

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

NANOLUMENS ACQUISITION INC.
a Georgia Corporation, and

NANOLUMENS, INC.,
a Georgia Corporation,

Plaintiffs,

v.

INFILED USA, LLC
a Georgia Corporation

DETAILED SOLUTIONS, LLC
a Georgia Corporation, and

SHENZHEN INFILED ELECTRONICS
CO., LTD.
a Chinese Corporation

Defendants.

Civil Action File
No.: _____

JURY TRIAL DEMANDED

COMPLAINT

Plaintiffs, NanoLumens Acquisition Inc. and NanoLumens, Inc. state their
Complaint as follows:

I. THE PARTIES

1. Plaintiffs NanoLumens Acquisition Inc. and NanoLumens, Inc.

(collectively “NanoLumens” or “Plaintiffs”) are Georgia Corporations, both with a principal place of business at 4900 Avalon Ridge Parkway, Norcross, Georgia 30071. NanoLumens Acquisition Inc. is the owner of the Patents-In-Suit, and NanoLumens, Inc. holds an exclusive license to the Patents-In-Suit.

2. Upon information and belief, InfiLED USA, LLC (“InfiLED USA”) is a Georgia limited liability company with a principal place of business at 1177 Powder Springs Street, Marietta, Georgia 30064.

3. Upon information and belief, DetaiLED Solutions, LLC (“DetaiLED”) is a Georgia limited liability company with a principal place of business at 1177 Powder Springs Street, Marietta, Georgia 30064.

4. Upon information and belief, Shenzhen InfiLED Electronics Co., Ltd. (“InfiLED Shenzhen,” together collectively with InfiLED USA and DetaiLED, “Defendants”) is a Chinese Corporation with a principal place of business at Building 18A, No. 3 Tangtou Industrial Park, Shiyan Town, Baoan District, Shenzhen, China 518000.

II. BACKGROUND ON NANOLUMENS

5. NanoLumens, Inc. is an award-winning creator of uniquely compelling interactive LED visualization solutions and has invested millions of dollars and man hours in the development of pioneering LED display innovations.

6. LEDs, or light-emitting diodes, are reliable, low-power, solid-state light sources that are used in a variety of applications, and increasingly in displays for televisions, monitors, and other electronic devices. In their simplest form, LEDs are semiconductor devices that emit light when an electric current is passed through it.

7. While LED-based displays have become more ubiquitous, the desire for flexible displays, both in terms of configuration options, and literal flexibility, has increased dramatically in recent years. It has proven difficult, however, to product a large flexible display, as manufacturing techniques used to produce small-scale displays have not proven readily scalable.

8. For many years, Plaintiffs have worked towards the vision of a universal modular flexible display that can be built in any size, shape, curvature, or pixel density.

9. NanoLumens, Inc. partners with clients to create uniquely compelling, interactive LED visualization solutions and is the fastest growing visualization company in the United States.

10. NanoLumens' ultra-thin, lightweight, and energy efficient experiential LED displays have been used indoors and outdoors by clients worldwide in retail, transportation, corporate, gaming, higher education, sports arenas, and houses of worship.

11. In connection with its research and development efforts to improve LED display technology, Plaintiffs have developed multiple innovative technologies including those protected by the valid and subsisting United States patents referenced below.

III. DEFENDANTS' RELATIONSHIPS

12. InfiLED is a developer and manufacturer of large LED equipment with a headquarters in Shenzhen, China, where it is registered under the name Shenzhen InfiLED Electronics Co., Ltd., and with a United States domestic branch, InfiLED USA, LLC located in Marietta, Georgia. (collectively "InfiLED") (*see* <http://www.infiled.com/about/index.html>). A true and correct copy of this website is attached hereto as Exhibit 1.

13. Upon information and belief, InfiLED manufactures large LED equipment exclusively at InfiLED Shenzhen and then distributes those products throughout the world through various international entities, including distributing those products in the United States and this district through InfiLED USA.

14. Both InfiLED USA and InfiLED Shenzhen share the common “infiled.com” domain and “@infiled.com” e-mail addresses.

15. Upon information and belief, InfiLED also operates the infiledeminternational.com website, through its InfiLED EM affiliate, but offering the same InfiLED products as those manufactured by InfiLED Shenzhen, and offered for sale by Defendants, as evidenced by identical part numbers utilized across the platforms, and InfiLED EM’s claim that its products are manufactured at “infiLED’s own state of the art manufacturing facility in Shenzhen China.” (*see*, <http://infiledeminternational.com/>). A true and correct copy of this website is attached hereto as Exhibit 2.

16. InfiLED USA is the owner of United States Trademark Registration Number 5,131,834 for the word mark INFILED.

17. InfiLED USA maintains its principal place of business at 1177 Powder Springs Street, Marietta, GA 30064, and InfiLED, and on infiled.com, lists the points of contact for InfiLED USA as Marc van Eekeren and Steve Simard.

18. Upon information and belief, DetaiLED Solutions is consulting and services provider of custom large LED displays for a variety of applications and markets. (*see* www.detailed.solutions) (hereinafter “DetaiLED Website”). A true and correct copy of this website is attached hereto as Exhibit 3.

19. Upon information and belief, Steve Simard is the President of DetaiLED Solutions which he operates with his partner, Marc van Eekeren.

20. DetaiLED Solutions maintains its office at 1177 Powder Springs Street, Marietta, GA 30064, the same address as InfiLED USA.

21. Upon information and belief, including at least the shared address and common personnel of Marc van Eekeren and Steve Simard, DetaiLED Solutions imports, offers for sale, sells, uses, and supports products from InfiLED.

22. DetaiLED Solutions imports, offers for sale, sells, uses, and supports flexible curved LED displays like those at issue in this dispute including curved displays and flex panels as listed on the DetaiLED Website.

III. JURISDICTION AND VENUE

23. This is an action for utility patent infringement arising from the unlawful conduct of defendants InfiLED USA, InfiLED Shenzhen, and DetaiLED Solutions (collectively, “Defendants”) and arising under the Patent Laws of the United States, 35 U.S.C. § 1 et seq. and seeking injunctive relief under 35 U.S.C. §§ 281, 283.

24. This Court has subject matter jurisdiction over the cause of action set forth herein pursuant to 28 U.S.C. §§ 1331 and 1338(a).

25. Venue is proper in this judicial district and division pursuant to 28 U.S.C. §§ 1391(b), (c), and (d) and 28 U.S.C. § 1400(b).

26. The Court has personal jurisdiction over defendants InfiLED USA and DetaiLED because, upon information and belief, defendants InfiLED USA and DetaiLED are limited liability companies formed in Georgia that maintain places of business within this district and have committed acts of infringement in this district.

27. Defendant InfiLED Shenzhen maintains an interactive website (www.infiled.com) accessible in this forum which enables residents of this forum to interact with InfiLED Shenzhen, facilitate business with InfiLED Shenzhen, to exchange business information with InfiLED Shenzhen, form contracts with InfiLED Shenzhen, and through which InfiLED Shenzhen offers products for sale, such as those enumerated below, that infringe, induce infringement of, and/or contribute to the infringement of the patents asserted in this litigation.

28. InfiLED Shenzhen, through its interactive website, provides detailed specifications and instructions for its products encouraging residents of this forum to purchase and use the products at issue in this dispute in a manner that infringes the patents asserted in this litigation.

29. Upon information and belief, InfiLED Shenzhen has offered for sale, imported, or sold one or more of the products at issue in this litigation that infringe, induce infringement of, and/or contribute to the infringement of the patents asserted in this litigation.

30. The Court has personal jurisdiction over Defendant InfiLED Shenzhen because, on information and belief, InfiLED Shenzhen has established minimum contacts with the forum. On information and belief, InfiLED Shenzhen does business in this forum and by its acts has caused and continues to cause Plaintiffs injury in this forum, including by having committed and continuing to commit acts of patent infringement in this forum as alleged in this Complaint.

IV. THE PATENTS-IN-SUIT

31. Plaintiffs own all right, title, and interest in U.S. Patent No. 8,963,895 (“the ‘895 Patent”). A true and correct copy of the ‘895 Patent is attached as Exhibit 4.

32. The subject matter of the ‘895 Patent relates to a ubiquitously mountable image display system.

33. The patent application that matured into the ‘895 Patent was filed with the U.S. Patent and Trademark Office on September 22, 2011, and was assigned application number 13/241,145 (“the ‘145 Application”). On February 24, 2015, the U.S. Patent and Trademark Office duly and properly issued the ‘895 Patent, and the patent remains in full force and effect.

34. Plaintiffs owns all right, title, and interest in U.S. Patent No. 9,159,707 (“the ‘707 Patent”). A true and correct copy of the ‘707 Patent is attached as Exhibit 5.

35. The subject matter of the ‘707 Patent relates to a flexible display.

36. The patent application that matured into the ‘707 Patent was filed with the U.S. Patent and Trademark Office on April 3, 2015, and was assigned application number 14/678,435 (“the ‘435 Application”). The ‘707 Patent is a continuation of Application No. 12/348,158, filed on January 2, 2009, which issued as U.S. Patent No. 9,013,367 (“the ‘367 Patent”). The ‘367 Patent claims priority to provisional application number 61/019,144, filed on January 4, 2008. On October 13, 2015, the U.S. Patent and Trademark Office duly and properly issued the ‘707 Patent, and the patent remains in full force and effect.

37. Plaintiffs owns all right, title, and interest in U.S. Patent No. 9,640,516 (“the ‘516 Patent”). A true and correct copy of the ‘516 Patent is attached as Exhibit 6.

38. The subject matter of the ‘516 Patent relates to a flexible display apparatus and methods.

39. The patent application that matured into the ‘516 Patent was filed with the U.S. Patent and Trademark Office on October 8, 2015, and was assigned application number 14/878,041 (“the ‘041 Application”). The ‘516 Patent is a continuation of the ‘707 Patent, which is described above in ¶ 36. On May 2, 2017, the U.S. Patent and

Trademark Office duly and properly issued the '516 Patent, and the patent remains in full force and effect.

V. THE CONTROVERSY: UTILITY PATENT INFRINGEMENT RELATED TO DEFENDANTS' TRUEFLEX LED DISPLAY

40. Defendants were explicitly made aware of the '895 and '707 Patents and their potential infringement of the '895 and '707 Patents when Ted Heske, Director of Intellectual Property for NanoLumens, sent a January 25, 2017 letter via Certified U.S. Mail to InfiLED USA and DetaiLED to the attention of Marc van Eekeren, notifying Defendants of InfiLED and DetaiLED's potential infringement of the Patents-in-Suit. True and correct copies of these letters are attached hereto as Exhibits 7 and 8.

41. Upon information and belief, at least because of the relationship between Defendants, InfiLED Shenzhen was made aware of the '895 and '707 Patents and their potential infringement through notification of Mr. Heske's January 25, 2017, letter.

42. In addition, Defendants have notice of the Patents-in-Suit and its infringement of the Patents-in-Suit as a result of the current complaint.

43. As a result of NanoLumens Acquisition Inc.'s ownership, and NanoLumens, Inc.'s license of the Patents-in-Suit, Plaintiffs have the exclusive right under 35 U.S.C. § 154(a)(1) to exclude others from making, using, importing,

offering for sale, or selling its patented inventions, including the right to bring this action for injunctive relief and damages.

44. Upon information and belief, Defendants have engaged in the import, manufacture, use, offer for sale, and/or sale of products that infringe the Patents-in-Suit in violation of 35 U.S.C. § 271.

45. As one example of Defendants infringing products, Defendants offer for sale on its website the InfiLED F-Series “Flexible Pad” and X-Series “Wave Screen” product lines (collectively the “Accused Products”) (*see* <http://www.infiled.com/chanpin/yingyong-1/20160726/1849.html> and <http://www.infiled.com/chanpin/yingyong-4/20150925/1804.html>, respectively)(collectively, “Product Webpages”, true an exact copies of these webpages are attached hereto as Exhibits 9 and 10, respectively) (*see also*, InfiLED F-Series Brochure, attached hereto as Exhibit 11, and the InfiLED X-Series Brochure, attached hereto as Exhibit 12, collectively, the “Product Brochures”).

46. Upon information and belief, Defendant DetaiLED imports, offers for sale, sells, uses, and supports the InfiLED Accused Products.

47. Upon information and belief, Defendants sell and offer for sale the Accused Products within this judicial district and elsewhere throughout the United States.

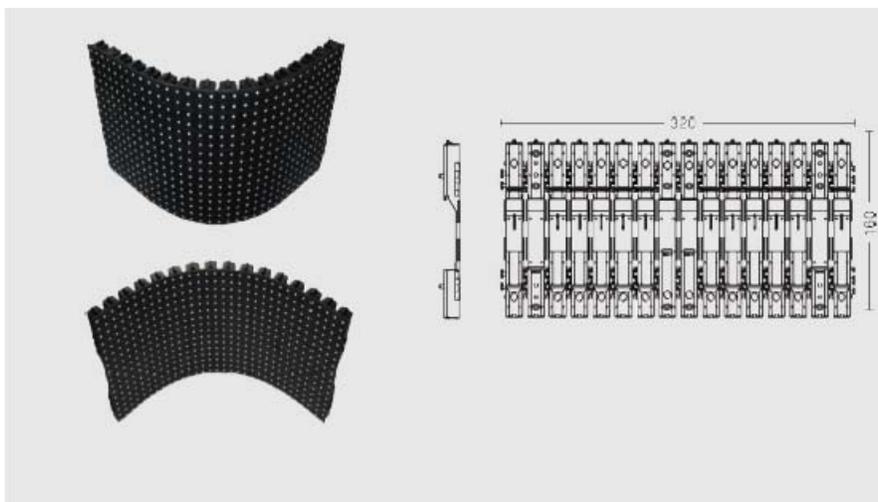
48. Plaintiffs have conducted a reasonable inquiry into Defendants' potential infringement and, based on the publicly available information and responses from Defendants to date, concluded that Defendants' Accused Products infringe one or more claims of the Patents-in-Suit.

49. Plaintiffs' search has been unable to locate technical information to contradict that conclusion and NanoLumens has been unable to purchase any of the Accused Products to evaluate because they are not available for direct purchase by the public. However, it is Plaintiffs' belief that in order for the Accused Products to function as claimed by Defendants, the Accused Products must necessarily infringe one or more claim of the Patents-in-Suit.

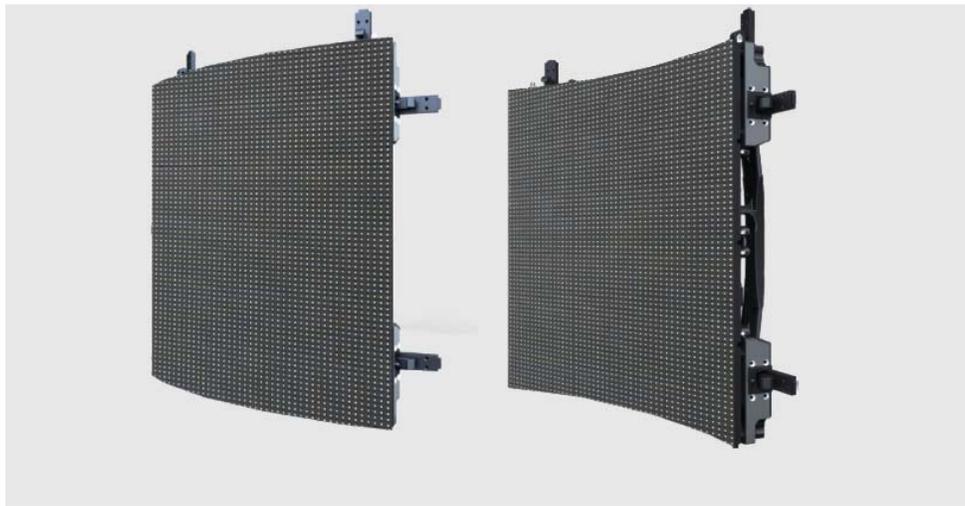
50. The Patents-in-Suit are generally directed to flexible LED panels containing uniformly placed pixels that can be affixed to structures in order to create a seamless display image. Plaintiffs' own product that embodies the technology claimed in the Patents-in-Suit enables NanoLumens to create curved displays made of flexible panels such as the one shown here:



51. Defendants' Product Webpage makes clear that Defendants use flexible LED panels containing uniformly placed pixels as shown in the product images and drawings from Defendants' Product Webpage excerpted below:



(F-Series Brochure Excerpt) (Exhibit 11).



(X-Series Brochure Excerpt) (Exhibit 12).

52. Defendants' Product Brochures claim that "INFiLED's F series displays are designed with user convenience in mind, being incredibly easy to assemble and front serviceable. Being specifically designed for more creative applications, its soft PCB design allows users to create a large concave or convex curve, with can also be adapted into various flexible shapes for a variety of creative purposes." (Exhibit 11).

53. Defendants' Product Brochures further claim that "INFiLED's Wave Screen series is the perfect solution for creative applications, being highly flexible, ultrathin, super light and offering a seamless curve-shaped display for a unique appeal. Designed with an advanced angling system and seamless connection system, the Wave Screen can be effectively configured to achieve curves of up to 20 degrees." (Exhibit 12).

54. Defendants' website details dozens of installations of the Accused Products (*see, e.g.*, <http://www.infiled.com/plus/list.php?tid=48>) (detailing numerous InfiLED installations around the world, including the United States). Upon information and belief, at least a portion of these installations, tradeshow, and events evidence sales, offers for sale, and use of the Accused Products within the United States.

55. In an effort to confirm its belief that the accused products infringe its patents, Plaintiffs, as a further component of their pre-filing inquiry, sent the January 25, 2017 letter to Defendants requesting a sample of the Accused Products. Although the parties have had subsequent communications, none have been substantive and none of the Defendants have provided NanoLumens with a sample of the Accused Products or any technical information to refute NanoLumens' claims of infringement.

56. As a result of the foregoing, Defendants should, at the very least, be ordered to allow Plaintiffs the early and expedited inspection of the Accused Products.

A. Infringement of the '895 Patent

57. Defendants have directly infringed, contributed to the infringement of, and/or continues to induce users of the Accused Products to infringe, one or more

claims of the '895 Patent, by intentionally developing, making, using, marketing, advertising, providing, sending, importing, distributing, and/or selling the Accused Products and accompanying documentation, materials, components, training, or support and aiding, abetting, encouraging, promoting or inviting the use thereof.

58. The Accused Products include all elements of, for example, claim 6 of the '895 Patent.

59. By way of example, claim 6 of the '895 Patent recites “[a]n image display system.”

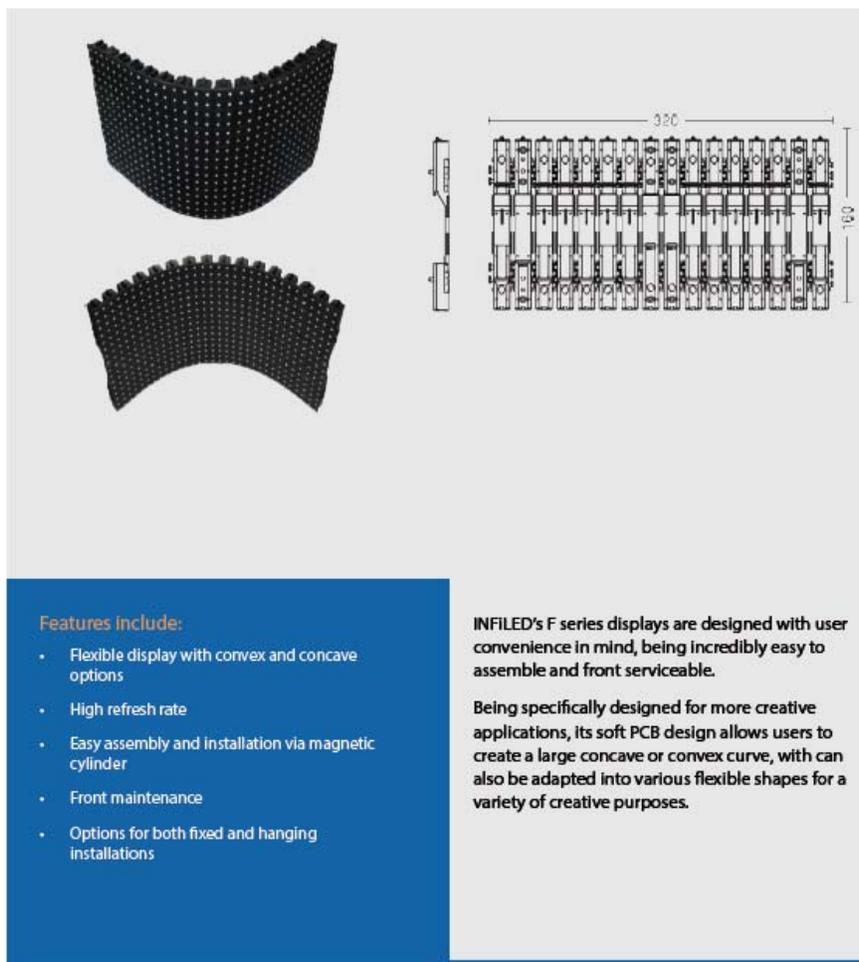
60. The Accused Products are a family of image display systems, about which Defendants' claim “INFiLED's F series displays are designed with user convenience in mind, being incredibly easy to assemble and front serviceable. Being specifically designed for more creative applications, its soft PCB design allows users to create a large concave or convex curve, with can also be adapted into various flexible shapes for a variety of creative purposes.” (Exhibit 11).

61. Defendants' Product Brochures further claim that “INFiLED's Wave Screen series is the perfect solution for creative applications, being highly flexible, ultrathin, super light and offering a seamless curve-shaped display for a unique appeal. Designed with an advanced angling system and seamless connection

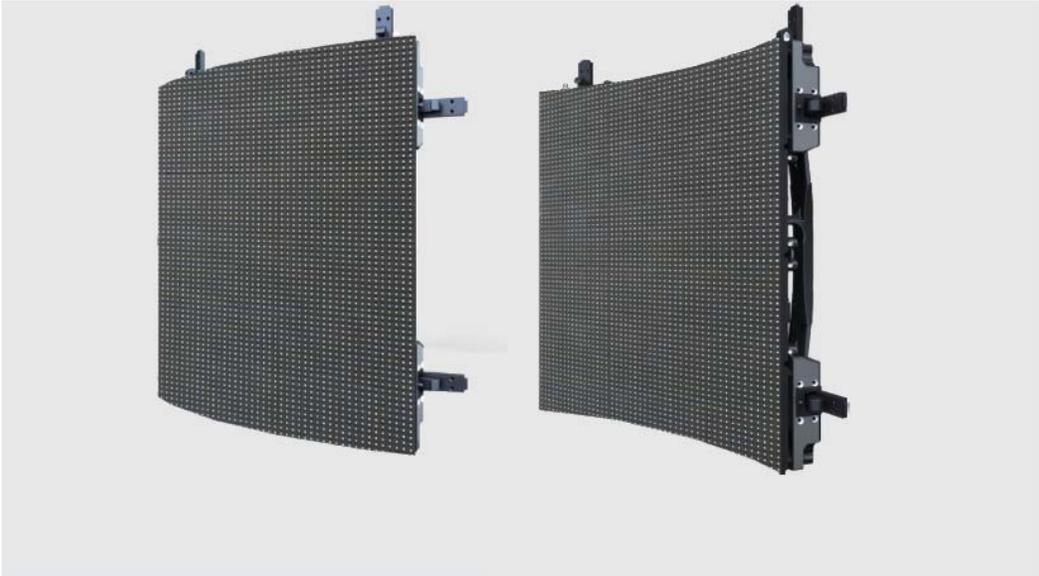
system, the Wave Screen can be effectively configured to achieve curves of up to 20 degrees.” (Exhibit 12).

62. Claim 6 of the ‘895 Patent further recites “a display screen component comprising a material that provides a plurality of post-manufacture mounting options including an ability to flex said display screen component to conform to a curvature of a curved mounting surface.”

63. As documented on the Product Webpages and in the Product Brochures, the Accused Products include display screens comprising a material that provides a plurality of post-manufacture mounting options, such a magnetic modules to attach to metal surfaces, and threaded fasteners for traditional mounting, as well as the ability to flex the display screen component to conform to a curvature of a curved mounting surface:



(InfILED F-Series Brochure) (Exhibit 11).



Features include:

- Highly flexible, thin and lightweight
- High brightness and high contrast ration
- One-action locking with positioning pins
- Magnetic connection between panels
- Easy angle adjustment
- Angles can reach 20 degrees, with 5 levels
- Options for both fixed and rental applications

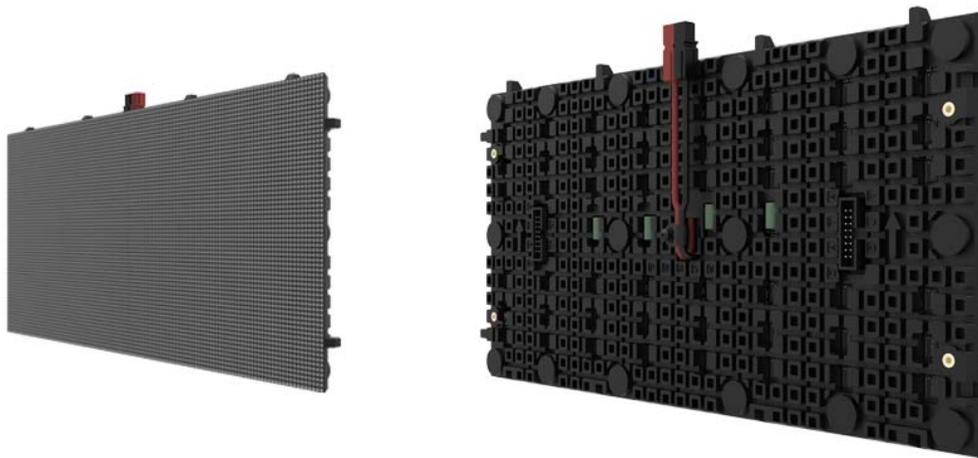
INfiLED's Wave Screen series is the perfect solution for creative applications, being highly flexible, ultra-thin, super light and offering a seamless curve-shaped display for a unique appeal.

Designed with an advanced angling system and seamless connection system, the Wave Screen can be effectively configured to achieve curves of up to 20 degrees. Equipped with full black LEDs, the display offers outstanding brightness levels and an incomparable contrast ratio, capable of delivering visually vibrant content that's never compromised.

Assembly is simple with our patented one-action locking mechanism, which also helps to ensure accurate alignment and adjustment.

(InfiLED X-Series Brochure) (Exhibit 12).

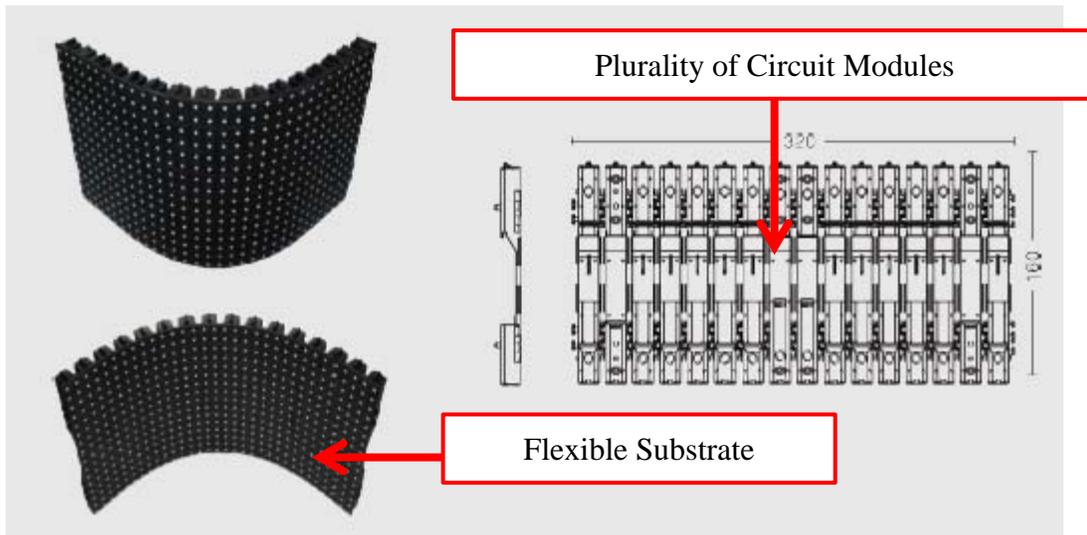
- Convex & concave flexible display
- Screws free & magnetic cylinder installation
- Front maintainance
- High refresh rate
- Fixed & hanging installation optional



(Exhibit 9).

64. Claim 6 of the ‘895 Patent further recites “a plurality of circuit modules, each comprising a light source.”

65. As documented on the Product Brochures, the Accused Products include a plurality circuit modules, each comprising a light source, for example, as illustrated below:



(InfiLED F-Series Brochure) (Exhibit 11).

66. Also as noted in the Product Brochures, the Accused Products incorporate a plurality of light emitting circuit modules, specifically, SMD 3 in 1 LEDs:

Specification				
Part Number	IL-FISS-IRSF2.5	IL-FISS-IRSF4	IL-FISS-IRSF6	IL-FISS-IRSF10
Pixel Pitch	2.5mm	4mm	6.67mm	10mm
Physical Density	160,000pxels	62,500pxels	22,500pxels	10,000pxels
LED Arrangement	3IN1SMD	3IN1SMD	3IN1SMD	3IN1SMD
Module Resolution	128x64pxels	64x48pxels	48x24pxels	32x16pxels

(see, e.g., InfiLED F-Series Brochure) (Exhibit 11).

Specification		
Part Number	IL-RSS-IRX3	IL-RSS-ORX6
Pixel Pitch	3.9mm	6.25mm
Physical Density	65,536pixels/m ²	25,600pixels/m ²
LED Arrangement	3 IN 1 SMD	3 IN 1 SMD
Module Resolution	128x32pixels	80x20pixels
Module Dimensions	50x25mm	50x25mm

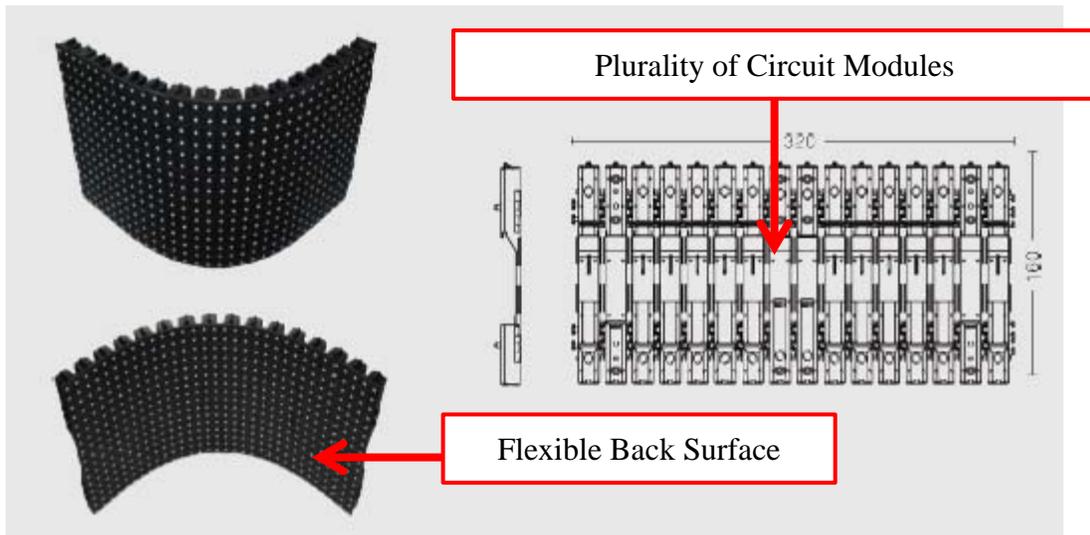
(see, e.g., InfiLED X-Series Brochure) (Exhibit 11).

67. SMD LEDs, also known as Surface Mounted Devices, are a special type of LED that include multiple diodes mounted in a single rigid package or board having a non-functional edge and an adjacent region devoid of any conductor.¹

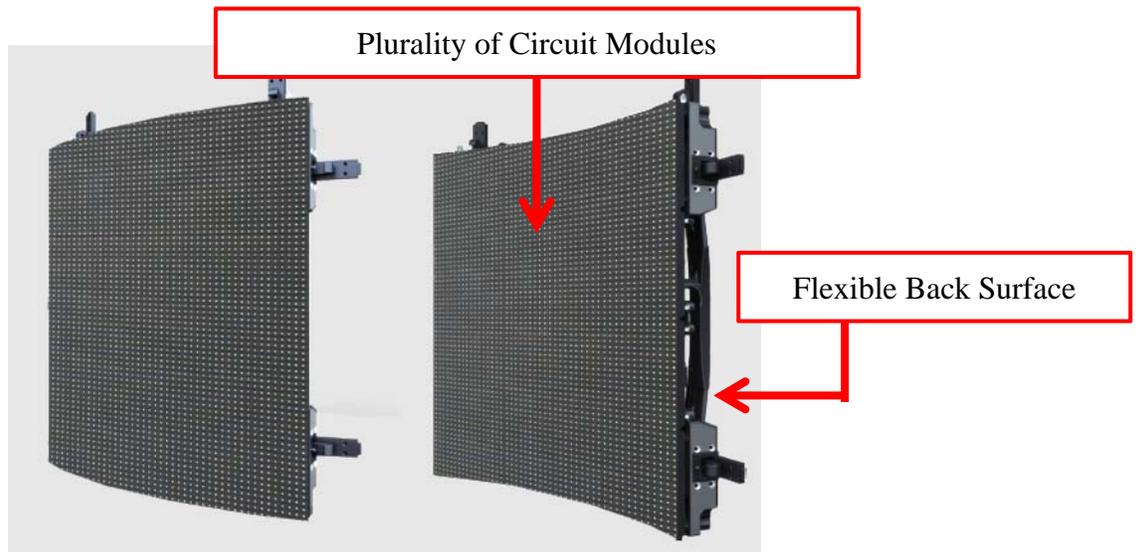
68. Claim 6 of the '895 Patent further recites the “plurality of circuit modules attached to said display screen on a back surface in an arrangement that cooperatively provides for flexing of said display screen component without substantially distorting an image displayed on a viewing surface of said display screen component when said display screen component is mounted on said curved mounting surface.”

69. As documented on the Product Brochures, the plurality of circuit modules attached to the display screen in the Accused Products are mounted to a flexible back surface , for example, as illustrated below:

¹ See, e.g., <https://alphaview.wordpress.com/2010/11/15/what-is-led-display-rgb-smd-3in1-virtual-pixel-real-pixel-etc/> (Discussing SMD 3in1 and related LED display technologies).



(InfiLED F-Series Brochure) (Exhibit 11).



(InfiLED X-Series Brochure) (Exhibit 12).

70. The plurality of circuit modules attached to the display screen in the Accused Products are mounted in an arrangement that cooperatively provides for flexing of the screen component without substantially distorting the image

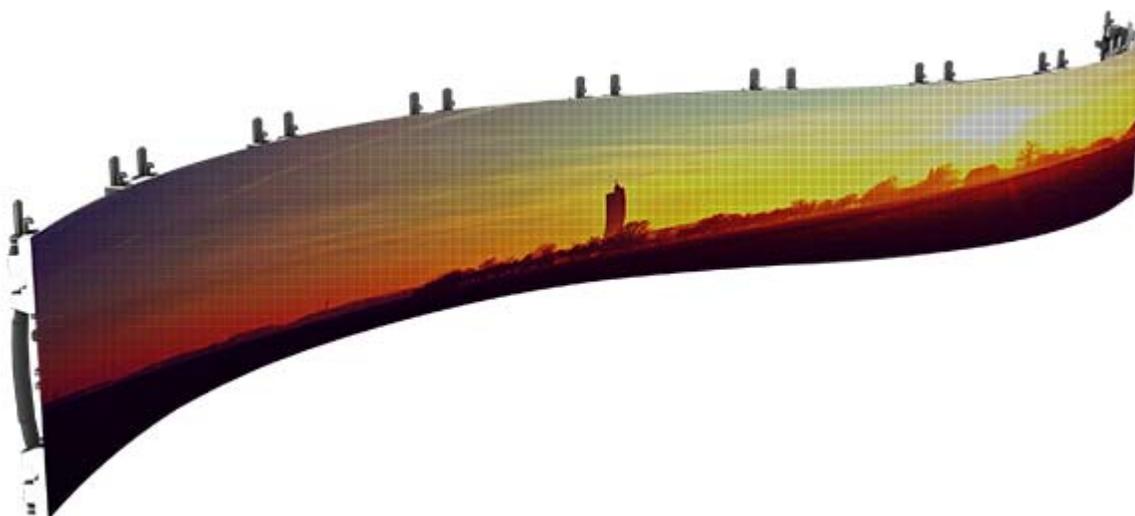
displayed on the viewing surface when the screen is mounted on a curved viewing surface as noted in the excerpts from the Product Brochures below:

INfiLED's Wave Screen series is the perfect solution for creative applications, being highly flexible, ultra-thin, super light and offering a seamless curve-shaped display for a unique appeal.

(InfiLED F-Series Brochure) (Exhibit 11).

Designed with an advanced angling system and seamless connection system, the Wave Screen can be effectively configured to achieve curves of up to 20 degrees. Equipped with full black LEDs, the display offers outstanding brightness levels and an incomparable contrast ratio, capable of delivering visually vibrant content that's never compromised.

(InfiLED X-Series Brochure) (Exhibit 12).



(Exhibit 10).

B. Infringement of the '707 and '516 Patents

71. Defendants have directly infringed, contributed to the infringement of, and/or continues to induce users of the Accused Products to infringe, one or more claims of the '707 and '516 Patents, by intentionally developing, making, using, marketing, advertising, providing, sending, importing, distributing, and/or selling the Accused Products and accompanying documentation, materials, components, training, or support and aiding, abetting, encouraging, promoting or inviting the use thereof.

72. The Accused Products include all elements of, for example, claim 1 of the '707 Patent and claim 1 of the '516 Patent.

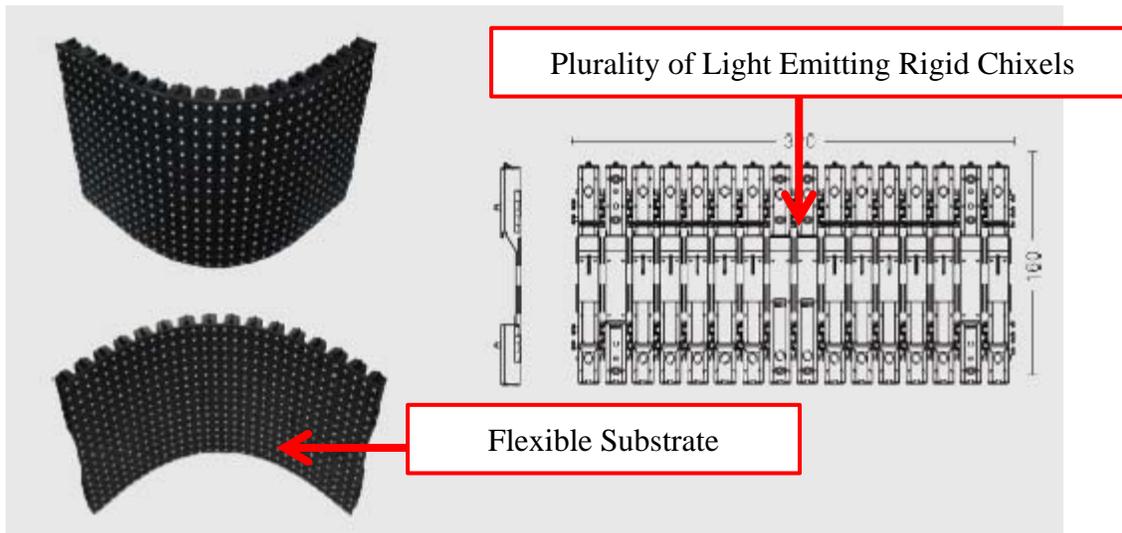
73. By way of example, claim 1 of the '707 and the '516 Patents recite “[a] flexible display.”

74. The Accused Products are a family of image display systems, about which Defendants' claim “INFiLED's F series displays are designed with user convenience in mind, being incredibly easy to assemble and front serviceable. Being specifically designed for more creative applications, its soft PCB design allows users to create a large concave or convex curve, with can also be adapted into various flexible shapes for a variety of creative purposes.”(Exhibit 11).

75. Defendants' Product Brochures further claim that "INFiLED's Wave Screen series is the perfect solution for creative applications, being highly flexible, ultrathin, super light and offering a seamless curve-shaped display for a unique appeal. Designed with an advanced angling system and seamless connection system, the Wave Screen can be effectively configured to achieve curves of up to 20 degrees." (Exhibit 12).

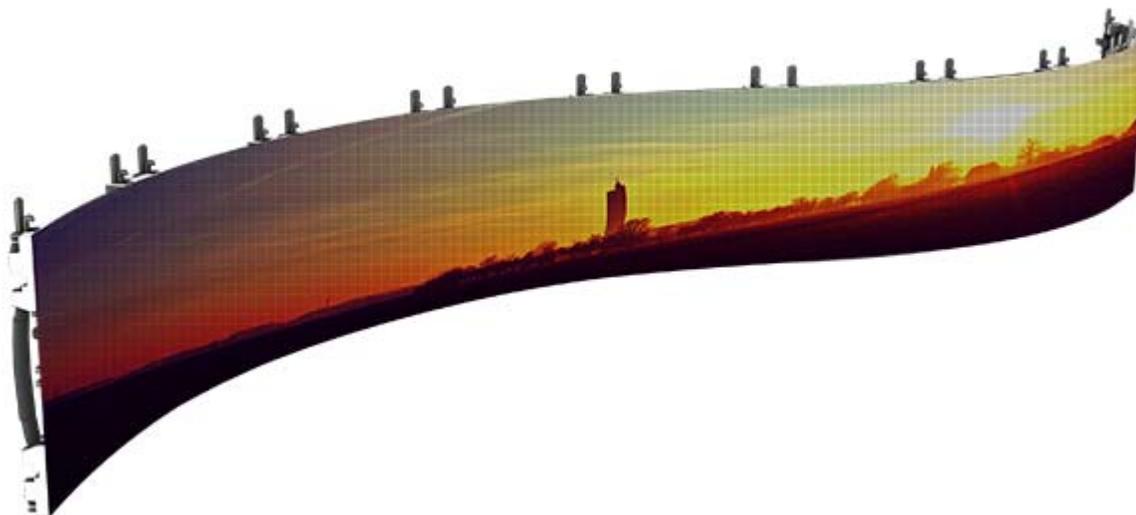
76. Claim 1 of the '707 and the '516 Patents further recite "a plurality of light emitting rigid chixels affixed to a flexible substrate, said plurality of light emitting rigid chixels collectively providing a visible display, said flexible display having both vertical and horizontal directions defined in the plane of said visible display."

77. As documented on the Product Brochures, the Accused Products include a plurality of light emitting rigid chixels mounted to a flexible substrate, for example, as illustrated below:



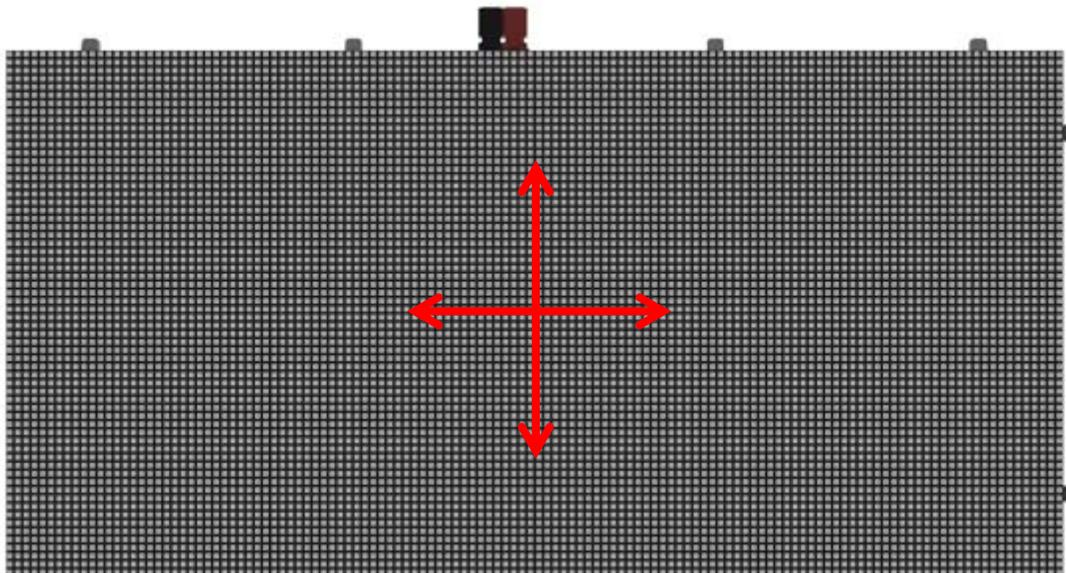
(InfiLED F-Series Brochure) (Exhibit 11).

78. Collectively, these light emitting chixels provide a visible display as shown on the Product Webpage:

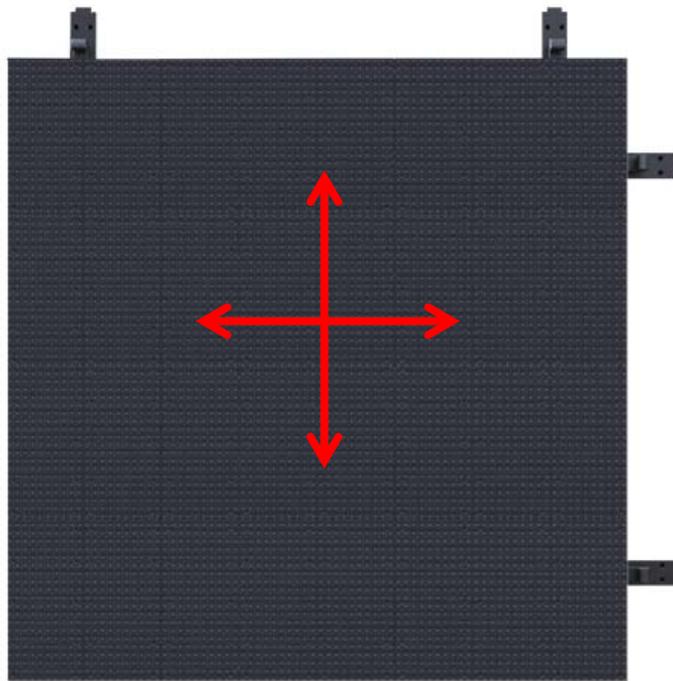


(Exhibit 10).

79. As shown in the Product Drawing and images on the Product Webpage, the TrueFlex Product's flexible display has both vertical and horizontal directions defined in the plane of said visible display.



(Exhibit 9).



(Exhibit 10).

80. Claim 1 of the ‘707 and the ‘516 Patents further recite chixels comprising “a plurality of light emitting pixels affixed to a rigid substrate, said rigid substrate having a non-functional edge and an adjacent region devoid of any conductor.”

81. As detailed in the Product Brochures, the Accused Products incorporate a plurality of light emitting pixels affixed to a rigid substrate, specifically, SMD 3 in 1 LEDs:

Specification				
Part Number	IL-FISS-IRSF2.5	IL-FISS-IRSF4	IL-FISS-IRSF6	IL-FISS-IRSF10
Pixel Pitch	2.5mm	4mm	6.67mm	10mm
Physical Density	160,000pixels	62,500pixels	22,500pixels	10,000pixels
LED Arrangement	3IN1SMD	3IN1SMD	3IN1SMD	3IN1SMD
Module Resolution	128x64pixels	64x48pixels	48x24pixels	32x16pixels

(see, e.g., InfiLED F-Series Brochure) (Exhibit 11).

Specification		
Part Number	IL-RSS-IRX3	IL-RSS-ORX6
Pixel Pitch	3.9mm	6.25mm
Physical Density	65,536pixels/m ²	25,600pixels/m ²
LED Arrangement	3 IN 1 SMD	3 IN 1 SMD
Module Resolution	128x32pixels	80x20pixels

(see, e.g., InfiLED X-Series Brochure) (Exhibit 12).

82. SMD LEDs, also known as Surface Mounted Devices, are a special type of LED that include multiple diodes mounted in a single rigid package or board having a non-functional edge and an adjacent region devoid of any conductor.²

83. Claim 1 of the ‘707 Patent further recites the “plurality of light emitting pixels arranged upon said rigid substrate to provide a spaced array of pixels providing a plurality of substantially equal first pixel gaps between adjacent light emitting pixels in both vertical and horizontal directions.”

84. Claim 1 of the ‘516 Patent further recites the “plurality of light emitting pixels arranged upon said rigid substrate to provide a spaced array of pixels

² See, e.g., <https://alphaview.wordpress.com/2010/11/15/what-is-led-display-rgb-smd-3in1-virtual-pixel-real-pixel-etc/> (Discussing SMD 3in1 and related LED display technologies).

providing a plurality of substantially equal first pixel gaps between adjacent light emitting pixels in a vertical direction.”

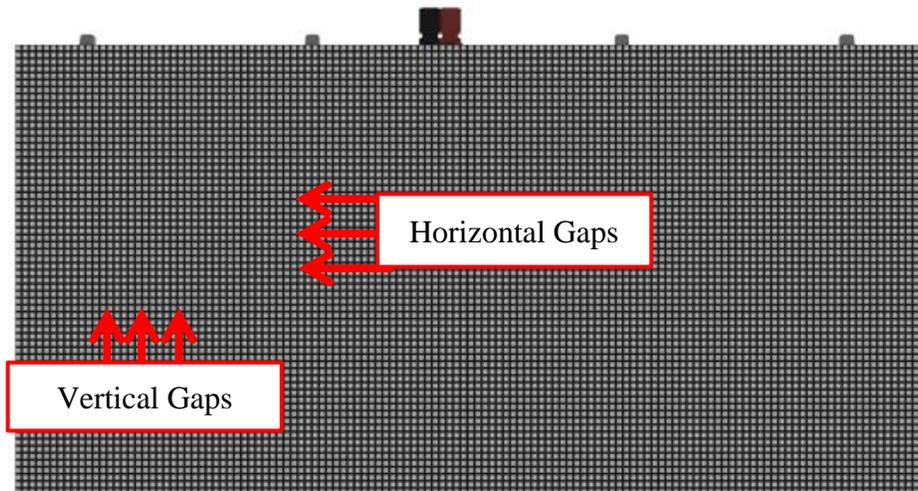
85. The Accused Products’ SMD LEDs are arranged upon the rigid substrate as discussed above to provide a spaced array of pixels that provides a plurality of substantially equal first pixel gaps between adjacent light emitting pixels in both the vertical and horizontal directions.

86. Claim 1 of the ‘707 Patent further recites the “plurality of light emitting rigid chixels arranged upon said flexible substrate to provide a spaced array of chixels, said spaced array of chixels providing a plurality of substantially equal second pixel gaps disposed across said non-functional edges between adjacent light emitting pixels in both vertical and horizontal directions.”

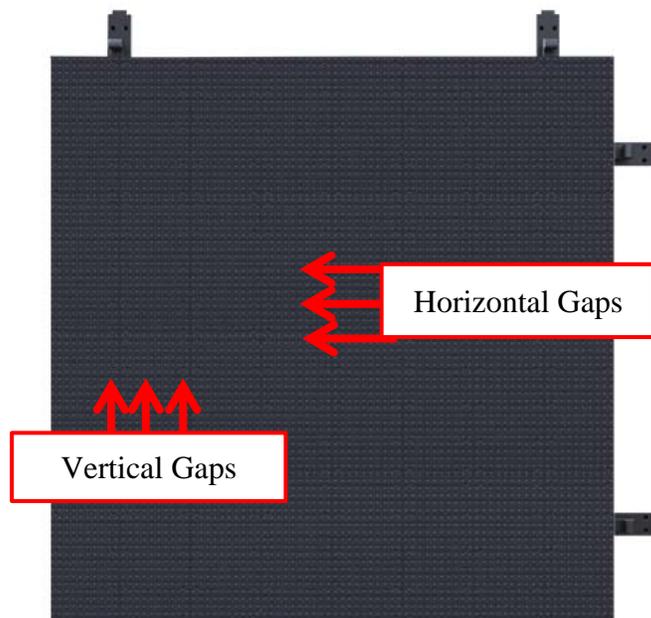
87. Claim 1 of the ‘516 Patent further recites the “plurality of light emitting rigid chixels arranged upon said flexible substrate to provide a spaced array of chixels, said spaced array of chixels providing a plurality of substantially equal second pixel gaps disposed across said non-functional edges between adjacent light emitting chixels in both vertical and horizontal directions.”

88. The Accused Products’ plurality of light emitting rigid chixels are arranged upon the flexible substrate as discussed above to provide a spaced array of chixels that provides a plurality of substantially equal second pixel gaps disposed across

the non-functional edges between adjacent light emitting pixels (or chixels, as in the '516 Patent) in both vertical and horizontal directions as noted on the images below:



(Exhibit 9).



(Exhibit 10).

89. Claim 1 of the '707 Patent further recites that the display is “further characterized in that each of said plurality of first pixel gaps is substantially equal to each of said plurality of second pixel gaps across said flexible display.”

90. As visible in the spacing shown in the product images above, the Accused Products displays are further characterized in that each of the plurality of first pixel gaps is substantially equal to each of the plurality of second pixel gaps across the flexible display.

91. As a direct and proximate consequence of the importation, manufacture, sale, use, and/or offer for sale of the Accused Products by Defendants, should the Accused Products be found to fall within one or more claims of the Patents-in-Suit, Plaintiffs have suffered and continue to suffer damages as a direct and proximate result of Defendants' infringement and will suffer additional and irreparable harm or injury unless Defendants are permanently enjoined by this Court from continuing its infringement. NanoLumens has no adequate remedy at law.

COUNT ONE – UTILITY PATENT INFRINGEMENT:
U.S. PATENT NO. 8,963,895

92. Plaintiffs reallege and incorporate by reference each of the foregoing paragraphs as though fully set forth herein.

93. Upon information and belief, Defendants have engaged in the importation, manufacture, use, offer for sale, and/or sale of products that infringe one or more claims of the '895 Patent in violation of 35 U.S.C. § 271. The infringing products imported, made, used, offered for sale, and/or sold by Defendants include, but are not necessarily limited to, the Accused Products discussed herein.

94. Defendants have infringed and are currently infringing, literally and/or under the doctrine of equivalents, the '895 Patent by, among other things, making, using, selling, offering for sale, and/or importing within this judicial district and elsewhere in the United States, without license or authority, products that infringe one or more claims of the '895 Patent, including but not limited to the Accused Products.

95. Plaintiffs have suffered and continue to suffer damages as a direct and proximate result of Defendants' infringement and will suffer additional and irreparable harm or injury unless Defendants are permanently enjoined by this Court from continuing its infringement. NanoLumens has no adequate remedy at law.

96. Defendants have been aware of the '895 Patent since at least January 25, 2017. Alternatively, Defendants have been aware of the '895 Patent at least from the date of this Complaint.

97. Defendants' Accused Product(s) compete with NanoLumens in the market in which the '895 Patent is used. The channels through which NanoLumens and Defendants sell their products are similar and overlap. Plaintiffs have invested substantially in their products, but Defendants' advertising and sale of the Accused Products, online and elsewhere, disrupt Plaintiffs' ability to market and launch their novel products free from unlawful competition. Such disruption presents an immediate and substantial injury to Plaintiffs, including substantial lost revenue, likely price erosion due to Defendants avoided development costs, and the loss of the good will associated with bringing this innovation to market.

98. Defendants also indirectly infringe the '895 Patent in violation of 35 U.S.C. § 271(b) and (c). Defendants induced and are inducing infringement of the '895 Patent by, among other things, actively and knowingly aiding and abetting others to directly make, use, offer for sale, sell, and/or import within this judicial district and elsewhere in the United States, without license or authority, for example, the Accused Products, which fall within the scope of at least claim 6 of the '895 Patent. On information and belief Defendants provide directions, instructions, and/or other materials that encourage and facilitate infringing use by others. Defendants have sold and are selling at least the Accused Products with the knowledge and intent that

customers who buy the product will commit infringement by using the product, and, therefore, those customers have been and are directly infringing the '895 Patent.

99. Defendants have contributorily and are currently contributorily infringing the '895 Patent, in violation of 35 U.S.C. § 271(c), by, among other things, selling, offering for sale, and/or importing into this judicial district and elsewhere in the United States, without license or authority, products, for example, the Accused Products, or components of those products which constitute a material part of the '895 Patent, knowing that such products and/or components are especially made or especially adapted for use in the infringement of the '895 Patent, including but not limited to claim 6, and are not staple articles of commerce suitable for substantial non-infringing use.

100. Having been previously notified of their infringing acts, the infringement by Defendants of the '895 Patent continues to be willful and deliberate, and, therefore, Plaintiffs are entitled to damages, including enhanced damages, under 35 U.S.C. § 284.

101. As a direct and proximate result of the infringement of the '895 Patent by Defendants, Plaintiffs have suffered and will continue to suffer irreparable injury for which there is no adequate remedy at law. Plaintiffs also have been damaged and,

until an injunction issues, will continue to be damaged in an amount yet to be determined.

102. In the absence of an injunction, Defendants reasonably possess the capability to continue infringement of the '895 Patent.

103. Plaintiffs are entitled to: (a) damages adequate to compensate it for Defendants' infringement; (b) its attorneys' fees and costs; (c) a permanent injunction; and (d) such other and further relief as justice requires.

COUNT TWO – UTILITY PATENT INFRINGEMENT:
U.S. PATENT NO. 9,159,707

104. Plaintiffs reallege and incorporate by reference each of the foregoing paragraphs as though fully set forth herein.

105. Upon information and belief, Defendants have engaged in the importation, manufacture, use, offer for sale, and/or sale of products that infringe one or more claims of the '707 Patent in violation of 35 U.S.C. § 271. The infringing products imported, made, used, offered for sale, and/or sold by Defendants include, but are not necessarily limited to, the Accused Products discussed herein.

106. Defendants have infringed and are currently infringing, literally and/or under the doctrine of equivalents, the '707 Patent by, among other things, making, using, selling, offering for sale, and/or importing within this judicial district and elsewhere in the United States, without license or authority, products that infringe

one or more claims of the '707 Patent, including but not limited to the Accused Products.

107. Plaintiffs have suffered and continue to suffer damages as a direct and proximate result of Defendants' infringement and will suffer additional and irreparable harm or injury unless Defendants are permanently enjoined by this Court from continuing its infringement. NanoLumens has no adequate remedy at law.

108. Defendants have been aware of the '707 Patent since at least January 25, 2017. Alternatively, Defendants have been aware of the '707 Patent at least from the date of this Complaint.

109. Defendants' infringing product(s) compete with NanoLumens in the market in which the '707 Patent is used. The channels through which NanoLumens and Defendants sell their products are similar and overlap. Plaintiffs have invested substantially in their products, but Defendants' advertising and sale of the Accused Products, online and elsewhere, disrupt Plaintiffs' ability to market and launch their novel products free from unlawful competition. Such disruption presents an immediate and substantial injury to Plaintiffs', including substantial lost revenue, likely price erosion due to Defendants avoided development costs, and the loss of the good will associated with bringing this innovation to market.

110. Defendants also indirectly infringe the ‘707 Patent in violation of 35 U.S.C. § 271(b) and (c). Defendants induced and are inducing infringement of the ‘707 Patent by, among other things, actively and knowingly aiding and abetting others to directly make, use, offer for sale, sell, and/or import within this judicial district and elsewhere in the United States, without license or authority, for example, the Accused Products, which fall within the scope of at least claim 1 of the ‘707 Patent. On information and belief Defendants provide directions, instructions, and/or other materials that encourage and facilitate infringing use by others. Defendants have sold and are selling at least the Accused Products with the knowledge and intent that customers who buy the product will commit infringement by using the product, and, therefore, those customers have been and are directly infringing the ‘707 Patent.

111. Defendants have contributorily and are currently contributorily infringing the ‘707 Patent, in violation of 35 U.S.C. § 271(c), by, among other things, selling, offering for sale, and/or importing into this judicial district and elsewhere in the United States, without license or authority, products, for example, the Accused Products, or components of those products which constitute a material part of the ‘707 Patent, knowing that such products and/or components are especially made or especially adapted for use in the infringement of the ‘707 Patent, including but not

limited to claim 1, and are not staple articles of commerce suitable for substantial non-infringing use.

112. Having been previously notified of their infringing acts, the infringement by Defendants of the '895 Patent continues to be willful and deliberate, and, therefore, Plaintiffs are entitled to damages, including enhanced damages, under 35 U.S.C. § 284.

113. As a direct and proximate result of the infringement of the '707 Patent by Defendants, Plaintiffs have suffered and will continue to suffer irreparable injury for which there is no adequate remedy at law. Plaintiffs also have been damaged and, until an injunction issues, will continue to be damaged in an amount yet to be determined.

114. In the absence of an injunction, Defendants reasonably possesses the capability to continue infringement of the '707 Patent.

115. Plaintiffs are entitled to: (a) damages adequate to compensate it for Defendants' infringement; (b) its attorneys' fees and costs; (c) a permanent injunction; and (d) such other and further relief as justice requires.

COUNT THREE – UTILITY PATENT INFRINGEMENT:
U.S. PATENT NO. 9,640,516

116. Plaintiffs reallege and incorporate by reference each of the foregoing paragraphs as though fully set forth herein.

117. Upon information and belief, Defendants have engaged in the importation, manufacture, use, offer for sale, and/or sale of products that infringe one or more claims of the '516 Patent in violation of 35 U.S.C. § 271. The infringing products imported, made, used, offered for sale, and/or sold by Defendants include, but are not necessarily limited to, the Accused Products discussed herein.

118. Defendants have infringed and are currently infringing, literally and/or under the doctrine of equivalents, the '516 Patent by, among other things, making, using, selling, offering for sale, and/or importing within this judicial district and elsewhere in the United States, without license or authority, products that infringe one or more claims of the '516 Patent, including but not limited to the Accused Products.

119. Plaintiffs have suffered and continue to suffer damages as a direct and proximate result of Defendants' infringement and will suffer additional and irreparable harm or injury unless Defendants are permanently enjoined by this Court from continuing their infringement. NanoLumens has no adequate remedy at law.

120. Defendants have been aware of the '516 Patent at least from the date of this Complaint.

121. Defendants' infringing product(s) compete with NanoLumens in the market in which the '516 Patent is used. The channels through which NanoLumens and

Defendants sell their products are similar and overlap. Plaintiffs have invested substantially in their products, but Defendants' advertising and sale of the Accused Products, online and elsewhere, disrupt Plaintiffs' ability to market and launch their novel products free from unlawful competition. Such disruption presents an immediate and substantial injury to Plaintiffs, including substantial lost revenue, likely price erosion due to Defendants avoided development costs, and the loss of the good will associated with bringing this innovation to market.

122. Defendants also indirectly infringe the '516 Patent in violation of 35 U.S.C. § 271(b) and (c). Defendants induced and are inducing infringement of the '516 Patent by, among other things, actively and knowingly aiding and abetting others to directly make, use, offer for sale, sell, and/or import within this judicial district and elsewhere in the United States, without license or authority, for example, the Accused Products, which fall within the scope of at least claim 1 of the '516 Patent. On information and belief Defendants provide directions, instructions, and/or other materials that encourage and facilitate infringing use by others. Defendants have sold and are selling at least the Accused Products with the knowledge and intent that customers who buy the product will commit infringement by using the product, and, therefore, those customers have been and are directly infringing the '516 Patent.

123. Defendants have contributorily and are currently contributorily infringing the '516 Patent, in violation of 35 U.S.C. § 271(c), by, among other things, selling, offering for sale, and/or importing into this judicial district and elsewhere in the United States, without license or authority, products, for example, the Accused Products, or components of those products which constitute a material part of the '516 Patent, knowing that such products and/or components are especially made or especially adapted for use in the infringement of the '516 Patent, including but not limited to claim 1, and are not staple articles of commerce suitable for substantial non-infringing use.

124. Any continuing infringement by Defendants of the '516 Patent after service of this complaint be willful and deliberate, and, therefore, Plaintiffs are entitled to damages, including enhanced damages, under 35 U.S.C. § 284.

125. As a direct and proximate result of the infringement of the '516 Patent by Defendants, Plaintiffs have suffered and will continue to suffer irreparable injury for which there is no adequate remedy at law. Plaintiffs also have been damaged and, until an injunction issues, will continue to be damaged in an amount yet to be determined.

126. In the absence of an injunction, Defendants reasonably possesses the capability to continue infringement of the '516 Patent.

127. Plaintiffs are entitled to: (a) damages adequate to compensate it for Defendants' infringement; (b) its attorneys' fees and costs; (c) a permanent injunction; and (d) such other and further relief as justice requires.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that the Court enter the following in their favor and against Defendants as follows:

A. A judgment in favor of NanoLumens on all its claims against Defendants;

B. A judgment that Defendants have violated 35 U.S.C. § 271 by infringing, directly or indirectly, and literally or under the doctrine of equivalents, one or more claims of the '895, '707, and '516 Patents;

C. A judgment awarding NanoLumens damages adequate to compensate for Defendants' infringement, but in no event less than a reasonable royalty under 35 U.S.C. § 284, in an amount to be determined at trial;

D. A judgment that Defendants' patent infringement has been and continues to be willful, and a trebling of damages;

E. A judgment declaring that this is an exceptional case and awarding Plaintiffs their actual costs, expenses, and reasonable attorneys' fees under 35 U.S.C. § 285;

F. A judgment that Defendants and their respective officers, agents, servants, employees, and attorneys, and all other persons who are in active concert or participation with them are enjoined, preliminarily and permanently, from further infringement of the '895, '707, and '516 Patents;

G. A judgment awarding NanoLumens pre-judgment and post-judgment interest; and

H. A judgment awarding such further equitable or other relief as the Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Fed. R. Civ. P. 38(b), NanoLumens demands a trial by jury of all issues triable of right by a jury.

This 9th day of June, 2017.

/s/ Ann G. Fort

Ann G. Fort

Georgia State Bar No. 269995

Anna C. Halsey

Georgia State Bar No. 208034

Walter S. Freitag

Georgia State Bar No. 510393

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NanoLumens Acquisition Inc. and NanoLumens, Inc.

CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing document complies with LR 7.1(D), NDGa. The font and point size used in preparing the foregoing is Times New Roman, 14 point.

This 9th day of June, 2017.

/s/ Walter S. Freitag _____
Walter S. Freitag