunction against Defendants, their officers, directors, agents, servants, employees, parent companies, affiliates, subsidiaries, divisions, branches, attorneys, representatives, and all others acting in concert or privity with them, from direct infringement of the '390 Patent;

J. That the Court enter a preliminary and thereafter a permanent injunction against Defendants' active inducements of infringement and/or contributory infringements of the '390 Patent by others;

K. That the Court enter a preliminary and thereafter a permanent injunction against Defendants, their officers, directors, agents, servants, employees, parent companies, affiliates, subsidiaries, divisions, branches, attorneys, representatives, and all others acting in concert or privity with them, from direct infringement of the '266 Patent;

L. That the Court enter a preliminary and thereafter a permanent injunction against Defendants' active inducements of infringement and/or contributory infringements of the '266 Patent by others;

M. That this Court enter an order directing Defendants to deliver to Lemaire Illumination, and serve upon Lemaire Illumination's counsel, within thirty (30) days after entry of the order of injunction, a report setting forth the manner and form in which Defendants have complied with each injunction;

N. That this Court award pre-judgment and post-judgment interest;



O. That this Court award Lemaire Illumination's costs and attorney fees incurred in this action; and

P. That this Court award such further and other relief and the Court may deem just and proper.

Date: March 15, 2019

Respectfully submitted,

/s/ Katarzyna Brozynski

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**ATTORNEYS FOR PLAINTIFF**

**CERTIFICATE OF SERVICE**

I hereby certify that on the 15th day of March, 2019, I electronically filed the foregoing document with the clerk of the court for the U.S. District Court, Eastern District of Texas, Marshall Division, using the electronic case filing system of the court. The electronic case filing system sent a “Notice of Electronic Filing” to the attorneys of record who have consented in writing to accept this Notice as service of this document by electronic means.

/s/ Katarzyna Brozynski  
Katarzyna Brozynski