IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

PHENIX LONGHORN LLC, Plaintiff, v. INNOLUX CORPORATION and DOES 1–10, Defendants.	**CIVIL ACTION NO. 2:23-cv-00478-RWS-RSP** **JURY TRIAL DEMANDED**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Phenix Longhorn, LLC ("Phenix") files this First Amended Complaint for infringement of U.S. Patent No. 7,233,305 ("the '305 Patent") and U.S. Patent No. 7,557,788 ("the '788 Patent") (collectively, the "Asserted Patents") against Defendants Innolux Corporation ("Innolux") and Does 1–10 (collectively, "Defendants") and alleges as follows:

NATURE OF ACTION

1. This is a patent infringement action to remedy Defendants' infringement of the Asserted Patents.

2. Phenix seeks injunctive relief and monetary damages.

THE PARTIES

3. Phenix is a limited liability company organized and existing under the laws of the State of Texas. Phenix maintains a registered agent and office located at 107 Austin Street, Martindale, Texas 78655.

4. On information and belief, Defendant Innolux is a multi-national corporation organized under the laws of the Republic of China (R.O.C. or Taiwan), with its principal place of business located at No.160, Kexue Road, Zhunan Science Park, Miaoli County 35053 Taiwan. On

information and belief, Defendant Innolux was previously known as Chi Mei Innolux Corporation following the 2010 merger of Innolux Display Corporation, Chi Mei Optoelectronics ("Chi Mei"), and TPO Displays Corporation. On information and belief, in 2012 Chimei Innolux Corporation changed its name to Innolux Corporation.

5. On information and belief, Defendant Innolux manufacturers and sells liquid crystal display ("LCD") panel modules, including the LCD screen and the circuits that control the LCD screen. Defendant Innolux sells its panels to manufacturers who sell under their own brand and to original equipment manufacturers (OEMs) that sell under contract for another brand. Defendant Innolux's LCD panel modules are incorporated into television sets sold and/or intended for sale throughout the United States, including the State of Texas and the Eastern District of Texas ("this District").

6. On information and belief, Defendants Does 1–10 import into and/or sell in the United States finished televisions that incorporate Defendant Innolux's LCD panel modules. Pursuant to Rule 11(b)(3), it is likely that discovery will lead to further facts supporting the foregoing allegations, and showing the identity of Does 1–10.

7. On information and belief, Defendants place or contribute to placing infringing products, including one or more of those specifically accused of infringement below, into the stream of commerce via established distribution channels knowing or understanding that such products will be sold and used in the United States, including in this District.

8. On information and belief, Defendants have derived substantial revenue from infringing acts in this District, including from the sale and use of these infringing products like those specifically accused of infringement below.

9. Defendants are properly joined under 35 U.S.C. § 299(a)(2) because Defendants, through their own acts and/or through the acts of each other Defendant acting as its representative, alter ego, or agent, make, use, sell, and/or offer to sell in, and/or import into the United States the same or similar accused LCD panel modules that include a timing and control board and a programmable gamma integrated circuit ("Pgamma chip") with at least two banks for use in the same or similar television sets, such that questions of fact will arise that are common to all Defendants.

JURISDICTION AND VENUE

10. This is a civil action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. § 1, including §§ 271 and 281-285.

11. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

12. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391(c). Defendant Innolux is a foreign entity and may be sued in any judicial district under 28 U.S.C. § 1391(c)(3). On information and belief, Defendants Does 1–10 are foreign entities and may be sued in any judicial district under 28 U.S.C. § 1391(c)(3).

13. Personal jurisdiction exists generally over the Defendants because Defendants have sufficient minimum contacts with the forum as a result of business conducted within the State of Texas and the Eastern District of Texas.

14. Personal jurisdiction exists over Defendants because they, directly or through affiliates, agents, subsidiaries, or intermediaries, make, use, sell, offer for sale, import, advertise, make available, and/or market products within the State of Texas and this District that infringe one or more claims of the Asserted Patents, as alleged more particularly below.

15. On information and belief, this Court has jurisdiction over Defendants by virtue of their systematic and continuous contacts with this jurisdiction, as alleged herein, as well as because the injury to Phenix occurred in the State of Texas and the claim for relief possessed by Phenix against Defendants for this injury arose in the State of Texas. On information and belief, Defendants have purposely availed themselves of the privileges of conducting business within the State of Texas, such business including but not limited to: (i) at least a portion of the infringements alleged herein; (ii) purposely and voluntarily placing one or more infringing products into the stream of commerce through established distribution channels with the expectation, knowledge, and intent that those products be sold throughout the United States, including the State of Texas and this District; and (iii) regularly transacting or soliciting business, engaging in other persistent courses of conduct, or deriving or attempting to derive substantial revenue and financial benefits from goods and services provided to individuals in the State of Texas and in this District. Thus, Defendants are subject to the Court's specific and general jurisdiction pursuant to due process and the Texas Long Arm Statute.

16. Venue in this District is proper under 28 U.S.C. §§ 1400(b) and 1391(b) and (c) because Defendants are subject to personal jurisdiction in this District and have committed acts of infringement in this District. Defendants, through their own acts and/or through the acts of others acting as their representatives, alter egos, or agents, make, use, sell, and/or offer to sell infringing products within this District, have a continuing presence within the District, and have the requisite minimum contacts with the District such that this venue is a fair and reasonable one. On information and belief, Defendants have transacted, and at the time of the filing of the original Complaint (Dkt. 1), are continuing to transact business within this District.

THE ASSERTED PATENTS

17. The USPTO duly issued the '305 Patent, entitled "Gamma Reference Voltage Generator," on June 19, 2007, after full and fair examination of Application No. 10/746,333, which was filed on June 11, 2003. Phenix is the owner, by assignment, of all rights, title, and interest in the '305 Patent. A true and accurate copy of the '305 Patent is attached as **Exhibit A.**

18. The '788 Patent is a continuation of the '305 Patent. The USPTO duly issued the '788 Patent, entitled "Gamma Reference Voltage Generator," on July 7, 2009, after full and fair examination of Application No. 11/743,014, which was filed on May 1, 2007. Phenix is the owner, by assignment, of all rights, title, and interest in the '788 Patent. A true and accurate copy of the '788 Patent is attached as **Exhibit B**.

BACKGROUND FACTS

19. The Asserted Patents are directed to LCD panels using gamma reference voltage generator integrated circuits, also known as programmable gamma integrated circuits or "Pgamma chips." These chips are components of LCD panels and contributed to innovations in manufacturing that brought us the high-quality and low-cost LCD television sets we have today.

20. The co-inventors of the Asserted Patents, Richard V. Orlando and Trevor A. Blyth, founded the semiconductor company Alta Analog, Inc. ("Alta") in Silicon Valley in March 2002. Alta pioneered and sold the first Pgamma chip capable of generating two or more gamma reference voltage display conditions for LCD displays using an integrated circuit that would be part of a new LCD architecture.

21. When fresh off the production line, the picture produced from LCD panel displays vary noticeably, not only by batch, but also from display-to-display within the same batch. The problem is that the brightness of the pixels making up the LCD display is not a linear or straight-line function of the voltages applied. Compounding the problem is that the sensitivity of the human

eye to light is also not linear. In order to obtain an acceptable LCD picture, a way is needed to drive the pixels with a voltage to correct for non-linear abnormalities. The correction is controlled by a set of voltages applied to the panel. These are gamma reference voltages, which refer to a gamma function that describes how smoothly black transitions to white on a digital display and serve to improve color and contrast.

22. The gamma reference voltages are fed to column drivers connected to LCD panels. The term column driver is a name used in the industry to refer to a specialized integrated circuit with two sets of inputs. This first input is for the digital picture data to be converted into analog voltages applied on the display column containing red, green, and blue pixels. The second input is for the gamma reference voltages coming from the gamma circuit that is used to correct or adjust the conversion occurring on the first input, resulting in the desired display condition.

23. The gamma reference voltages produce changes to the example display below using different gamma correction values:

24. Prior to the invention, gamma correction values were generated using a gamma voltage circuit that used resistor ladders. Replacing the gamma voltage circuit that existed in 2002 with an integrated circuit was a significant improvement that streamlined and saved manufacturing costs while also improving picture quality. The ’305 Patent addressed the problem of providing a

gamma correction solution to LCD panels by doing away with manually adjusted select-on-test resistors or other discrete components, such as, for example, microcontroller-based solutions, and replacing these components with an integrated circuit. The incorporation of the Pgamma chip also required LCD panel makers to redesign their products to accommodate the new technology and, in addition, allowed panel makers to automate the testing of their LCD products on the production line, as described in the '788 Patent, a continuation of the '305 patent. As discussed below, Mr. Orlando made numerous trips to Asia to speak directly to Asian panel makers to promote this new LCD panel architecture.

25. Alta's innovations in panel architecture design and manufacturing processes were adopted in Japan by Sharp Corporation, also known as Sharp Kabushiki Kaisha ("Sharp Japan"). Between 2010 and 2011, Alta sold over 200,000 units of one type of Pgamma integrated circuit to Sharp Japan for inclusion in panels for LCD television sets sold in Japan.

26. Disruption to the Japanese consumer market for television sets following the March 11, 2011, earthquake, tsunami, and nuclear disaster negatively impacted the sales of Sharp Japan and led to Alta's bankruptcy in 2014. Alta's patents, including the '305 Patent and '788 Patent, were subsequently assigned to Phenix, where co-inventor Mr. Orlando serves as the Director and President. The panel design promoted by Mr. Orlando and used by Sharp Japan was eventually adopted by the television industry.

DEFENDANT INNOLUX'S KNOWLEDGE OF THE ASSERTED PATENTS

27. On information and belief, Defendant Innolux manufactures LCD panel modules in Asia and sells them to OEMs, either directly or through intermediaries. These LCD panel modules are incorporated by OEMs into television sets. The LCD panel modules made by Innolux include the LCD screen itself and electronic circuits to control the LCD screen. Electronic

components that are part of the LCD panel module are mounted on one or more printed circuit boards ("PCBs" or "boards"). One of these PCBs is generally referred to as a timing and control board or "TCON" board, which is specially designed to accept one or more Pgamma integrated circuits. Placed inside the television housing, a TCON board is mated to the LCD display and bundled together. The TCON board connects to a main circuit board and to the LCD screen that displays an image to a user. Most, if not all, of the intricate timing and data control signals required to form an image on the LCD screen is performed by the TCON board. The TCON board can be a removeable board, but some functions of the TCON board, including Pgamma correction, may be located on boards permanently bonded into the LCD panel and not removeable, depending on the manufacturing process.

28. Defendant Innolux's infringement of the '305 Patent and the '788 Patent is willful because Defendant Innolux has had knowledge of the Asserted Patents for over ten years.

29. The provisional patent application that became the '305 Patent was filed in June 2003, before Phenix's predecessor-in-interest Alta began to engage Defendant Innolux, then known as Chi Mei, in talks regarding the use of panel architecture using Pgamma devices.

30. Alta engaged with Defendant Innolux regarding the use of panel architecture using Pgamma devices since at least as early as 2007 until about 2010.

31. Defendant Innolux had knowledge of, or was willfully blind to the knowledge of, the '305 Patent and the '788 Patent, and its infringement is willful.

32. On information and belief, despite having knowledge of the Asserted Patents and knowledge that it is directly and/or indirectly infringing one or more claims of the Asserted Patents, Defendant Innolux has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Defendant Innolux's infringing activities relative to

the Asserted Patents have been, and continue to be, willful, wanton, malicious, in bad faith, deliberate, consciously wrongful, flagrant, and an egregious case of misconduct beyond typical infringement such that Plaintiff is entitled under 35 U.S.C. § 284 to enhanced damages up to three times the amount found or assessed.

DEFENDANT INNOLUX'S ACTIONS DIRECTED AT PLACING INFRINGING PRODUCTS INTO THE UNITED STATES

33. Defendant Innolux specifically intends to induce others, including foreign manufacturers, to import and sell infringing products in the U.S. Innolux knows that manufacturers like Samsung Mexicana S.A. de C.V. ("SAMEX") and others buy Innolux LCD panel modules to incorporate into finished televisions that are intended to be sold and imported into the U.S. and are sold and imported into the U.S. Innolux knows and intends that the U.S. market is an important and high-volume end market for its infringing products.

34. According to Innolux's annual reports, Innolux knows that the United States is a major market for its products, including its LCD panel modules. **Exhibit C**. For example, Innolux understands the strong demand for end products that incorporate its panel modules in the United States and takes steps to satisfy and service that demand, including through delivery hubs in the U.S. **Exhibit D**; **Exhibit E**. On information and belief, Innolux closely tracks its total sales in the United States. Further, according to Innolux's annual report, in 2020, sales in the United States represented 11.63% of Innolux's total sales, or NT$31,387,034,000; in 2021, sales in the United States represented 11.44% of Innolux's total sales, or NT$40,031,179,000; and in 2022, sales in the United States represented 17.88% of Innolux's total sales, or NT$39,995,184,000. **Exhibit C**; **Exhibit D**; **Exhibit E**.

35. Innolux maintains delivery hubs in the United States to achieve its "deliver just in time" objectives. **Exhibit C**; **Exhibit D**; **Exhibit E**.

36. Innolux has at least one U.S.-based subsidiary, Innolux USA, Inc. Innolux USA, Inc. is responsible for electronics parts and display sales in the United States, which, on information and belief, includes the importation into the U.S. and the sale of infringing finished televisions. **Exhibit C**; **Exhibit D**; **Exhibit E**. In recent litigation in this District, Innolux acknowledged that Innolux USA, Inc. is Innolux's wholly owned subsidiary that provides sales support for certain LCD products in the United States. **Exhibit F**, ¶ 7.

37. Innolux's annual reports also state that Innolux is involved with downstream assembly of its LCD panel modules, demonstrating Innolux's knowledge of and involvement with the distribution chain for its LCD panel modules. **Exhibit D**.

RELATED PROCEEDINGS

38. The '305 Patent was confirmed valid over an obviousness challenge brought before the Patent Trial and Appeal Board (PTAB) at the United States Patent & Trademark Office (USPTO). The challenger contended certain claims of the '305 Patent were obvious in view of four prior art references, either alone or in combination. The Board denied institution of the *Inter Partes* Review in its entirety. *Wistron Corporation v. Phenix Longhorn, LLC*, IPR2018-01255, Paper 14 (PTAB Jan. 24, 2019).

THE ACCUSED INSTRUMENTALITIES

39. Defendants are involved in the manufacture, use, sale (including sale for importation), offer to sell, and/or importation of LCD televisions incorporating accused Innolux LCD panel modules that infringe one or more claims of the Asserted Patents.

40. On information and belief, Defendant Innolux designs, manufactures, and sells LCD panel modules that include a TCON board with a programmable gamma integrated circuit, *i.e.*, Pgamma chip, with at least two banks, including but not limited to CM602, CM603, IN602, and IN603, which are implemented into LCD televisions. The Innolux LCD panel modules that

include a TCON board and a Pgamma chip with at least two banks are referred to herein as the "Infringing Panel Modules."

41. On information and belief, Defendant Innolux sells the Infringing Panel Modules to manufacturers, some of whom are currently unknown, that incorporate the Infringing Panel Modules into certain finished television models intended for sale and sold into the United States, and that import, or cause to be imported, finished television models incorporating the Infringing Panel Modules into the United States, including but not limited to the following: Sharp LC-32LE244; RCA LED65G55R120Q; Panasonic TC-50A400U; LG 82UM8070PUA; and Vizio V655-G9 LIAIYBTV.

42. On information and belief, Defendant Innolux sells certain of the Infringing Panel Modules to SAMEX. On information and belief, SAMEX incorporates the Infringing Panel Modules into finished television models intended for sale and sold into the United States, and/or imports or causes to be imported finished television models incorporating the Infringing Panel Modules into the United States, including but not limited to the following Samsung-brand televisions: UN55ES6550FXZA CS02; UN40KU6300FXZA FF06; UN50J6200AFXZA IH02; HG50ND890UFXZA JS01; UN50EH5000FXZA; UN50F5000AFXZA; HG39NA570CFXZA ND02; UN46F6300AFXZA; UN50ES6100FXZA CS01; and UN39EH5003FXZA CD01. Collectively, the finished televisions that incorporate the Infringing Panel Modules manufactured by SAMEX and/or other manufacturers are called the "Infringing TV Products."

43. On information and belief, Defendant Innolux supplies the Infringing Panel Modules to at least SAMEX and other manufacturers that incorporate the Infringing Panel Modules into Infringing TV Products sold throughout the United States, including the State of

Texas and this District. *See* **Exhibit G** (D&B Report reflecting that SAMEX sells 65% of its goods into the U.S.).

44. On information and belief, the Infringing TV Products, are designed to incorporate and incorporate receivers (or tuners) that conform with FCC requirements and are sold and/or intended to be sold in the United States. [1]

45. On information and belief, Defendant Innolux tests and calibrates and/or directs and controls others to test and calibrate the Innolux LCD panel modules to compensate for panel-to-panel variations, for incorporation into finished televisions that are imported into the United States.

46. On information and belief, SAMEX imports or causes to be imported LCD televisions incorporating Innolux LCD panel modules into the United States, including without limitation the Samsung-brand televisions listed in paragraph 42. For example, importation records from 2021 show that SAMEX imported into the United States 2,182 LED[2] televisions. **Exhibit H**. In addition, importation records from 2022 show that SAMEX imported into the United States 746 LED monitors. **Exhibit I**.

47. SAMEX and other television manufacturers incorporate the Infringing Panel Modules into Infringing TV Products, *e.g.*, assembled televisions, that are sold, or were sold, by

[1] The Advanced Television Systems Committee (ATSC) developed technical standards for digital television in the U.S. To comply, an LCD panel manufacturer supplies components designed to interface with an ATSC receiver (or tuner) required for the U.S. market. The Federal Communications Commission (FCC) mandated that after March 1, 2007, all televisions regardless of screen size, and all interfaces that include a tuner (*e.g.*, VCR, DVD player/recorder, DVR) must include a built-in ATSC DTV tuner.

[2] The difference between LCD and light-emitting diode (LED) technology relates to the type and placement of the light sources for the screens and does not affect the panel modules. Because LED technology is newer than LCD technology, it is typically used in newer television models.

brick-and-mortar and online retailers throughout the United States, including at least Best Buy and Amazon. **Exhibit J; Exhibit K; Exhibit L**.

48. On information and belief, Defendants Does 1–10 import and/or sell the Infringing TV Products in the United States, including Texas and this District.

49. Infringing TV Products, including the LG 50UK6090PUA and the Samsung UN46F6300AFXZA, were available for purchase in the United States, including in Texas and this District, at BestBuy.com. **Exhibits J; Exhibit K**.

50. Infringing TV Products, including the Vizio V655-G9 LINIYBMV, are available for purchase in the United States, including in Texas and this District, at Amazon.com. **Exhibit L**.

51. In summary, Defendant Innolux supplies the Infringing Panel Modules to SAMEX and other OEMs and manufacturers which: (1) assemble or cause others to assemble the Infringing Panel Modules into Infringing TV Products; (2) test or cause others to test such modules and products; and (3) import or cause others, including Does 1–10, to import the Infringing TV Products into the United States, including Texas and this District.

COUNT I: INDUCEMENT OF INFRINGEMENT OF THE ’305 PATENT BY DEFENDANT INNOLUX

52. Phenix realleges and incorporates herein the preceding allegation of this First Amended Complaint as if fully set forth herein.

53. Defendant Innolux directly and/or through subsidiaries or intermediaries, has induced and continues to induce infringement (literally or under the doctrine of equivalents) of one or more claims of the ’305 Patent. With knowledge of the Asserted Patents, Defendant Innolux’s deliberate and/or willfully blind actions include, but are not limited to, actively marketing to, supplying, causing the supply to, encouraging, and instructing others such as businesses, distributors, agents, channel partners, resellers, sales representatives, and

manufacturers to incorporate the Infringing Panel Modules into consumer products, including without limitation LCD televisions. These actions, individually and collectively, have induced and continue to induce the direct infringement of the '305 Patent by others, such as television set manufacturers and assemblers, who import into the United States Infringing TV Products containing the Infringing Panel Modules. Defendant Innolux knew and/or was willfully blind to the fact that the induced parties' use, testing, making available for another's use, promotion, marketing, distributing, importing, selling, and/or offering to sell the Infringing TV Products would infringe one or more claims of the '305 Patent.

54. Phenix is the owner of the '305 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '305 Patent against infringers, and to collect damages for all relevant times.

55. The '305 Patent generally describes an integrated circuit used to calibrate LCDs to compensate for panel-to-panel manufacturing variations. The claims of the '305 Patent, including Claim 1, recite a novel and inventive apparatus for producing voltage signals on a plurality of outputs comprising non-volatile storage cells, programming circuits coupled to a multiplexer that address the many inputs, drivers connected to the storage cells and outputs, and inputs connected to the multiplexer to address the storage cells, where the gamma reference voltage signals determine the driving voltages of columns of a display, the non-volatile storage cells are organized into banks with a predetermined gamma reference voltage signal display condition, and the banks are able to be switched by external signals on the integrated circuit.

56. For example, Claim 1 of the '305 Patent recites:

> An integrated circuit for producing voltage signals on a plurality of outputs comprising:
>
> a plurality of non-volatile storage cells;

> circuits for programming coupled to a multiplexer for addressing and programming said storage cells, wherein the addressing is based on a plurality of inputs;
>
> drivers connected to said storage cells and to the plurality of outputs; and
>
> the plurality of inputs connected to said multiplexer for addressing said storage cells,
>
> wherein said voltage signals are gamma reference voltage signals for determining actual driving voltages of columns of a display, wherein said non-volatile storage cells are organized into two or more banks of cells wherein each bank contains a predetermined gamma reference voltage signal display condition; and means to switch between the banks based on one or more external signals is provided on said integrated circuit.

57. The Infringing TV Products, including but not limited to Sharp LC-32LE244, RCA LED65G55R120Q, Vizio V655-G9 LIAIYBTV, and Samsung UN55ES6550FXZA CS02, contain the Infringing Panel Modules, *i.e.*, Innolux LCD panel modules that include a TCON board with an integrated circuit, *i.e.*, Pgamma chip, with at least two banks, including but not limited to CM602, CM603, IN602, and IN603, for producing voltage signals on a plurality of outputs with a plurality of non-volatile storage cells and circuits for programming coupled to a multiplexer for addressing and programming said storage cells, where the addressing is based on a plurality of inputs, the drivers connect to the storage cells and the outputs, the inputs connect to the multiplexer for addressing the storage cells, the voltage signals are gamma reference voltage signals for determining actual driving voltages of columns of display, the non-volatile storage cells are organized into banks of cells, each bank contains a predetermined gamma reference voltage signal display condition, and the banks are able to be switched by external signals on the integrated circuit.

58. In violation of 35 U.S.C. § 271(b), Defendant Innolux has induced and continues to induce infringement of one or more claims of the ’305 Patent by one or more direct infringers,

either literally or by the doctrine of equivalents. Defendant Innolux supplies, distributes, offers for sale, or sells the Infringing Panel Modules to SAMEX and others who without authority use, offer to sell, or sell Infringing Panel Modules, within the United States, or import into the United States, or cause others (such as Does 1–10) to import into the United States, in violation of 35 U.S.C. § 271(a).

59. On information and belief, Defendant Innolux has made, and continues to make, unlawful gains and profits from infringing the ’305 Patent.

60. As a consequence of Defendant Innolux’s past dealings with Alta that pre-dated the filing and service of the original Complaint (Dkt. 1) as described above, Defendant Innolux had knowledge of, or was willfully blind to knowledge of, the ’305 Patent and its infringement of the ’305 Patent before the filing of this lawsuit.

61. On information and belief, Defendant Innolux has had knowledge of the ’305 Patent since at least as early as 2007. Accordingly, Defendant Innolux has been willfully infringing the ’305 Patent since it began designing, manufacturing, and selling its Infringing Panel Modules.

62. Since it began designing, manufacturing, and selling its Infringing Panels, Defendant Innolux has actively, knowingly, and intentionally continued to induce infringement of the ’305 Patent, literally or by the doctrine of equivalents, by selling the Infringing Panel Modules to manufacturers, suppliers, and/or distributors for use in the Infringing TV Products with the knowledge and intent that such products would be imported into the U.S., and, upon information and belief, distributing literature and materials inducing manufacturers, suppliers and/or distributors to use their Infringing Panel Modules in a manner that infringes one or more claims of the ’305 Patent.

COUNT II: INDUCEMENT OF INFRINGEMENT OF THE '788 PATENT BY DEFENDANT INNOLUX

63. Phenix realleges and incorporates herein the preceding allegation of this First Amended Complaint as if fully set forth herein.

64. Defendant Innolux directly and/or through subsidiaries or intermediaries, has induced and continues to induce infringement (literally or under the doctrine of equivalents) of one or more claims of the '788 Patent. With knowledge of the '788 Patent, Defendant Innolux's deliberate and/or willfully blind actions include, but are not limited to, actively marketing to, supplying, causing the supply to, encouraging, and instructing others such as businesses, distributors, agents, channel partners, resellers, sales representatives, and manufacturers to incorporate the Innolux LCD panel modules into consumer products, including without limitation LCD televisions, and to test and use such modules and products. These actions, individually and collectively, have induced and continue to induce the direct infringement of the '788 Patent by others, such as television set manufacturers and assemblers, who import into the United States finished television sets containing Innolux LCD panel modules. Defendant Innolux knew and/or was willfully blind to the fact that the induced parties' use, testing, making available for another's use, promotion, marketing, distributing, importing, selling, and/or offering to sell the Infringing TV Products would infringe one or more claims of the '788 Patent.

65. Phenix is the owner of the '788 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the '788 Patent against infringers, and to collect damages for all relevant times.

66. The '788 Patent generally describes a method for calibrating an LCD to a desired gamma curve to compensate for panel-to-panel manufacturing variations. The claims of the '788 Patent, including Claim 1, recite a novel and inventive method for calibrating LCD to a desired

gamma curve to compensate for manufacturing variations by providing a display with electrically reprogrammable and non-volatile gamma reference control capability, testing the display with a sensor, varying the gamma reference voltage levels on columns of the display with a control circuit, optimizing the gamma reference voltage levels with predetermined algorithms, criteria, and data to achieve the desired gamma curve, and storing the gamma reference voltage levels.

67. For example, Claim 1 of the '788 Patent recites:

> A method of calibrating a liquid crystal display to a desired gamma curve to compensate for panel to panel manufacturing variations comprising the steps:
>
> providing said display with gamma reference control capability which is electrically reprogrammable and non-volatile;
>
> testing said display with at least one sensor with optical input, wherein said sensor is separate from said display;
>
> varying gamma reference voltage levels on columns of said display by a control circuit, where said control circuit is separate from said display;
>
> optimizing said gamma reference voltage levels using means for executing a predetermined algorithm according to a predetermined criteria and data sensed by said at least one sensor, wherein said means for executing said predetermined algorithm is separate from said display to achieve the desired gamma curve; and
>
> storing said gamma reference voltage levels in said gamma reference control capability.

68. The Innolux LCD panel modules and/or finished television sets are made using a method for calibrating LCD to a desired gamma curve to compensate for manufacturing variations by providing a display with electrically reprogrammable and non-volatile gamma reference control capability, testing the display with a sensor, varying the gamma reference voltage levels on columns of the display with a control circuit, optimizing the gamma reference voltage levels with

predetermined algorithms, criteria, and data to achieve the desired gamma curve, and storing the gamma reference voltage levels.

69. In violation of 35 U.S.C. § 271(b), Defendant Innolux has induced and continues to induce infringement of one or more claims of the '788 Patent by one or more direct infringers, either literally or by the doctrine of equivalents. By way of Defendant Innolux's designing, making, or testing its LCD panel modules using a process claimed by the '788 Patent, or causing others to do so, Defendant Innolux has induced SAMEX and others to without authority import into the United States, or cause others (such as Does 1–10) to import into the United States, or offer to sell, sell, or use within the United States the Innolux LCD panel modules, in violation of 35 U.S.C. § 271(g).

70. Defendant Innolux has made, and continues to make, unlawful gains and profits from infringing the '788 Patent.

71. As a consequence of Defendant Innolux's past dealings with Alta that pre-dated the filing and service of the original Complaint (Dkt. 1) as described above, Defendant Innolux had knowledge of, or was willfully blind to knowledge of, the '788 Patent and its infringement of the '788 Patent before the filing of this lawsuit.

72. Defendant Innolux has had knowledge of the '788 Patent and its infringement activities at least as early as 2009. Accordingly, Defendant Innolux has been willfully infringing the '788 Patent since at least as early as 2009.

73. Since at least as early as 2009, Defendant Innolux has actively, knowingly, and intentionally continued to induce infringement of the '788 Patent, literally or by the doctrine of equivalents, by selling the Infringing Panel Modules to manufacturers, suppliers, and/or distributors for use in the Infringing TV Products with the knowledge and intent that such products

would be imported into the U.S., and, upon information and belief, distributing literature and materials inducing manufacturers, suppliers and/or distributors to use their Infringing Panel Modules in a manner that infringes one or more claims of the ’788 Patent.

COUNT III: DIRECT INFRINGEMENT OF THE ’305 PATENT BY DEFENDANTS DOES 1–10

74. Phenix realleges and incorporates herein the preceding allegations of this First Amended Complaint as if fully set forth herein.

75. Defendants Does 1–10 make, use, sell, and/or offer to sell in, and/or import into, the United States finished television sets that incorporate Innolux LCD panel modules that infringe one or more claims of the Asserted Patents, including at least Claims 1, 2, and 5 of the ’305 Patent.

76. Phenix is the owner of the ’305 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the ’305 Patent against infringers, and to collect damages for all relevant times.

77. The ’305 Patent generally describes an integrated circuit used to calibrate LCDs to compensate for panel-to-panel manufacturing variations. The claims of the ’305 Patent, including Claim 1, recite a novel and inventive apparatus for producing voltage signals on a plurality of outputs comprising non-volatile storage cells, programming circuits coupled to a multiplexer that address the many inputs, drivers connected to the storage cells and outputs, and inputs connected to the multiplexer to address the storage cells, where the gamma reference voltage signals determine the driving voltages of columns of a display, the non-volatile storage cells are organized into banks with a predetermined gamma reference voltage signal display condition, and the banks are able to be switched by external signals on the integrated circuit.

78. For example, Claim 1 of the ’305 Patent recites:

> An integrated circuit for producing voltage signals on a plurality of outputs comprising:
>
> a plurality of non-volatile storage cells;
>
> circuits for programming coupled to a multiplexer for addressing and programming said storage cells, wherein the addressing is based on a plurality of inputs;
>
> drivers connected to said storage cells and to the plurality of outputs; and
>
> the plurality of inputs connected to said multiplexer for addressing said storage cells,
>
> wherein said voltage signals are gamma reference voltage signals for determining actual driving voltages of columns of a display, wherein said non-volatile storage cells are organized into two or more banks of cells wherein each bank contains a predetermined gamma reference voltage signal display condition; and means to switch between the banks based on one or more external signals is provided on said integrated circuit.

79. The finished television sets imported by Defendants Does 1–10 each incorporate one of Defendant Innolux's LCD panel modules that include a TCON board with an integrated circuit, *i.e.*, Pgamma chip, with at least two banks, for producing voltage signals on a plurality of outputs with a plurality of non-volatile storage cells and circuits for programming coupled to a multiplexer for addressing and programming said storage cells, where the addressing is based on a plurality of inputs, the drivers connect to the storage cells and the outputs, the inputs connect to the multiplexer for addressing the storage cells, the voltage signals are gamma reference voltage signals for determining actual driving voltages of columns of display, the non-volatile storage cells are organized into banks of cells, each bank contains a predetermined gamma reference voltage signal display condition, and the banks are able to be switched by external signals on the integrated circuit.

80. In violation of 35 U.S.C. § 271(a), Defendants Does 1–10 have directly infringed and continue to infringe the '305 Patent, either literally or by the doctrine of equivalents, by

making, using, importing, supplying, distributing, offering for sale, or selling the Infringing TV Products within the United States.

81. Defendants Does 1–10 have made, and continue to make, unlawful gains and profits from infringing the ’305 Patent.

COUNT IV: DIRECT INFRINGEMENT OF THE ’788 PATENT BY DEFENDANTS DOES 1–10

82. Phenix realleges and incorporates herein the preceding allegations of this First Amended Complaint as if fully set forth herein.

83. Defendants Does 1–10 make, use, sell, and/or offer to sell in, and/or import into, the United States finished television sets that incorporate Innolux LCD panel modules that infringe one or more claims of the Asserted Patents, including at least Claim 1 of the ’788 Patent.

84. Phenix is the owner of the ’788 Patent, with all substantive rights in and to that patent, including the sole and exclusive right to prosecute this action and enforce the ’788 Patent against infringers, and to collect damages for all relevant times.

85. The ’788 Patent generally describes a method for calibrating an LCD to a desired gamma curve to compensate for panel-to-panel manufacturing variations. The claims of the ’788 Patent, including Claim 1, recite a novel and inventive method for calibrating LCD to a desired gamma curve to compensate for manufacturing variations by providing a display with electrically reprogrammable and non-volatile gamma reference control capability, testing the display with a sensor, varying the gamma reference voltage levels on columns of the display with a control circuit, optimizing the gamma reference voltage levels with predetermined algorithms, criteria, and data to achieve the desired gamma curve, and storing the gamma reference voltage levels.

86. For example, Claim 1 of the ’788 Patent recites:

> A method of calibrating a liquid crystal display to a desired gamma curve to compensate for panel to panel manufacturing variations comprising the steps:
>
> providing said display with gamma reference control capability which is electrically reprogrammable and non-volatile;
>
> testing said display with at least one sensor with optical input, wherein said sensor is separate from said display;
>
> varying gamma reference voltage levels on columns of said display by a control circuit, where said control circuit is separate from said display;
>
> optimizing said gamma reference voltage levels using means for executing a predetermined algorithm according to a predetermined criteria and data sensed by said at least one sensor, wherein said means for executing said predetermined algorithm is separate from said display to achieve the desired gamma curve; and
>
> storing said gamma reference voltage levels in said gamma reference control capability.

87. The finished television sets imported and/or sold by Defendants Does 1–10 each incorporate Defendant Innolux's LCD panel modules that are made using a method for calibrating LCD to a desired gamma curve to compensate for manufacturing variations by providing a display with electrically reprogrammable and non-volatile gamma reference control capability, testing the display with a sensor, varying the gamma reference voltage levels on columns of the display with a control circuit, optimizing the gamma reference voltage levels with predetermined algorithms, criteria, and data to achieve the desired gamma curve, and storing the gamma reference voltage levels.

88. In violation of 35 U.S.C. § 271(g), Defendants Does 1–10 have directly infringed and continue to infringe one or more claims of the '788 Patent, either literally or by the doctrine of equivalents, by without authority importing into the United States, offering to sell, selling, or

using within the United States television models that incorporate Defendant Innolux's LCD panel modules which are made by a process patented in the '788 Patent.

89. Defendants Does 1–10 have made, and continue to make, unlawful gains and profits from infringing the '788 Patent.

NOTICE

90. Phenix has complied with the marking and notice requirements of 35 U.S.C. § 287, to the extent required. Phenix's predecessor-in-interest, Alta, marked datasheets for its products with patent numbers, including those of the Asserted Patents, even though Alta was not required to comply with the marking and notice requirements of 35 U.S.C. § 287 because all of its sales of covered products were made outside of the United States and foreign sales are not subject to the marking requirements of 35 U.S.C. § 287. Further, Phenix has made reasonable efforts to require all potential licensees of the '305 Patent to mark pursuant to 35 U.S.C. § 287, and the one willing licensee of the Asserted Patents was required to, and did, mark. The marking and notice requirements of 35 U.S.C. § 287 do not apply to the '788 Patent.

ATTORNEYS' FEES

91. According to 35 U.S.C. § 285, Plaintiff is entitled to, and respectfully requests, its reasonable attorneys' fees in this case.

DEMAND FOR JURY TRIAL

92. According to Fed. R. Civ. P. 38(b), Plaintiff respectfully requests a trial by jury on all issues triable by a jury.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for the following relief:

a. that this Court declare that Defendant Innolux has induced the infringement and continues to induce the infringement of one or more claims of the Asserted Patents under 35 U.S.C. § 271(b);

b. that this Court declare that Defendants Does 1–10 have directly infringed and continue to directly infringe one or more claims of the Asserted Patents under 35 U.S.C. §§ 271(a) and (g);

c. that this Court award Plaintiff all damages adequate to compensate Plaintiff for Defendants' above-mentioned infringements; and that interest and costs be assessed against Defendants according to 35 U.S.C. §§ 154(d) and 284;

d. that this Court declare Defendant Innolux's infringement was and is willful, and award treble damages for the period of the willful infringement of the Asserted Patents;

e. that this Court declare this an exceptional case and order that Defendants pay Plaintiff its reasonable attorneys' fees and costs according to 35 U.S.C. § 285;

f. that Defendants, their officers, directors, agents, servants, employees, attorneys, affiliates, divisions, branches, parents, and those persons in active concert or participation with any of them, be permanently restrained and enjoined from infringing the Asserted Patents; and

g. that this Court award any additional relief to Plaintiff that this Court deems just and proper.

October 4, 2024

Respectfully submitted,

By: /s/ Eric H. Findlay

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ATTORNEYS FOR PLAINTIFF PHENIX LONGHORN LLC

CERTIFICATE OF SERVICE

The undersigned counsel hereby certifies that on October 4, 2024, a true and correct copy of the foregoing First Amended Complaint was served on all counsel of record who have appeared in this case via the Court's CM/ECF system.

/s/ Eric H. Findlay
Eric H. Findlay