

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

BISHOP DISPLAY TECH LLC,

Plaintiff,

v.

HEESUNG ELECTRONICS LTD.,

Defendant.

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C.A. No. 2:24-cv-00087-JRG

JURY TRIAL DEMANDED

PLAINTIFF’S FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Bishop Display Tech LLC (“Bishop” or “Plaintiff”) files this First Amended Complaint against Defendant Heesung Electronics Ltd. (“Heesung” or “Defendant”) for infringement of U.S. Patent No. 6,819,377 (the “377 patent”), U.S. Patent No. 6,822,706 (the “706 patent”), U.S. Patent No. 7,583,347 (the “347 patent”), and U.S. Patent No. 7,414,682 (the “682 patent”) (collectively, the “Asserted Patents”).

THE PARTIES

1. Plaintiff is a Texas limited liability company with its principal place of business in the Eastern District of Texas.

2. On information and belief, Heesung Electronics Ltd. is a corporation organized under the laws of Korea. Its principal place of business is at 63, Seongseogongdan-ro 11-gil, Daiseo-gu, Daegu, Korea (704-230).

3. On information and belief, Heesung Electronics Guangzhou Co., Ltd. (“Heesung China”) is a corporation organized under the laws of China. Its principal place of business is at No. 66, Kaitai Road, Science City of Guangzhou High-Tech Industrial Development Zone, China,

510663. On information and belief, Heesung China provides (and has provided) sales, distribution, research, and/or development support in the United States for its parent Heesung, which wholly owns Heesung China. Heesung China is, and has been, an agent of Heesung. At the direction and control of Heesung, U.S.-based and foreign-based sales and/or distribution subsidiaries including, Heesung China, have imported and continue to import Accused Products into the United States and this District.

4. Defendant is engaged (including, as relevant, in the past) in making, using, selling, offering for sale, and/or importing, and/or inducing its respective subsidiaries, affiliates, distributors, suppliers, business partners (e.g., LG Electronics, subsidiaries and affiliates) retail partners, and customers in the making, using, selling, offering for sale, and/or importing throughout the United States, including within this District, the following products accused of infringement (the “Accused Products”):

- Heesung liquid crystal modules comprising thin-film transistor liquid crystal displays (“TFT-LCDs”) (collectively, “LCMs”);
- Heesung TFT-LCDs; and
- Products comprising Heesung TFT-LCDs or LCMs.
- Components of the foregoing.

5. On information and belief, Heesung, including its respective U.S. and foreign-based employees, agents, distributors, affiliates, business partners, retail partners, and customers (which act as part of a global network and supply chain of overseas sales and manufacturing subsidiaries), have operated as agents of one another and vicariously as parts of the same business group to work in concert together and enter into agreements that are nearer than arm’s length. Heesung and its U.S. and foreign-based employees, agents, distributors, affiliates, business

partners, retail partners, and/or customers, individually and/or in concert, conduct business (and have conducted business) in the United States, including importing, shipping, distributing, offering to sell, and selling the Accused Products that incorporate devices, systems, and processes that infringed the Asserted Patents in Texas and this District. *See Trois v. Apple Tree Auction Center, Inc.*, 882 F.3d 485, 490 (5th Cir. 2018) (“A defendant may be subject to personal jurisdiction because of the activities of its agent within the forum state....”); *see also Cephalon, Inc. v. Watson Pharmaceuticals, Inc.*, 629 F. Supp. 2d 338, 348 (D. Del. 2009) (“The agency theory may be applied not only to parents and subsidiaries, but also to companies that are ‘two arms of the same business group,’ operate in concert with each other, and enter into agreements with each other that are nearer than arm’s length.”). For example, Defendant acknowledges that “[i]n addition to its headquarters in Seoul and factory sites in Daegu, South Korea, Heesung has global manufacturing site offices in China, Egypt, Indonesia, Poland, and Vietnam.”¹

6. “Heesung Electronics LTD., founded in 1973, has specialized in the production of electronic parts. Based on the accumulation of knowledge and technological capabilities, the company has expanded its business field in accordance with the rapidly growing LCD market with the effort to continuously make technological developments since embarking in the BLU market in 1999. Currently, the company possesses the world's largest BLU production capacity, and is the source of stable parts supply of LG Display, its main client.” Heesung Electronics has specialized in the production of core display components BLU (Back Light Unit), TSP (Touch Screen Panel) and LED (Light Emitting Diode). Based on our growing expertise and technological skills, we are moving forward as the world’s leading display company. We are operating factories in Daegu and Paju in South Korea, Nanjing, Suzhou and Guangzhou in China and Wroclaw in Poland. We will

¹ *See, e.g., Ex. A at ¶ 7* (Declaration of Chang Woo Han).

expand to include Module and SET business aspects, which includes cell phone and secondary cells from existing BLU and key components, thereby solidifying our status as one of the world's best EMS (Electronics Manufacturing Service) by 2020.² The Defendant describes itself, on its website, as "LG Captive."³ Heesung is affiliated with LG-related companies.⁴

7. On information and belief, LG Electronics Inc. ("LGE") is a publicly traded corporation organized under the laws of Korea. Its principal place of business is at LG Twin Tower 128, Yeoui-daero, Yeongdeungpo-gu, 07336, Seoul, South Korea. LGE makes, uses, sells, imports, and offers to sell the Accused Products in the United States and in this District both directly and through various affiliates, agents, partners, distributors, and other methods of selling and distributing the Accused Products. LGE is a substantial shareholder of LGD.

8. On information and belief, LG Electronics U.S.A., Inc. ("LGEUS"), is a Delaware corporation with a principal place of business at 111 Sylvan Avenue, North Building, Englewood Cliffs, New Jersey 07632. LGEUS is a wholly-owned subsidiary of LGE, and has regular and established places of business within this District at 2153-2155 Eagle Pkwy, Fort Worth, TX 76177 and 14901 Beach St, Fort Worth, TX 76177. LGEUS makes, uses, sells, imports, and offers to sell the Accused Products in the United States and in this District both directly and through various affiliates, agents, partners, distributors, and other methods of selling and distributing the Accused Products.

9. On information and belief, LG Display Co., Ltd. ("LGD") is a corporation organized under the laws of Korea. Its principal place of business is at LG Twin Tower 128, Yeoui-daero, Yeongdeungpo-gu, 07336, Seoul, South Korea. LGD makes, uses, sells, imports, and offers

² Ex. B (http://www.hselec.co.kr/en/company/overview.asp?menu_img=company_new_2021)

³ Ex. C (http://www.hselec.co.kr/en/company/manage.asp?menu_img=company_new_2021)

⁴ See e.g., Ex. D (<https://koreajoongangdaily.joins.com/2020/11/26/business/industry/LG-Group-LG-Chem-LG-U/20201126191200565.html>)

to sell the Accused Products in the United States and in this District both directly and through various affiliates, agents, partners, distributors, and other methods of selling and distributing the Accused Products. LGD specifically calls out Heesung as one of its major suppliers.⁵

10. Through offers to sell, sales, imports, distributions, and other related agreements to transfer ownership of Defendant's Accused Products by and/or to affiliates, distributors, subsidiaries, suppliers, business partners, retail partners, customers, and/or agents, Defendant is operating in (and has operated in) and maintaining (and maintained) a significant business presence in the U.S. and/or through its U.S. subsidiaries or agents, Defendant has done (and does) business in the U.S., the state of Texas, and in the Eastern District of Texas.

JURISDICTION AND VENUE

11. Plaintiff incorporates paragraphs 1 through 10 herein by reference.

12. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

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

14. Venue is proper for Heesung in this District pursuant to 28 U.S.C. §§ 1391(c). Heesung is a foreign entity and may be sued in any judicial district under 28 U.S.C. § 1391(c)(3).

15. This Court has general and specific personal jurisdiction over the Defendant pursuant to due process and/or the Texas Long Arm Statute because, inter alia, (i) the Defendant has done and continue to do business in Texas and/or (ii) the Defendant has, directly and through intermediaries, distributors, agents, and/or others committed and continues to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling

⁵ Ex. E (November 2022 Form 6K, LG Display Co., Ltd.) at p. 11.

Accused Products in Texas, and/or importing Accused Products into Texas, including by Internet sales and/or sales via business partners, retail and wholesale stores, inducing others to commit acts of patent infringement in Texas, and/or committing at least a portion of any other infringements alleged herein. Defendant has placed, and is continuing to place, infringing products into the stream of commerce, via established distribution channels, with the knowledge and/or understanding that such products are sold in Texas, including in this District. Defendant has derived substantial revenues from its infringing acts occurring within Texas and within this District. Defendant has substantial business in this State and District (including, as relevant, in the past), including: (A) conducting at least part of its infringing activities alleged herein; and (B) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from infringing goods offered for sale, sold, and/or imported, and services provided to Texas residents vicariously through and/or in concert with its respective alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers.

16. For example, since at least 2019, Defendant and its agents, including Heesung China, have shipped the Accused Products (e.g., HC320DXN-ABSL3-2141, HC400DUN-VCKNB-214X, HC430DQG-ABHAA 320, HC490EQG-SLXA1-211X, HC490EQG-SLXA1-214X, HC490EQH-SLXA1-211X, HC490EQH-SLXA3-2111, HC490EQH-SLXA3-2141, HC500EQF-VKGA1-214X, HC500EQG-VKMA2-214X, HC550DQB-SLDA1-2141, HC550EQG-SLGD1-2141, HC550EQG-SLMA2-2141, HC550EQH-ABGA1-2144, HC550EQH-SLMA1-2141, HC650DAD-SLCAA-2142, HC650DAE-ABCA1-2142, HC650DQB-ABDA1-2141, HC650DQB-ABDA1-2141, HC650DQB-ABJH1, HC650DQB-SLUA5-2123, HC650MAD-SLDA1-2122, HC650MQB-ABDA1-2141, HC700DQN-VHXL7-21SX, HC700EQN-VHSR3-211X, HC750MAD-SLDA2-212X, HC820DQF-VCXR1-211X,

HC820DQF-VCXR1-214X, HC820DQF-VCXR2-211X, HC860DQF-SLUR2-2142, NC650DQB-ABJH1) and/or components of the Accused Products to the United States to various LG-related entities, such as LG Electronics Do Brasil LTDA, LX International America, Inc.,⁶ and LG International America, Inc.⁷

17. In addition, Defendant has employees in the United States.⁸

18. In addition, Defendant is aware that the Accused Products are shipped to, and used in, the United States given that they obtain UL Solutions certifications for the Accused Products so that they comply with the laws and regulations of the United States.⁹ For example, Accused Product LG TV model no. 49SM8600PUA includes Accused Product Heesung LCM model no. HC490EQH-SLXA1-211X, which includes a UL Solutions mark indicating compliance with the laws and regulations of the United States:¹⁰



⁶ Name change in 2021 from LG International Corp. *See e.g.*, Ex. F (<http://www.lgicorp.com/en/about>) And LG owns the trademarks for the new entity. *See e.g.*, Ex. G (<https://news.koreaherald.com/view.php?ud=20210305000489>)

⁷ *See e.g.*, Ex. H (Import Genius report from <https://www.importgenius.com/>)

⁸ *See e.g.*, Ex. I (LinkedIn Heesung employees)

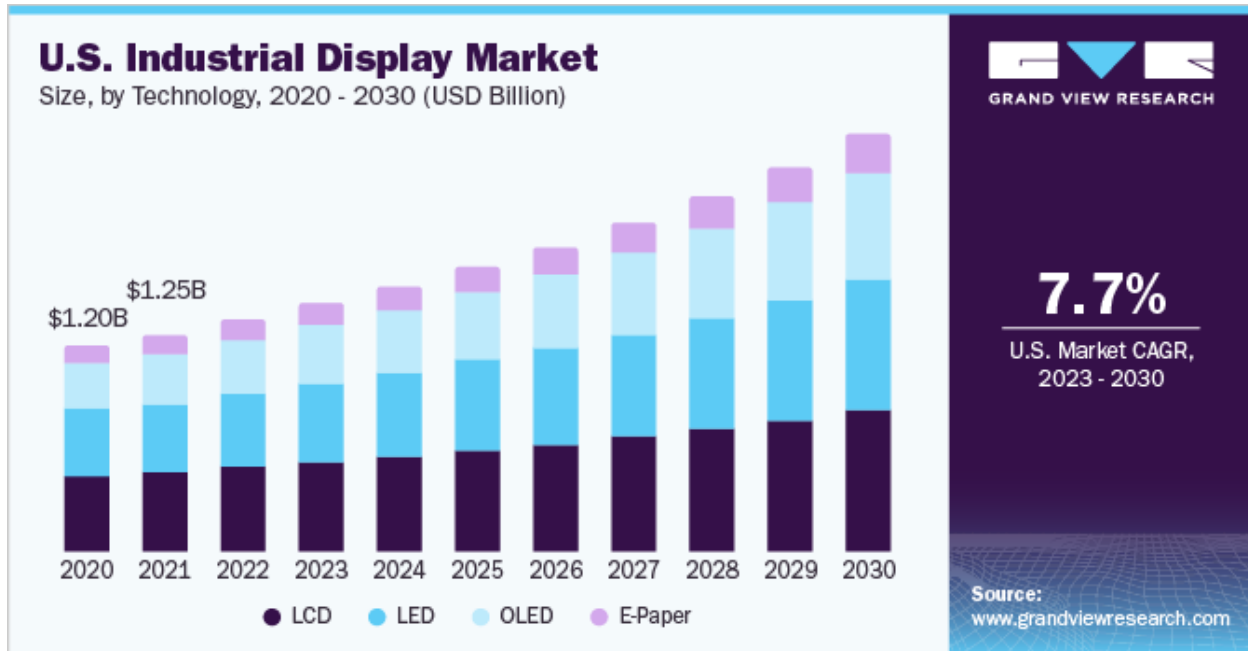
⁹ Ex. J (<https://markshub.ul.com/north-america-geography>)

¹⁰ Ex. J (<https://markshub.ul.com/north-america-geography>)



The label on the TV indicates that the LG TV 49SM8600PUA was manufactured in Mexico. Moreover, shipping records demonstrate that Defendant knowingly ships the Accused Products to Hidalgo, Texas.¹¹ Also, given the Defendant's long history as one of LG Display's and LG Electronics main suppliers of display components, Defendant has knowledge that both LG Display and LG Electronics have substantial operations in the United States, as well as substantial market share in the United States market for LCD displays; Defendant is well-aware that the Accused Products are destined for the United States and Texas (e.g., via the LG-related entities' supply chains, distributors, retailers, etc.). Indeed, the U.S. market for the Accused Products is substantial:

¹¹ See Ex. K (<https://panjiva.com/Heesung-Electronics-Guangzhou-Co-Ltd/29751190>)



19. Further, Defendant’s Chairman--Koo Bon-sik—according to Forbes Magazine¹² “runs LG affiliate Heesung Electronics with his brother Koo Bon-neung,” and “Heesung is LG’s largest supplier of backlights, which are used to illuminate LCD displays.”

20. This Court has personal jurisdiction over Defendant, directly or through agents, intermediaries, distributors, importers, business partners, customers, subsidiaries, and/or consumers. Through direction and control (including, as relevant, in the past) of such subsidiaries, affiliates, business partners, distributors, retail partners, agents, and/or customers, Defendant has committed acts of direct and/or indirect patent infringement within Texas, and elsewhere within the United States, giving rise to this action and/or have established minimum contacts with Texas such that personal jurisdiction over Defendant would not offend traditional notions of fair play and substantial justice. Upon information and belief, Defendant compensate its U.S.-based subsidiaries and/or agents for their sales and/or technical support services in the United States. As such,

¹² See e.g., Ex. L (<https://www.forbes.com/profile/koo-bon-sik/>)

Defendant has a direct financial interest in its U.S.-based subsidiaries and/or agents, and/or partners, distributors, or customers, and vice versa.

21. Personal jurisdiction is proper because Defendant has committed acts of infringement in this District. This Court has personal jurisdiction over Defendant because, *inter alia*, this action arises from activities Defendant purposefully directed towards the State of Texas and this District.

22. Exercising personal jurisdiction over Defendant in this District would not be unreasonable given Defendant's contacts in this District, the interest in this District of resolving disputes related to products sold herein, and the harm that would occur to Plaintiff who resides in this District.

23. In addition, Defendant has knowingly induced infringement within this District by advertising, marketing, offering for sale and/or selling devices pre-loaded with infringing functionality within this District, to consumers, customers, manufacturers, distributors, resellers, partners, end users, and/or LGE, LGEUS, and/or LGD, and providing instructions, user manuals, advertising, and/or marketing materials which facilitate, direct or encourage the use of infringing functionality with knowledge thereof.

24. For example, Defendant's website advertises the type of components and Accused Products that are infringing in this case:¹³

¹³ See e.g., Ex. M (http://www.hselec.co.kr/en/product/blu.asp?menu_img=product_new) and Ex. N (http://www.hselec.co.kr/en/product/blu1.asp?menu_img=product_new&height=300)

About BLU

This introduces the product and describes the features of the luminous source of TFT-LCD.

01 LCD(Liquid Crystal Display)

As a passive component, it is a DISPLAY that uses liquid that is in the intermediate phase between solid and liquid. It controls the brightness of the screen by adjusting how much the amount of light, emitted by the backlight, passes through by changes in the voltage

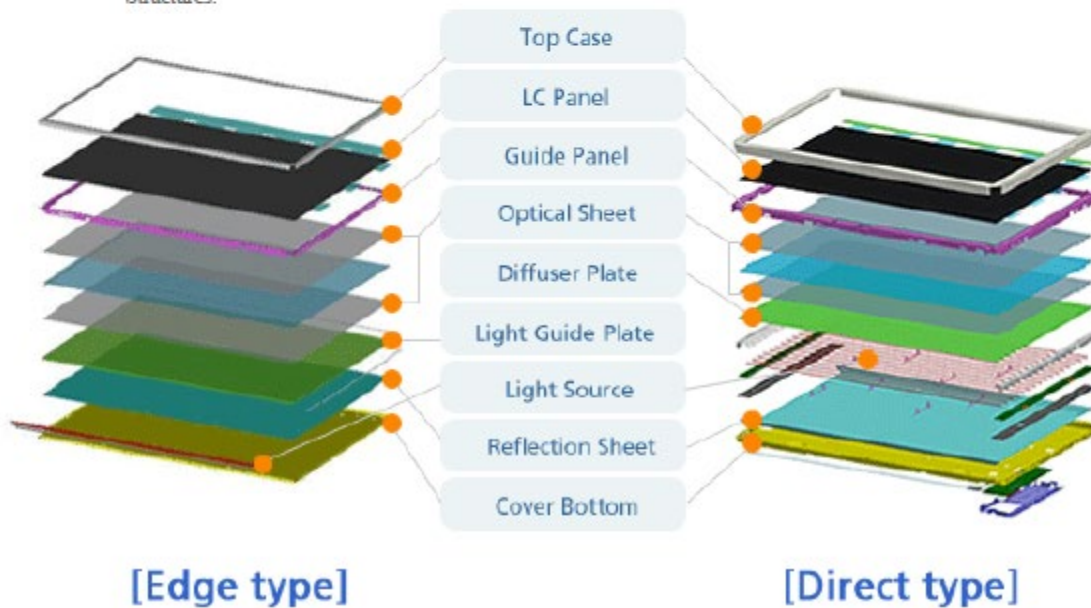
02 BLU (Back Light Unit)

Located in the back of the liquid crystal panel, which has no self-luminescent capabilities, BLU is luminous equipment that emits uniform planar light in the direction of the panel.

03 BLU Types and Structures

Types: categorized into Edge Type, where the light source is located on the side of the Light Guide Plate, and Direct Type, where the light source is located on the bottom of the Diffuser Plate.

Structures:



25. Personal jurisdiction also exists specifically over Defendant because Defendant, directly or through affiliates, subsidiaries, business partners, agents, and/or intermediaries, transact business (or have transacted business) in this State or purposefully directed business at this State by making, importing, offering to sell, selling, and/or having sold infringing products within this State and District or purposefully directed at this State or District.

26. To the extent Defendant is not subject to jurisdiction in any state's court of general jurisdiction, exercising jurisdiction over Defendant in this State and this District would be consistent with due process and this State's long-arm statute and under national contacts in light of the facts alleged in this Complaint.

27. In addition, Defendant, directly or through affiliates, subsidiaries, agents, and/or intermediaries, have placed infringing products into the stream of commerce knowing they would be sold and used in Texas, and economically benefit from the retail sale of infringing products in this State, including in this District.

28. Defendant has advertised its infringing products to customers in Texas and this District through its website.

29. On information and belief, Defendant controls (or has controlled) or otherwise direct (or directed) and authorizes (or authorized) all activities of its U.S.-based (or foreign-based with the knowledge that the Accused Products are directed to the United States and this District) agents and/or sales and/or distribution subsidiaries. Such directed and authorized activities include the U.S.-based (and/or foreign-based) subsidiaries' and/or agents having used, offered for sale, sold, and/or imported the Accused Products, their components, processes, and/or products containing the same that incorporated the fundamental technologies and claims of the Asserted Patents. Defendant's U.S.-based (and/or foreign-based) sales and/or distribution subsidiaries and/or agents were authorized to import, distribute, sell, or offer for sale the Accused Products on behalf of Defendant. For example, Defendant researched, designed, developed, and manufactured the Accused Products, and then directed its U.S.-based (and/or foreign-based) sales subsidiaries, distributors, business partners agents, and/or others to import, distribute, offer for sale, and sell the Accused Products in the United States. *See, e.g., United States v. Hui Hsiung*, 778 F.3d 738, 743

(9th Cir. 2015) (finding that the sale of infringing products to third parties rather than for direct import into the U.S. did not “place [defendants’] conduct beyond the reach of United States law [or] escape culpability under the rubric of extraterritoriality”). Thus, Defendant conducted infringing activities, and Defendant’s U.S.-based (and foreign-based) sales subsidiaries and/or distributors and/or agents and/or business partners conducted infringing activities on behalf of Defendant.

30. On information and belief, Defendant’s’ U.S.-based (and/or foreign-based) sales and/or distribution subsidiaries’ and/or agents’ presence (including in the past) in the United States gave Defendant substantially the same business advantages that it would have enjoyed if Defendant conducted its business through its own offices or paid agents. Defendant’s U.S.-based (and/or foreign-based) sales subsidiaries and/or distributors and/or agents were authorized to import, distribute, sell, and offer for sale Defendant’s products, including the Accused Products, as well as their components and processes related to the same, on behalf of Defendant. For example, Defendant’s U.S.-based (and/or foreign-based) sales subsidiaries and/or agents operated within Defendant’s global network and supply chain of sales. In the U.S., including within the Eastern District of Texas, the Accused Products, as well as their components and processes related to the same, were imported, distributed, offered for sale, and/or sold.

31. Via Defendant’s alter egos, agents, business partners, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers that maintained a business presence, operating in, and/or residing in the U.S., Defendant’s products, including products and processes accused of infringing the Asserted Patents, are or have been widely distributed and sold in Texas including within this District. *See Litecubes, LLC v. Northern Light Products, Inc.*, 523 F.3d 1353, 1369-70 (Fed. Cir. 2008) (“[T]he sale [for purposes of § 271] occurred at the location of the

buyer.”); *see also Semcon IP Inc. v. Kyocera Corp.*, No. 2:18-cv-00197-JRG, 2019 WL 1979930, at *3 (E.D. Tex. May 3, 2019) (denying accused infringer’s motion to dismiss because plaintiff sufficiently plead that purchases of infringing products outside of the United States for importation into and sales to customers in the U.S. may constitute an offer to sell under § 271(a)).

32. On information and belief, Defendant has placed infringing products and/or products that practiced infringing processes into the stream of commerce via established distribution channels comprising at least its subsidiaries, business partners, affiliates, distributors, and/or agents or customers, with the knowledge and/or intent that those products were imported, used, offered for sale, and sold in the United States and Texas, including in this District. As a result, Defendant has, vicariously through and/or in concert with alter egos, agents, intermediaries, distributors, affiliates, importers, customers, subsidiaries, and/or consumers, placed the Accused Products into the stream of commerce via established distribution channels with the knowledge and/or intent that those products were sold and continue to be sold in the United States and Texas, including in this District.

33. The minimum contacts test is satisfied because Defendant delivers its products (*e.g.*, TFT-LCDs and/or LCMs) into the stream of commerce with the expectation that they will be purchased by consumers in Texas. *Beverly Hills Fan Co. v. Royal Sovereign Corp.*, 21 F.3d 1558, 1566 (Fed. Cir. 1994) (quoting *World-Wide Volkswagen Corp. v. Woodson*, 100 S. Ct. 559 (1980)). For example, and on information and belief (and as provided for herein), Defendant imports, and/or has imported and/or shipped infringing Accused Products into the United States through and with its supply chain partner and/or customer LGE (including, but not limited to, LGE subsidiaries and/or affiliates and/or agents, such as LX International (America), Inc, LG International, LG Display, etc.). Defendant supplies its Accused Products (*e.g.*, TFT-LCDs and/or

LCMs) to LG (*e.g.*, LG Electronics in Brazil and Mexico and LG Display in China) knowing that its accused products will be incorporated into accused LG downstream display products (*e.g.*, LG TVs, laptops, monitors) that are offered for sale, sold, imported, and/or used by LG (*e.g.*, LGEUS), Best Buy Walmart, and/or Amazon in the United States and this District.¹⁴ Indeed, LG TV model no. 49SM8600PUA, which incorporates Heesung LCM model no. HC490EQH-SLXA1-211X, was manufactured in Mexico where Defendant admits to shipping its Accused products to LGE. The Accused Products were (and are) directed to this District and were (and are) available for purchase in this District via retailers, such as LG, Best Buy, Walmart, and Amazon.¹⁵ The lengthy and complex distribution chain does not insulate Defendant from suit in Texas.

34. Defendant intentionally placed its TFT-LCDs and/or LCMs in a distribution chain flowing from Asia to the United States, Texas, and this District. For example, Defendant intentionally places its TFT-LCDs and/or LCMs in a distribution or supply chain knowing that such TFT-LCDs and or LCMs (*e.g.*, Heesung LCM model no. HC490EQH-SLXA1-211X) ultimately arrive in the United States market and this District through, at least, LG monitors, laptops, and/or TVs (*e.g.*, LG TV model no. 49SM8600PUA). Defendant, through its sales of TFT-LCDs and/or LCMs for application in LG downstream display devices, such as LG TVs, monitors, and/or laptops knew (or should have reasonably known) the likely destination of the products, where Defendant's conduct and connections with Texas and this District were such that Defendant should have reasonably anticipated being brought to court in this District. Indeed, Defendants'

¹⁴ See, *e.g.*, Ex. A at ¶ 12 (Declaration of Chang Woo Han).

¹⁵ See, *e.g.*, Ex. O (<https://www.lg.com/us/tvs/lg-49SM8600PUA-4k-uhd-tv>); Ex. P (<https://www.bestbuy.com/site/lg-49-class-nano-8-series-led-4k-uhd-smart-webos-tv/6334081.p?skuId=6334081>); Ex. Q (<https://web.archive.org/web/20190920074736/https://www.walmart.com/ip/LG-49-Class-8-Series-4K-2160P-Ultra-HD-Smart-LED-HDR-NanoCell-TV-49SM8600PUA-2019-Model/865008594>); Ex. R (<https://www.amazon.com/LG-49SM8600PUA-Ultra-Smart-NanoCell/dp/B07PQ96G5J>) (evidencing that LG, Best Buy, Walmart, and Amazon sold Accused Product LG TV model no. 49SM8600PUA, which includes Accused Product Heesung LCM model no. HC490EQH-SLXA1-211X, to customers in the United States, including customers in this District.).

TFT-LCDs and or LCMs include a UL Solutions mark indicating compliance with the laws and regulations of the United States further evidencing that Defendant knew or should have known that its products were destined for the United States and this District.

35. Moreover, Defendant is the assignee of a substantial number of United States patents and patent applications, including use of U.S. patent counsel to procure such patents in their name.¹⁶ Thus, Defendant sought out the United States market, evidenced by seeking patent protection in the United States.

36. Also by way of example, and on information and belief, Defendant has (and have had) U.S. based (and/or foreign-based) employees that work in connection with the Accused Products, including, but not limited to, engineers who have identified Defendant as an “LG Partner.”

37. Defendant has and had a commercial relationship with LG affiliated entities, and Defendant access the Texas consumer-electronics market vis-à-vis that relationship. Given Defendant’s relationship with LG, which is a behemoth for display products (e.g., TVs, laptops, and monitors) in the United States market, jurisdiction in this Court is fair and reasonable.

38. In the alternative, the Court has personal jurisdiction over Defendant under Federal Rule of Civil Procedure 4(k)(2), because the claims for patent infringement in this action arise under federal law, Defendant is not subject to the jurisdiction of the courts of general jurisdiction of any state and exercising jurisdiction over Defendant is consistent with the U.S. Constitution. Exercising jurisdiction comports with due process given Defendant’s purposeful availment from the sales of LG’s display products (e.g., LG TVs, laptops, and monitors) incorporating Defendant’s TFT-LCDs and/or LCMs sold in the United States and this District.

¹⁶ See e.g., Ex. S (United States Patent No. 10,429,033), prosecuted by the law firm Hauptman Ham LLP with offices in the United States.

COUNT I
(Infringement of U.S. Patent No. 6,819,377)

39. Plaintiff incorporates paragraphs 1 through 38 herein by reference.

40. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

41. Plaintiff is the owner of the '377 patent with all substantial rights to the '377 patent including the exclusive right to enforce, sue, and recover damages for past infringement.

42. The '377 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

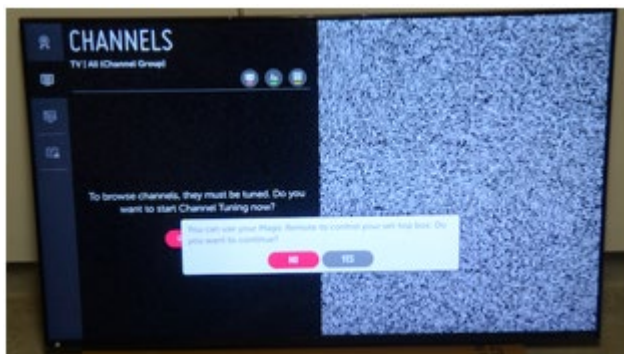
DIRECT INFRINGEMENT (35 U.S.C. §271(a))

43. Defendant has infringed literally, and/or under the Doctrine of Equivalents, one or more claims of the '377 patent in this District and elsewhere in Texas and the United States.

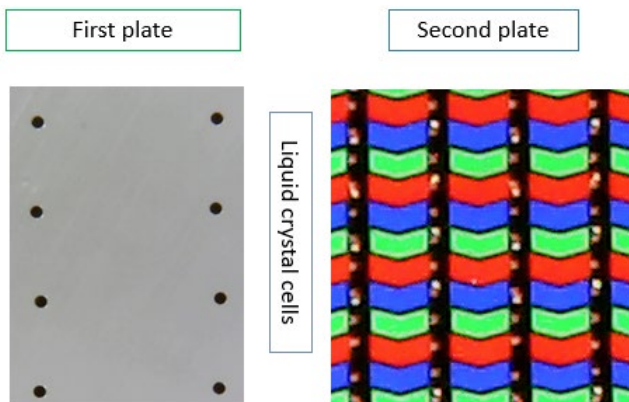
44. Defendant directly infringed the '377 patent via 35 U.S.C. § 271(a) by having made, offered for sale, sold, used, tested, and/or imported those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the '377 patent. For example, Defendant, either by itself and/or via an agent, directly infringed the '377 patent by offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the '377 patent, to and/or via its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendant sold and made some Accused Products outside of the United States, delivered those products to its customers, agents, distributors, and/or subsidiaries in the United States, or in the case that it delivered the Accused Products outside of the United States it did so intending and/or knowing that those products were destined for the United States and/or

designed those products for sale in the United States, thereby directly infringing the '377 patent. See, e.g., *Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013).

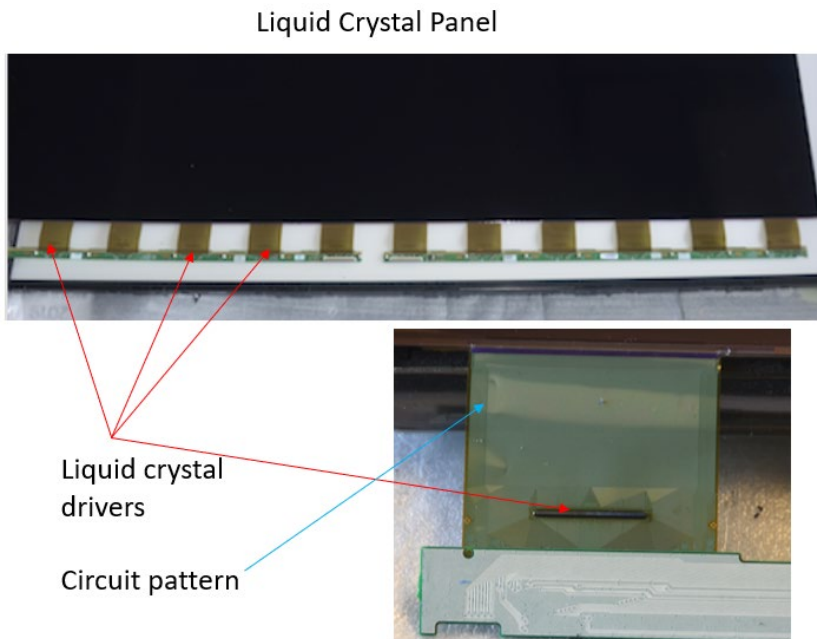
45. For example, Defendant infringed claim 1 of the '377 patent. The products accused of infringing the '377 patent comprise a liquid crystal display device. For example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC490EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display device:



46. The products accused of infringing the '377 patent comprise a liquid crystal panel comprising liquid crystal cells, a first plate disposed on a displaying side of the cells, and a second plate disposed on a reverse side of the cells. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

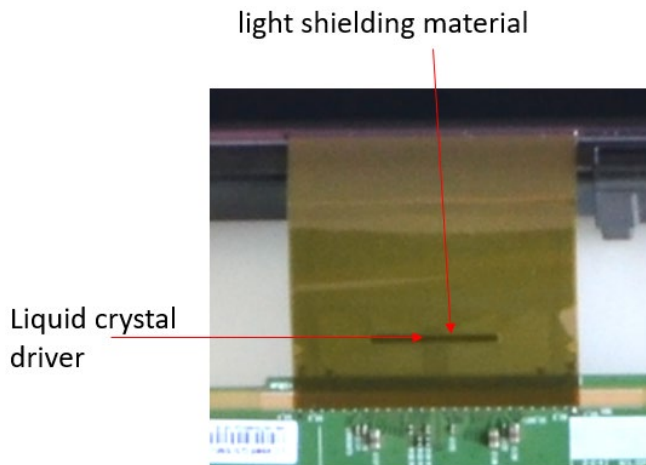


47. The products accused of infringing the '377 patent comprise a liquid crystal driver electrically connected with the liquid crystal panel through a circuit pattern. For example, examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



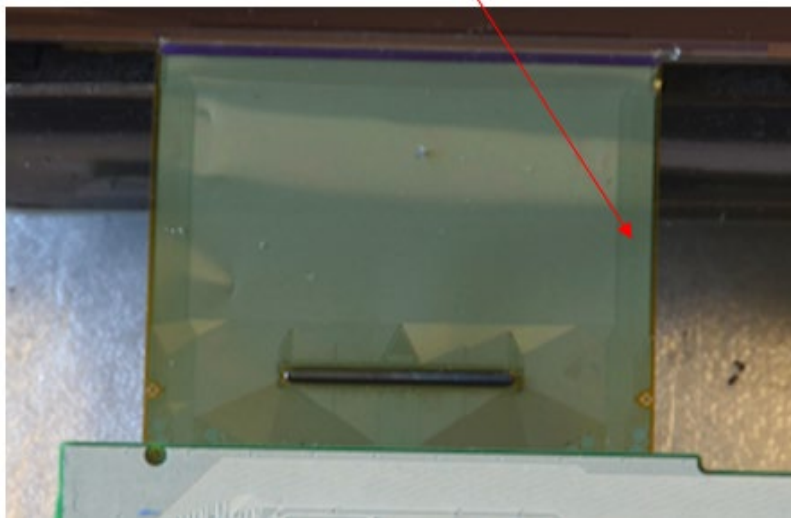
48. The products accused of infringing the '377 patent comprise a light shielding material disposed adjacent said liquid crystal driver so as to prevent an outer light from being

incident to said liquid crystal driver. An examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

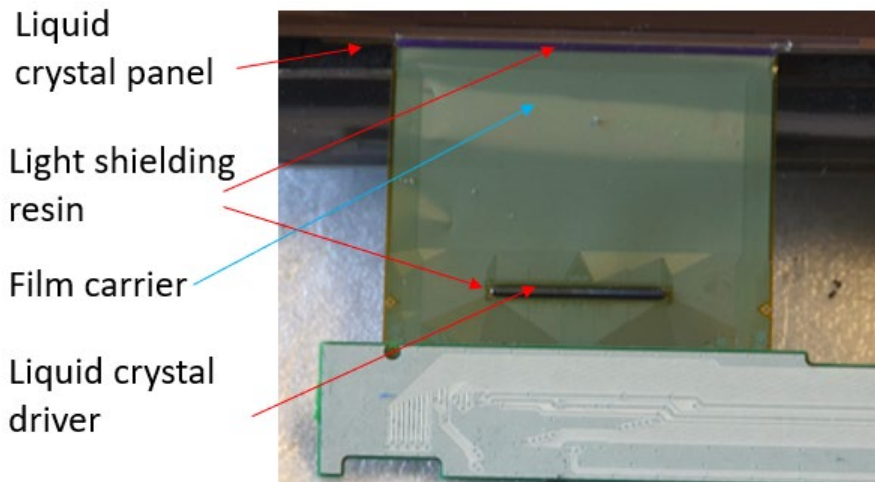


49. The products accused of infringing the '377 patent comprise a film carrier comprising said circuit pattern formed on a resin film. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

Film carrier comprising circuit pattern
formed on resin film



50. The products accused of infringing the '377 patent are configured such that the liquid crystal driver is mounted on the liquid crystal panel by a light shielding resin disposed on said liquid crystal panel so as to cover one end of the film carrier and a side surface of said liquid crystal driver. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



51. Plaintiff has been damaged as a result of Defendant's infringing conduct described in this Count. Defendant is, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for Defendant's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

52. Plaintiff has complied with the requirements of 35 U.S.C. § 287, to the extent necessary and/or applicable, and is entitled to collect pre- and post-filing damages for Defendant's infringements of the '377 patent.

COUNT II
(Infringement of U.S. Patent No. 6,822,706)

53. Plaintiff incorporates paragraphs 1 through 52 herein by reference.

54. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

55. Plaintiff is the owner of the '706 patent with all substantial rights to the '706 patent including the exclusive right to enforce, sue, and recover damages for past infringement.

56. The '706 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. §271(a))

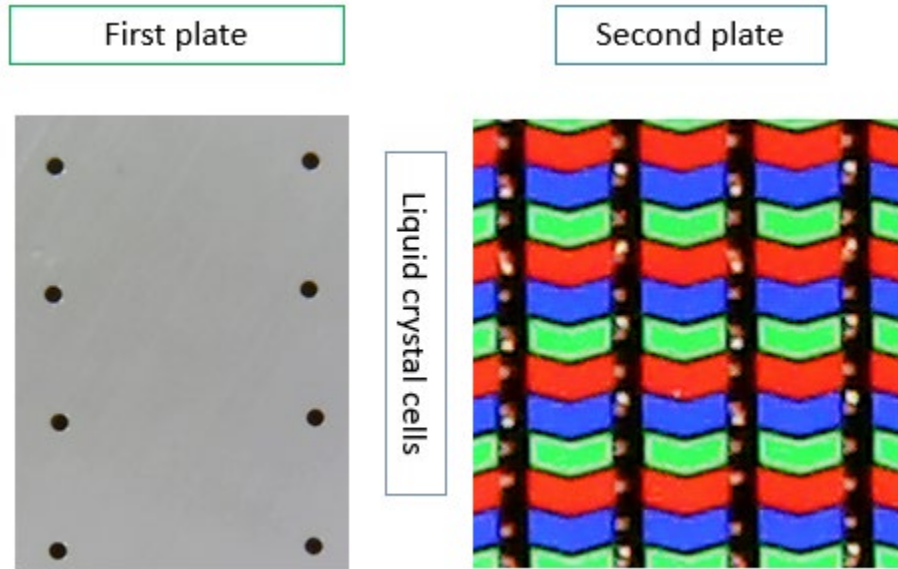
57. Defendant has infringed literally, and/or under the Doctrine of Equivalents, one or more claims of the '706 patent in this District and elsewhere in Texas and the United States.

58. Defendant directly infringed the '706 patent via 35 U.S.C. § 271(a) by having made, offered for sale, sold, used, tested, and/or imported those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the '706 patent. For example, Defendant, either by itself and/or via an agent, directly infringed the '706 patent by offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the '706 patent, to and/or via its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendant sold and made some Accused Products outside of the United States, delivered those products to its customers, agents, distributors, and/or subsidiaries in the United States, or in the case that it delivered the Accused Products outside of the United States it did so intending and/or knowing that those products were destined for the United States and/or designed those products for sale in the United States, thereby directly infringing the '706 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013).

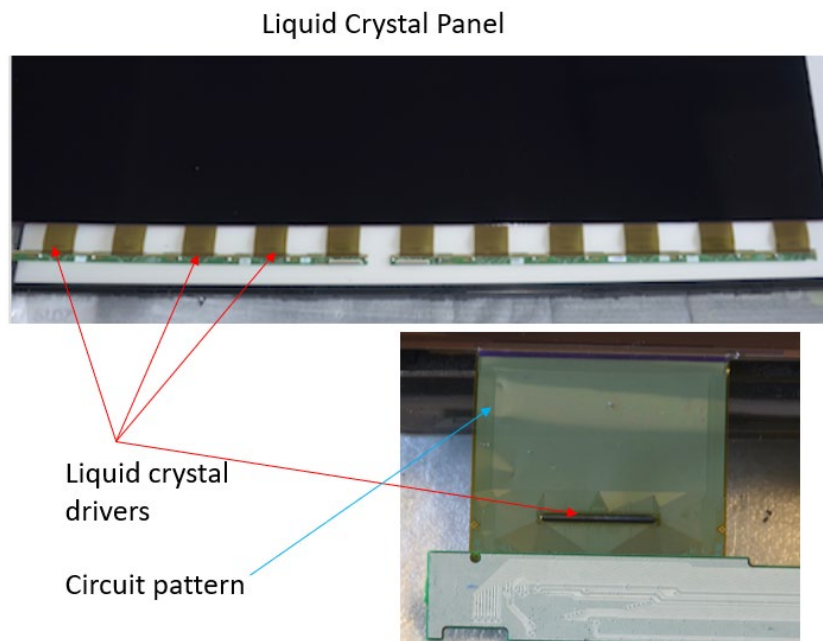
59. For example, Heesung infringed claim 1 of the '706 patent. The products accused of infringing the '706 patent comprise a liquid crystal display device. For example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC490EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display device:



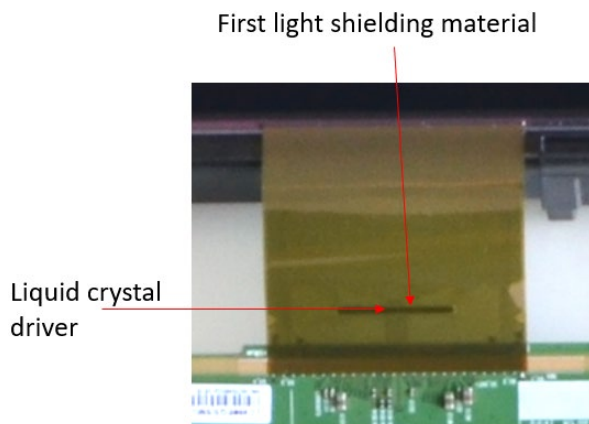
60. The products accused of infringing the '706 patent comprise a liquid crystal device comprising liquid crystal cells, a first plate disposed on a displaying side of the cells, and a second plate disposed on a reverse side of the cells. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



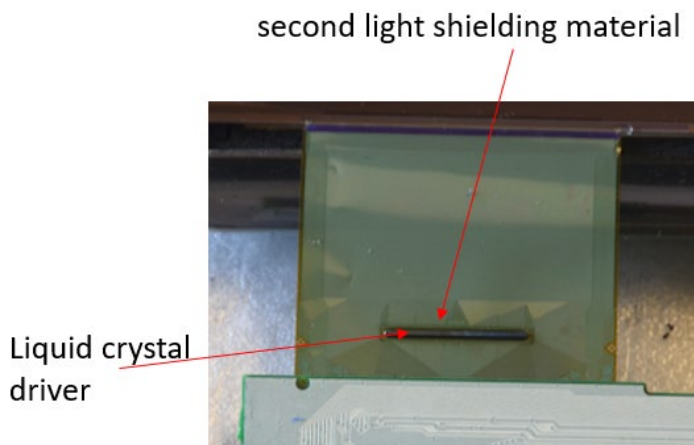
61. The products accused of infringing the '706 patent comprise a liquid crystal driver electrically connected with the liquid crystal panel through a circuit pattern. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



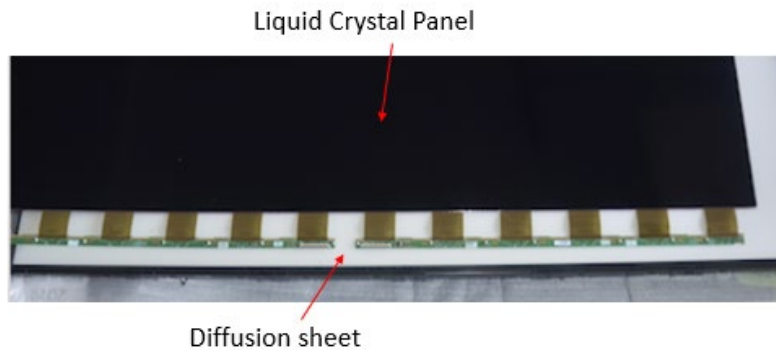
62. The products accused of infringing the '706 patent comprise a first light shielding material disposed adjacent a face of said liquid crystal driver so as to prevent an outer light from being incident to said liquid crystal driver. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



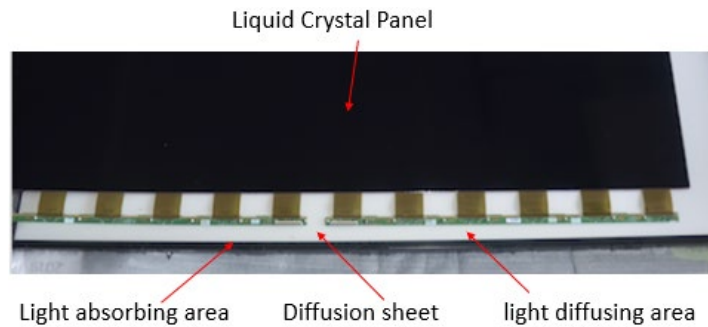
63. The products accused of infringing the '706 patent comprise a second light shielding material disposed adjacent an opposite face of said liquid crystal driver so as to prevent an outer light from being incident to said liquid crystal driver. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



64. The products accused of infringing the '706 patent comprise a diffusion sheet located adjacent said liquid crystal display panel. An examination of Heesung LCM model no. HC490EQH-SLXA1-211X, which includes the LGD LCD (model no. not identified on device), demonstrates this:



65. The products accused of infringing the '706 patent are configured such that the diffusion sheet comprises a light diffusing area and a light absorbing area located on the outer periphery thereof, the light diffusing area serving to diffuse illumination light from a light source to the liquid crystal display panel, and the light absorbing area serving to absorb the extraneous light incident on said liquid crystal driver. For example, an examination of Heesung LCM model no. HC490EQH-SLXA1-211X, which includes the LGD LCD (model no. not identified on device), demonstrates this:



66. At a minimum, LGE, LGEUS, and LGD have known about the '706 patent since at least February 8, 2017, when LGD received notice of their infringement from a former patent owner Godo Kaisha IP Bridge 1, and at least by March 7, 2017 when LGD replied to the notice letter. Moreover, Defendant, based on information and belief, was on notice of the '706 patent from at least the foregoing dates as a result of indemnity, contractual, and/or its business relationship with LGE, LGEUS, and/or LGD and did, as a result, receive actual or constructive notice and/or knowledge of the '706 patent. On information and belief, display manufacturers, such as LGE and LGD, once placed on notice of infringement, would, as prudent businesses, provide that same notice to suppliers and component suppliers.¹⁷

INDIRECT INFRINGEMENT (35 U.S.C. §271(b))

67. On information and belief, since at least the above-mentioned dates when Defendant was on notice of its infringement, Defendant actively induced, under U.S.C. § 271(b), distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers to directly infringe one or more claims of the '706 patent by making, using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Defendant did so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '706 patent. Defendant has caused and/or intended to cause, and took affirmative steps to induce infringement by distributors, retailers, customers, subsidiaries,

¹⁷ See e.g., *Nat'l Inst. for Strategic Tech. Acquisition & Commercialization v. Nissan of N. Am.*, No. 11-11039, 2012 U.S. Dist. LEXIS 117941, at *14 (E.D. Mich. Aug. 21, 2012) (“Defendants argue the sheer implausibility of an automotive supplier informing its customers that it is supplying infringing products to them. Without a fully developed factual record however, the court cannot conclude that it is unreasonable to infer that defendants Toyota and Nissan received pre-suit knowledge of the patents-in-suit from their suppliers. A reasonable inference can be made that a supplier of an accused infringing instrumentality, with direct notice of the patents-in-suit, discussed said patents and the likelihood of infringement of these patents with its customers. It is also a reasonable inference that a Japanese parent company, Honda Motor Company, which received NISTAC's letter concerning the patents-in-suit, would communicate with its United States subsidiary, American Honda, about these patents and potential infringement thereof.”).

importers, testing outfits, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. As just one example, Defendant actively induced distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers that have purchased, imported, used, offered for sale, and/or sold Accused Products in the U.S. by marking the Accused Products with UL Solutions labels indicating compliance with U.S. laws and regulations for the Accused Products destined and intended to be sold in the U.S. <https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and-significance/marks-for-north-america/>. In another example, Defendant actively induced distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers that have purchased, imported, used, offered for sale, and/or sold to include the accused Heesung TFT-LCDs and/or LCMs that already comply with U.S. laws and regulations via UL Solutions in accused end products (e.g., TVs, monitors, laptops, tablets, mobile phones) because it allows for such entities to streamline the UL Solutions certification process for such end products if the Heesung TFT-LCD and/or LCMs have already been certified by UL Solutions. <https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and-significance/marks-for-north-america/>. Defendant specifically designs, develops, manufactures, sells, supplies its accused TFT-LCDs and/or LCMs for application in LG's display products (e.g., LG TVs, laptops, monitors, tables, and/or mobile phones), including by obtaining UL Solutions

certificates for compliance with U.S. laws and regulations, where Defendant induces LG (e.g., LGE and/or LGEUS) to offer for sale, sell, import, and/or use the accused LG display products incorporating Defendants' infringing TFT-LCDs/LCMs in the United States and this District. Defendant undertakes these activities with knowledge or at least willful blindness to LG's significant sales of the products including Defendant's TFT-LCDs/LCMs in the United States and in this District.

68. On information and belief, despite having knowledge of the '706 patent and its infringement, Defendant specifically intended for others to import and sell products accused of infringing the '706 patent. For example, Defendant specifically intended for its U.S.-based subsidiaries or customers to import and sell products accused of infringing the '706 patent. On information and belief, Defendant instructed and encouraged the importers or customers to import and/or sell products accused of infringing the '706 patent. On information and belief, the purchase and sale agreements between Defendant and the importers or customers provide such instruction and/or encouragement. Further, on information and belief, Defendant's U.S.-based (and/or foreign-based) subsidiaries, affiliates, employees, agents, and/or related companies existed for inter alia, the purpose of importing and selling products accused of infringing the '706 patent in the United States.

69. Upon information and belief, despite having knowledge of the '706 patent and knowledge that each was directly and/or indirectly infringing one or more claims of the '706 patent, Defendant nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. Defendant's infringing activities relative to the '706 patent have been 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.

70. Plaintiff has been damaged as a result of Defendant's infringing conduct described in this Count. Defendant is, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for Defendant's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

71. Plaintiff has complied with the requirements of 35 U.S.C. § 287, to the extent necessary and/or applicable, and is entitled to collect pre- and post-filing damages for Defendant's infringements of the '706 patent.

COUNT III
(Infringement of U.S. Patent No. 7,583,347)

72. Plaintiff incorporates paragraphs 1 through 71 herein by reference.

73. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

74. Plaintiff is the owner of the '347 patent with all substantial rights to the '347 patent including the exclusive right to enforce, sue, and recover damages for past infringement.

75. The '347 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

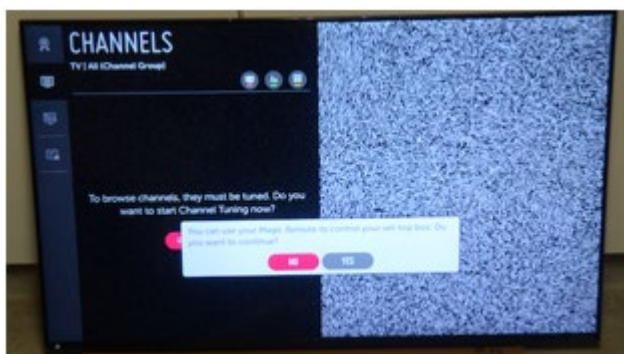
DIRECT INFRINGEMENT (35 U.S.C. §271(a))

76. Defendant has infringed literally, and/or under the Doctrine of Equivalents, one or more claims of the '347 patent in this District and elsewhere in Texas and the United States.

77. Defendant directly infringed the '347 patent via 35 U.S.C. § 271(a) by having made, offered for sale, sold, used, tested, and/or imported those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and

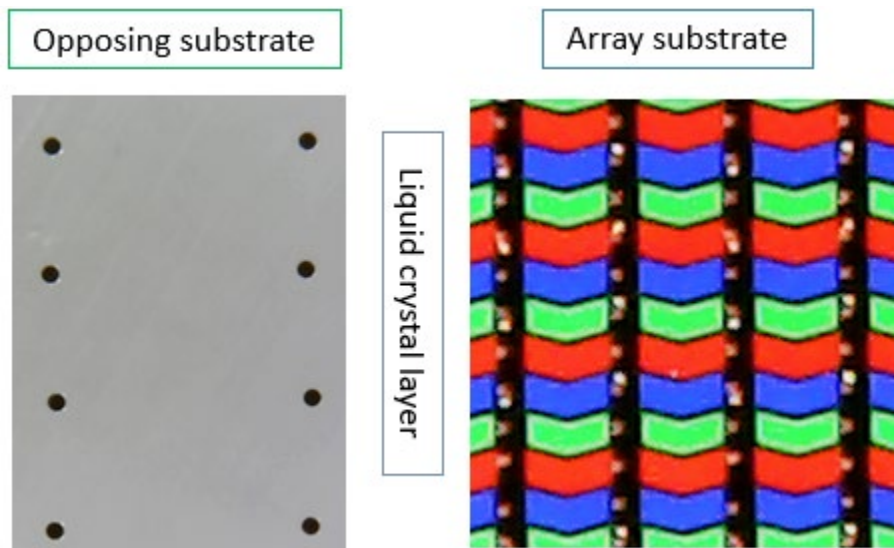
claims of the '347 patent. For example, Defendant, either by itself and/or via an agent, directly infringed the '347 patent by offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the '347 patent, to and/or via its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendant sold and made some Accused Products outside of the United States, delivered those products to its customers, agents, distributors, and/or subsidiaries in the United States, or in the case that it delivered the Accused Products outside of the United States it did so intending and/or knowing that those products were destined for the United States and/or designed those products for sale in the United States, thereby directly infringing the '347 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013).

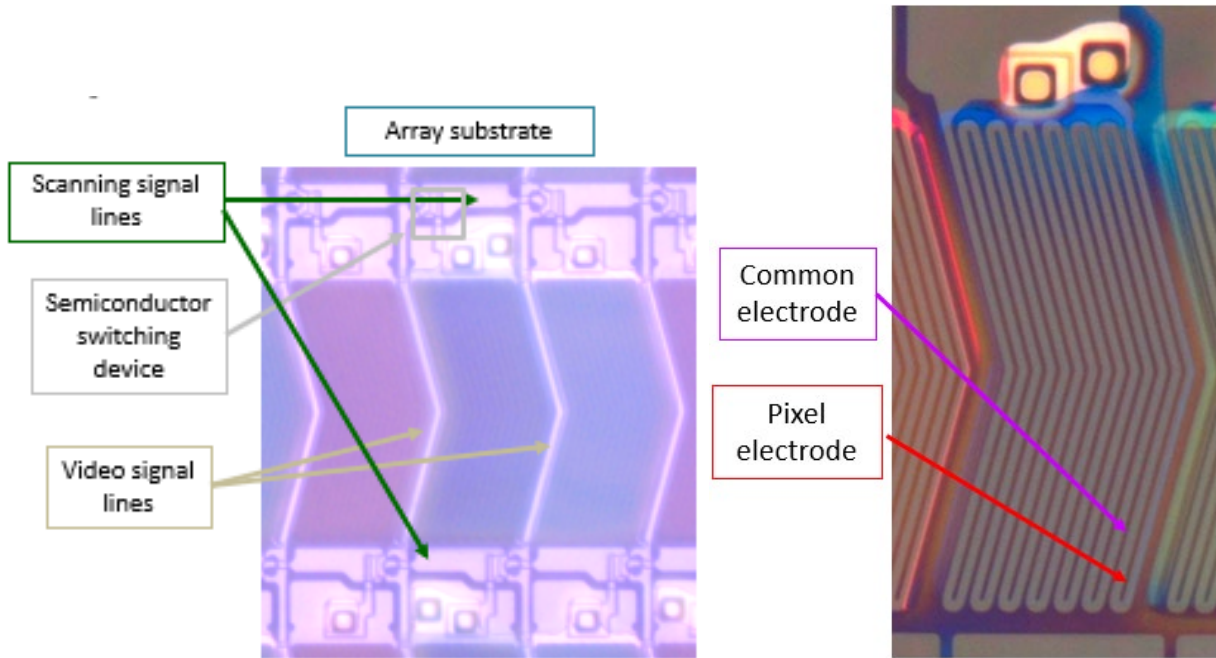
78. For example, Defendant infringed claim 1 of the '347 patent. The products accused of infringing the '347 patent comprise a liquid crystal display. For example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC490EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display:



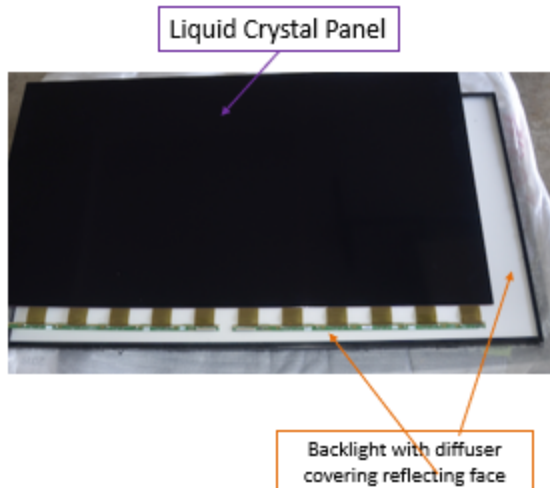


79. The products accused of infringing the '347 patent comprise a liquid crystal panel including an array substrate having an upper surface on which a common electrode, a pixel electrode, a scanning signal line, a video signal line, and a semiconductor switching device are formed, an opposing substrate disposed so as to be opposite to the upper surface of the array substrate, and a liquid crystal layer disposed between the array substrate and the opposing substrate. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

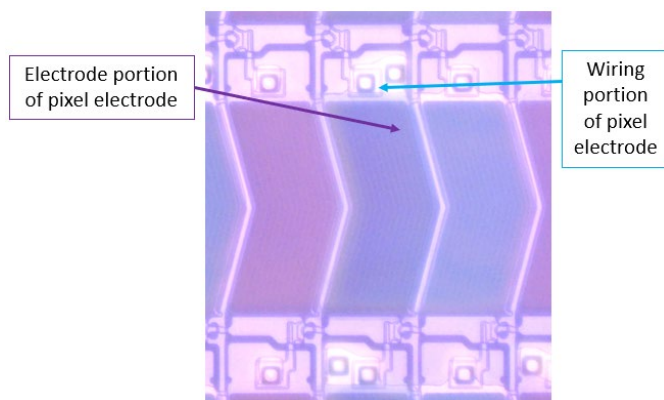




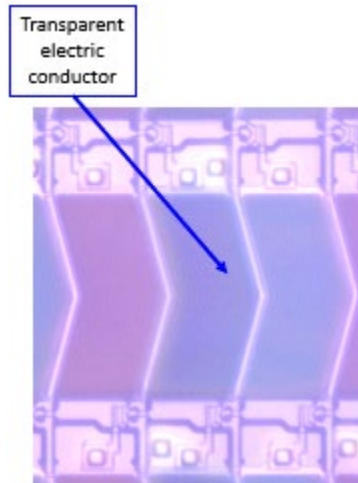
80. The products accused of infringing the '347 patent comprise a reflecting face formed below the liquid crystal panel, wherein a light reflected on the reflecting face is transmitted through the liquid crystal panel. The configuration of the products accused of infringing the '347 patent is such that light reflected on the reflecting face is transmitted through the liquid crystal panel (the reflecting face is beneath the diffuser in the below illustration). For example, an examination of Heesung LCM model no. HC490EQH-SLXA1-211X, which includes the LGD LCD (model no. not identified on device), demonstrates this:



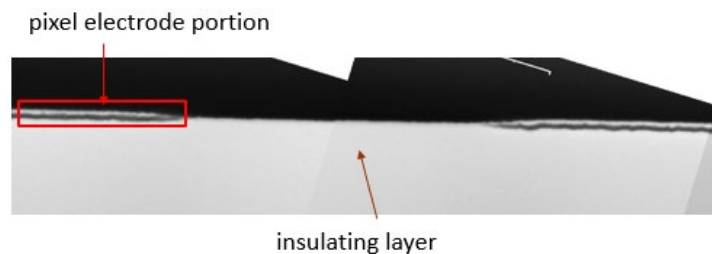
81. The products accused of infringing the '347 patent are configured such that at least one electrode of the common electrode and the pixel electrode is constituted by an electrode portion and a wiring portion. For example, the pixel electrode is constituted by an electrode portion and a wiring portion. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

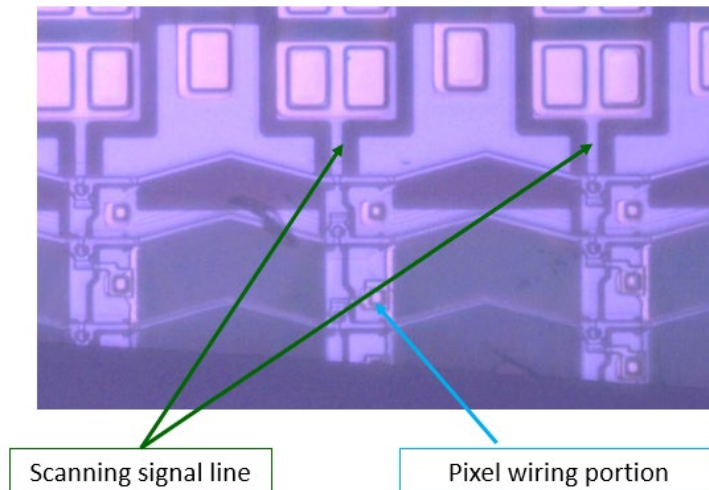


82. The products accused of infringing the '347 patent are configured such that the electrode portion is at least partially constituted by a transparent electric conductor. For example, the pixel electrode portion is at least partially constituted by a transparent electric conductor. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



83. The products accused of infringing the '347 patent are configured such that the pixel electrode portion is formed in a layer separated by an insulating layer from a layer in which the scanning signal line is formed, and the pixel wiring portion is formed in the layer in which the scanning signal line is formed. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:





84. At a minimum, LGE, LGEUS, and LGD have known about the '347 patent since at least July 29, 2020, when LGD received notice of their infringement. Furthermore, LGE, LGEUS, and LGD have known about the '347 patent since at least July 29, 2020, when LGE received notice of their infringement. Moreover, Defendant, based on information and belief, were on notice of the '347 patent from at least the foregoing dates as a result of indemnity, contractual, and/or its business relationship with LGE, LGEUS, and/or LGD and did, as a result, receive actual or constructive notice and/or knowledge of the '347 patent. On information and belief, display manufacturers, such as LGE and LGD, once placed on notice of infringement, would, as prudent businesses, provide that same notice to suppliers and component suppliers.¹⁸

INDIRECT INFRINGEMENT (35 U.S.C. §271(b))

85. On information and belief, since at least the above-mentioned dates when Defendant was on notice of its infringement, Defendant actively induced, under U.S.C. § 271(b), distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers to directly infringe one or more claims of the '347 patent by making, using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned

¹⁸ See FN 1, *supra*.

dates, Defendant did so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '347 patent. Defendant has caused and/or intended to cause, and took affirmative steps to induce infringement by distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers by at least, inter alia, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. As just one example, Defendant actively induced distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers that have purchased, imported, used, offered for sale, and/or sold Accused Products in the U.S. by marking the Accused Products with UL Solutions labels indicating compliance with U.S. laws and regulations for the Accused Products destined and intended to be sold in the U.S. <https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and-significance/marks-for-north-america/>. In another example, Defendant actively induced distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers that have purchased, imported, used, offered for sale, and/or sold to include the accused Defendant's TFT-LCDs and/or LCMs that already comply with U.S. laws and regulations via UL Solutions in accused end products (e.g., TVs, monitors, laptops, tablets, mobile phones) because it allows for such entities to streamline the UL Solutions certification process for such end products if the Defendant's TFT-LCD and/or LCMs have already been certified by UL Solutions. <https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and->

significance/marks-for-north-america/. Defendant specifically designs, develops, manufactures, sells, supplies its accused TFT-LCDs and/or LCMs for application in LG's display products (e.g., LG TVs, laptops, monitors, tables, and/or mobile phones), including by obtaining UL Solutions certificates for compliance with U.S. laws and regulations, where Defendant induces LG (e.g., LGE and/or LGEUS) to offer for sale, sell, import, and/or use the accused LG display products incorporating Defendants' infringing TFT-LCDs/LCMs in the United States and this District. Defendant undertakes these activities with knowledge or at least willful blindness to LG's significant sales of the products including Defendant's TFT-LCDs/LCMs in the United States and in this District.

86. On information and belief, despite having knowledge of the '347 patent and its infringement, Defendant specifically intended for others to import and sell products accused of infringing the '347 patent. For example, Defendant specifically intended for its U.S.-based (and/or foreign-based) subsidiaries or customers to import and sell products accused of infringing the '347 patent. On information and belief, Defendant instructed and encouraged the importers or customers to import and/or sell products accused of infringing the '347 patent. On information and belief, the purchase and sale agreements between Defendant and the importers or customers provide such instruction and/or encouragement. Further, on information and belief, Defendant's U.S.-based (and/or foreign-based) subsidiaries, affiliates, employees, agents, and/or related companies existed for inter alia, the purpose of importing and selling products accused of infringing the '347 patent in the United States.

87. Upon information and belief, despite having knowledge of the '347 patent and knowledge that each was directly and/or indirectly infringing one or more claims of the '347 patent, Defendant nevertheless continued its infringing conduct and disregarded an objectively

high likelihood of infringement. Defendant's infringing activities relative to the '347 patent have been 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.

88. Plaintiff has been damaged as a result of Defendant's infringing conduct described in this Count. Defendant is, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for Defendant's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

89. Plaintiff has complied with the requirements of 35 U.S.C. § 287, to the extent necessary and/or applicable, and is entitled to collect pre- and post-filing damages for Defendant's infringements of the '347 patent.

COUNT IV
(Infringement of U.S. Patent No. 7,414,682)

90. Plaintiff incorporates paragraphs 1 through 89 herein by reference.

91. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

92. Plaintiff is the owner of the '682 patent with all substantial rights to the '682 patent including the exclusive right to enforce, sue, and recover damages for past infringement.

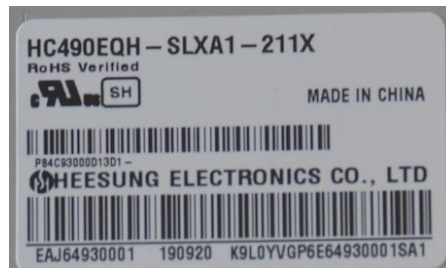
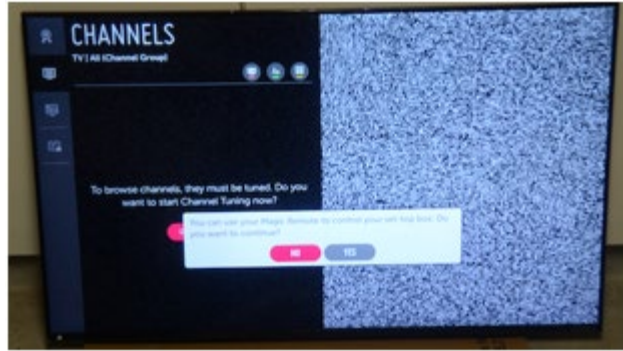
93. The '682 patent is valid, enforceable and was duly issued in full compliance with Title 35 of the United States Code.

DIRECT INFRINGEMENT (35 U.S.C. §271(a))

94. Defendant has infringed literally, and/or under the Doctrine of Equivalents, one or more claims of the '682 patent in this District and elsewhere in Texas and the United States.

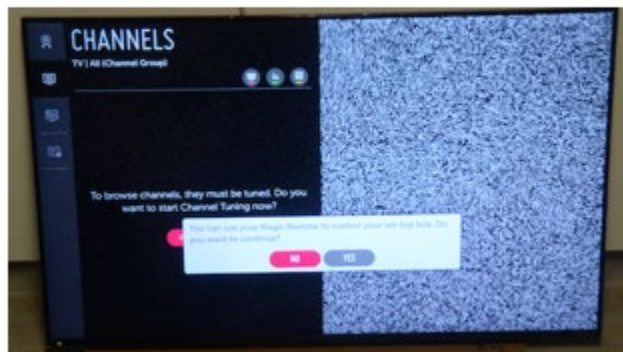
95. Defendant directly infringed the '682 patent via 35 U.S.C. § 271(a) by having made, offered for sale, sold, used, tested, and/or imported those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the '682 patent. For example, Defendant, either by itself and/or via an agent, directly infringed the '682 patent by offering for sale, selling, and/or importing those Accused Products, their components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the '682 patent, to and/or via its alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendant sold and made some Accused Products outside of the United States, delivered those products to its customers, agents, distributors, and/or subsidiaries in the United States, or in the case that it delivered the Accused Products outside of the United States it did so intending and/or knowing that those products were destined for the United States and/or designed those products for sale in the United States, thereby directly infringing the '682 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013).

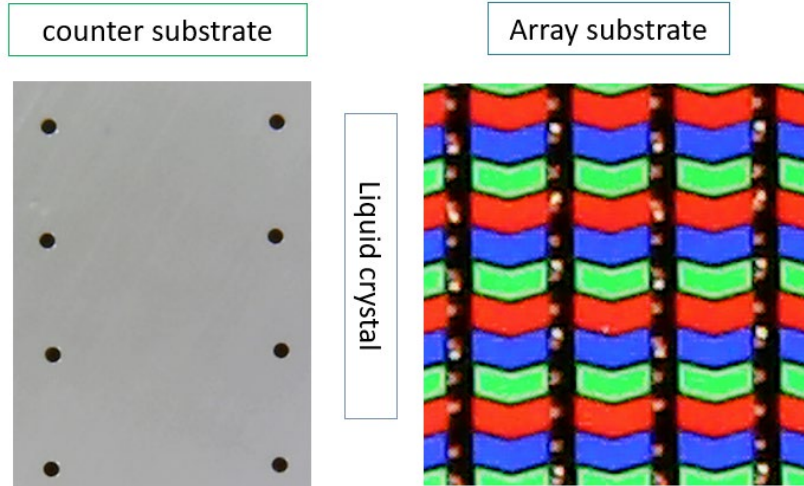
96. Defendant infringed claim 7 of the '682 patent. The products accused of infringing the '682 patent comprise a liquid crystal display of transversal electric field type. For example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC490EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display of transversal electric field type:



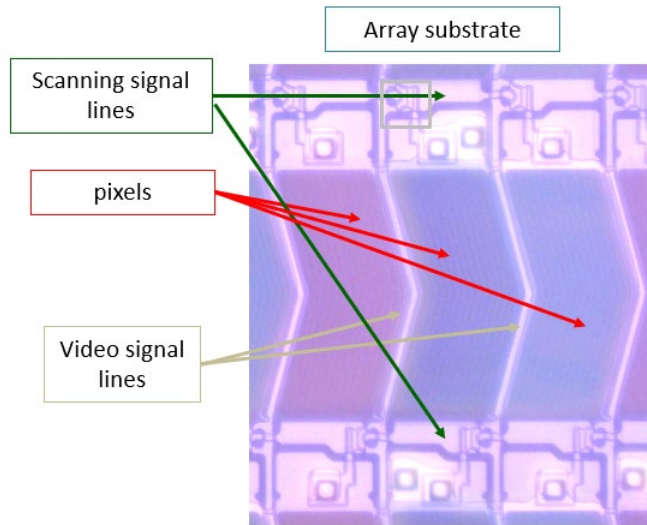
97. The products accused of infringing the '682 patent comprise a liquid crystal panel in which liquid crystal is retained between a pair of substrates. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

Liquid crystal panel



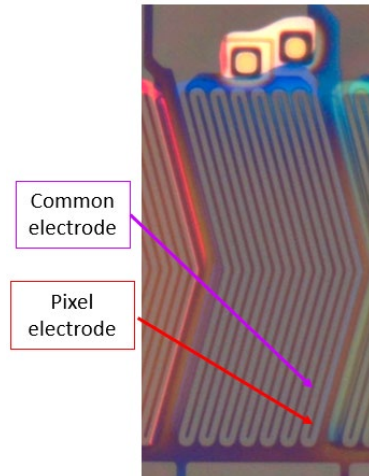


98. The products accused of infringing the '682 patent comprise a plurality of scanning signal lines and a plurality of video signal lines formed so as to define a plurality of pixels in a matrix on an inner surface of one of the pair of substrates. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

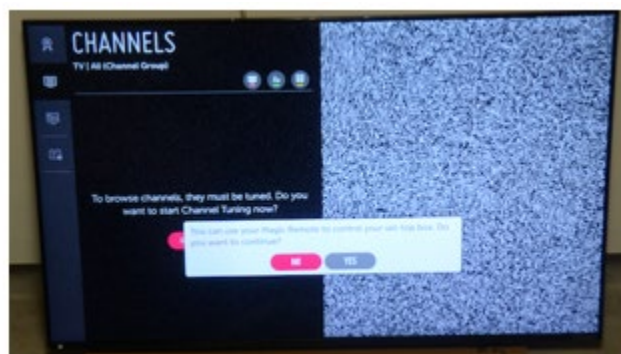


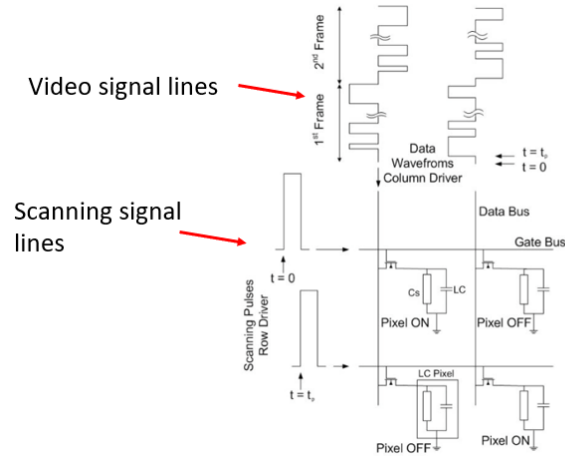
99. The products accused of infringing the '682 patent comprise a pixel electrode and a common electrode formed opposite to each other in each pixel in a plan view. For example, an

examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

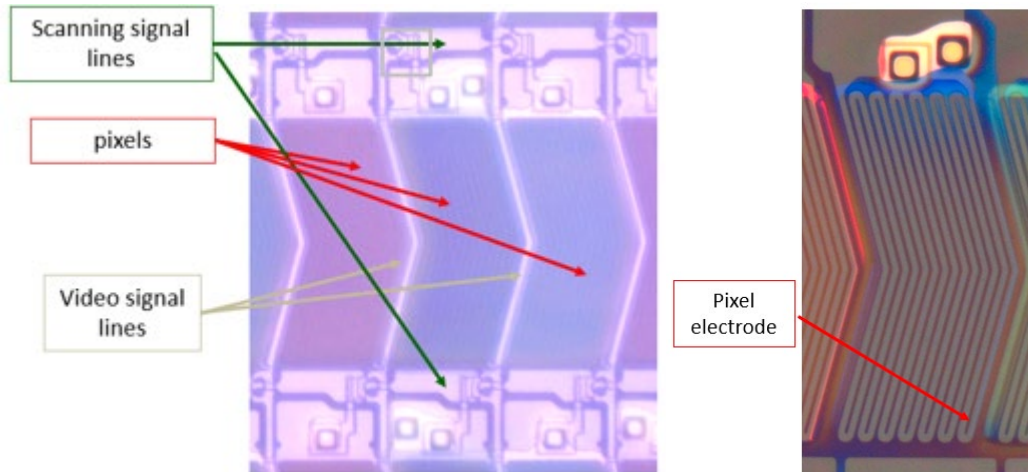


100. The products accused of infringing the '682 patent are configured such that an image is displayed on the liquid crystal panel by inputting a video signal from the video signal line into the pixel electrode while sequentially selecting the pixel through the scanning signal line. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:

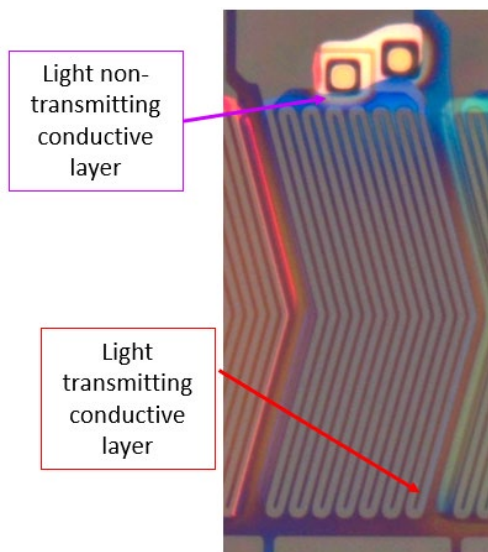




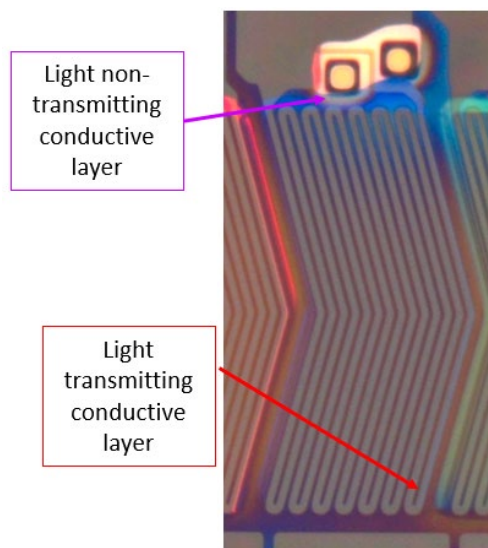
<https://www.intechopen.com/books/new-developments-in-liquid-crystals/active-matrix-liquid-crystal-displays-operation-electronics-and-analog-circuits-design>



101. The products accused of infringing the '682 patent are configured such that at least one of the scanning signal lines, the video signal lines, the pixel electrode, or the common electrode is at least partially constituted by a light-transmitting conductive layer and a light-non-transmitting conductive layer. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates that the pixel electrode is at least partially constituted by a light-transmitting conductive layer and a light-non-transmitting conductive layer:



102. The products accused of infringing the '682 patent are configured such that a width of the light-transmitting conductive layer is wider than a width of the light-non-transmitting layer. For example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC490EQH-SLXA1-211X demonstrates this:



103. At a minimum, LGE, LGEUS, and LGD have known about the '682 patent since at least February 8, 2017, when LGD received notice of their infringement from a former patent owner Godo Kaisha IP Bridge 1, and at least by March 7, 2017 when LGD replied to the notice

letter. In addition, LGE, LGEUS, and LGD have known about the '682 patent since at least July 29, 2020, when LGD again received notice of their infringement. Furthermore, LGE, LGEUS, and LGD have known about the '682 patent since at least July 29, 2020, when LGE received notice of their infringement. Moreover, Defendant, based on information and belief, was on notice of the '682 patent from at least the foregoing dates as a result of indemnity, contractual, and/or its business relationship with LGE, LGEUS, and/or LGD and did, as a result, receive actual or constructive notice and/or knowledge of the '682 patent. On information and belief, display manufacturers, such as LGE and LGD, once placed on notice of infringement, would, as prudent businesses, provide that same notice to suppliers and component suppliers.¹⁹

INDIRECT INFRINGEMENT (35 U.S.C. §271(b))

104. On information and belief, since at least the above-mentioned dates when Defendant was on notice of its infringement, Defendant actively induced, under U.S.C. § 271(b), distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers to directly infringe one or more claims of the '682 patent by making, using, offering for sale, selling, and/or importing the Accused Products. Since at least the notice provided on the above-mentioned dates, Defendant did so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '682 patent. Defendant has caused and/or intended to cause, and took affirmative steps to induce infringement by distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers by at least, *inter alia*, creating advertisements that promote the infringing use of the Accused Products, creating and/or maintaining established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making

¹⁹ See FN 1, *supra*.

available instructions or manuals for these products to purchasers and prospective buyers, testing and certifying features related to infringing features in the Accused Products, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States. As just one example, Defendant actively induced distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers that have purchased, imported, used, offered for sale, and/or sold Accused Products in the U.S. by marking the Accused Products with UL Solutions labels indicating compliance with U.S. laws and regulations for the Accused Products destined and intended to be sold in the U.S. <https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and-significance/marks-for-north-america/>. In another example, Defendant actively induced distributors, retailers, customers, subsidiaries, importers, testing outfits, and/or consumers that have purchased, imported, used, offered for sale, and/or sold to include the accused Defendant's TFT-LCDs and/or LCMs that already comply with U.S. laws and regulations via UL Solutions in accused end products (e.g., TVs, monitors, laptops, tablets, mobile phones) because it allows for such entities to streamline the UL Solutions certification process for such end products if the Defendant's TFT-LCD and/or LCMs have already been certified by UL Solutions. <https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and-significance/marks-for-north-america/>. Defendant specifically designs, develops, manufactures, sells, supplies its accused TFT-LCDs and/or LCMs for application in LG's display products (e.g., LG TVs, laptops, monitors, tables, and/or mobile phones), including by obtaining UL Solutions certificates for compliance with U.S. laws and regulations, where Defendant induces LG (e.g., LGE and/or LGEUS) to offer for sale, sell, import, and/or use the accused LG display products incorporating Defendants' infringing TFT-LCDs/LCMs in the United States and this District. Defendant undertakes these activities with knowledge or at least willful blindness to LG's

significant sales of the products including Defendant's TFT-LCDs/LCMs in the United States and in this District.

105. On information and belief, despite having knowledge of the '682 patent and its infringement, Defendant specifically intended for others to import and sell products accused of infringing the '682 patent. For example, Defendant specifically intended for its U.S.-based subsidiaries or customers to import and sell products accused of infringing the '682 patent. On information and belief, Defendant instructed and encouraged the importers or customers to import and/or sell products accused of infringing the '682 patent. On information and belief, the purchase and sale agreements between Defendant and the importers or customers provide such instruction and/or encouragement. Further, on information and belief, Defendant's U.S.-based (and/or foreign-based) subsidiaries, affiliates, employees, agents, and/or related companies existed for inter alia, the purpose of importing and selling products accused of infringing the '682 patent in the United States.

106. Upon information and belief, despite having knowledge of the '682 patent and knowledge that each was directly and/or indirectly infringing one or more claims of the '682 patent, Defendant nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. Defendant's infringing activities relative to the '682 patent have been 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.

107. Plaintiff has been damaged as a result of Defendant's infringing conduct described in this Count. Defendant is, thus, liable to Plaintiff in an amount that adequately compensates

Plaintiff for Defendant's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

108. Plaintiff has complied with the requirements of 35 U.S.C. § 287, to the extent necessary and/or applicable, and is entitled to collect pre- and post-filing damages for Defendant's infringements of the '682 patent.

CONCLUSION

109. Plaintiff is entitled to recover from Defendant the damages sustained by Plaintiff as a result of the Defendant's wrongful acts in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

110. Plaintiff has incurred and will incur attorneys' fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional case within the meaning of 35 U.S.C. § 285, and Plaintiff is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

Plaintiff requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

Plaintiff asks that the Court find in its favor and against Defendant and that the Court grant Plaintiff the following relief:

1. A judgment that Defendant has infringed the Asserted Patents as alleged herein, directly and/or indirectly by way of inducing infringement of such patents;
2. A judgment for an accounting of all damages sustained by Plaintiff as a result of the acts of infringement by Defendant;

3. A judgment and order requiring Defendant to pay Plaintiff damages under 35 U.S.C. § 284, including up to treble damages as provided by 35 U.S.C. § 284, and any royalties determined to be appropriate;
4. A judgment and order requiring Defendant to pay Plaintiff pre-judgment and post-judgment interest on the damages awarded;
5. A judgment and order finding this to be an exceptional case and requiring Defendant to pay the costs of this action (including all disbursements) and attorneys' fees as provided by 35 U.S.C. § 285; and
6. Such other and further relief as the Court deems just and equitable.

Dated: October 8, 2024

Respectfully submitted,

/s/ Patrick J. Conroy

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