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

BISHOP DISPLAY TECH LLC,	§	
	§	
Plaintiff,	§	
	§	**C.A. No. 2:24-cv-85**
v.	§	
	§	**JURY TRIAL DEMANDED**
LG ELECTRONICS INC., LG ELECTRONICS U.S.A., INC., LG DISPLAY CO., LTD., AND NEW OPTICS, LTD.,	§	
	§	
Defendants.	§	

PLAINTIFF'S ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Bishop Display Tech LLC ("Bishop" or "Plaintiff") files this Original Complaint against Defendants LG Electronics Inc. ("LGE"), LG Electronics U.S.A., Inc. ("LGEUS"), LG Display Co., Ltd. ("LGD"), and New Optics, Ltd. ("New Optics") (collectively, "Defendants") 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"), U.S. Patent No. 7,995,047 (the "'047 patent"), U.S. Patent No. 8,093,830 (the "'830 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, LG Electronics Inc. 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.

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3. On information and belief, LG Electronics U.S.A., Inc., 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.

4. On information and belief, LG Display Co., Ltd. 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.

5. On information and belief, New Optics, Ltd. is a corporation organized under the laws of Korea. Its principal place of business is at 11407 315, Hyuam-ro 392beon-gil, Nam-myeon, Yangju-si, Gyeonggi-do, Republic of Korea.

6. Defendants are engaged (including, as relevant, in the past) in making, using, selling, offering for sale, and/or importing, and/or inducing one another and their respective subsidiaries, affiliates, distributors, suppliers, 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"):

- LGD thin-film transistor liquid crystal displays ("TFT-LCDs") or liquid crystal modules comprising TFT-LCDs ("LCMs");
- New Optics TFT-LCDs or LCMs;
- LGE and LGEUS products (*e.g.*, TVs, monitors, laptops, tablets, mobile phones) comprising TFT-LCDs or LCMs;
- Products comprising LGD or New Optics TFT-LCDs or LCMs;

- LGE and LGEUS display products (*e.g.*, TVs, monitors, laptops, tablets, mobile phones) comprising a power supply board;
- LGE, LGEUS, and LGD power supply boards for display products; and
- Display products comprising an LGE, LGEUS, or LGD power supply board.

7. On information and belief, LGD maintains (and has maintained) a corporate presence in the United States via at least its U.S.-based sales and/or distribution subsidiaries and/or agents including, LG Display America, Inc. ("LGDUS"), which is a corporation organized under the laws of the State of Delaware with places of business at least at 2540 North First Street, Suite 400, San Jose, CA 95131; 9600 Great Hills Trail, Suite 150W, Austin, Texas 78759; and 19500 State Highway 249, Suite 260, Houston, Texas 77070.

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

9. On information and belief, LGE controls (and has controlled) LGEUS, as well as many other subsidiaries, including, but not limited to, LX International (America), Inc. (including past affiliates and corporate names, such as LG International Corp. and/or LG International (America), Inc. and/or others), which, on information and belief, is (and was) an LGE affiliate and/or subsidiary and/or agent that is (and was) within the supply chain of Accused Products that were shipped to the United States. On information and belief, LGEUS provides (and has provided) sales, distribution, research, and development support in the United States for its parent LGE,

which wholly owns LGEUS. LGEUS is, and has been, an agent of LGE. At the direction and control of LGE, U.S.-based sales and/or distribution subsidiaries including, LGEUS, have imported and continue to import Accused Products into the United States and this District.

10. On information and belief, LGE controls LGD (and has controlled) as its largest shareholder, as well as many other subsidiaries and affiliates. On information and belief, LGD is, and has been, an agent of LGE. On information and belief, LGD and LGE share the same office, leadership, employees, and business. At the direction and control of LGE, LGD makes (and has made) and supplies (and has supplied) TFT-LCDs and LCMs that are (and have been) incorporated into end user products by LGE.

11. On information and belief LGE controls (and has controlled) each of LGEUS, LGD, and LGDUS. On information and belief, each of these related companies and other LG companies are, and have been, agents of LGE. For example, LGE, LGEUS, LGD, and LGDUS use the same logo, further emphasizing that these companies are alter egos and/or agents of one another.

12. On information and belief, LGE, LGEUS, and LGD, along with their respective foreign and U.S.-based subsidiaries (*e.g.*, LGDUS), affiliates, distributors, 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 to provide (and have provided) a distribution channel of infringing products within this District and the U.S. nationally.

13. LGE, LGEUS, and LGD operate (and have operated) in agency with their respective foreign and U.S.-based subsidiaries (*e.g.*, LGDUS), affiliates, distributors, retail

partners, suppliers, and customers, to provide a distribution channel of infringing products within this District and the U.S. nationally. LGE, LGEUS, and LGD, individually and/or between one another and their respective agents and foreign and U.S.-based subsidiaries, affiliates, distributors, retail partners, suppliers, and customers, purposefully direct (and have directed) the Accused Products into established distribution channels within this District and the U.S. nationally.

14. On information and belief, New Optics maintains (and has maintained) a corporate presence in the United States via at least its, U.S.-based sales and distribution subsidiaries including, New Optics USA, Inc. ("New Optics US"), which is a corporation organized under the laws of the State of Delaware with a place in at least South Fair Oaks Ave, Pasadena, California 91105.

15. On information and belief, New Optics controls (and has controlled) New Optics US. On information and belief, New Optics US provides (and has provided) sales, distribution, research, and/or development support in the United States for their parent New Optics. New Optics US is, and has been, an agent of New Optics. At the direction and control of New Optics, U.S.-based sales and distribution subsidiaries including, New Optics US, have imported Accused Products into the United States and this District.

16. On information and belief, New Optics, along with its respective foreign and U.S.-based subsidiaries (*e.g.*, New Optics US), affiliates, distributors, 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 to provide (and have provided) a distribution channel of infringing products within this District and the U.S. nationally.

17. New Optics operates (and has operated) in agency with its respective foreign and U.S.-based subsidiaries (*e.g.*, New Optics US), affiliates, distributors, retail partners, suppliers, and customers, to provide (and have provided) a distribution channel of infringing products within this District and the U.S. nationally. New Optics, individually and/or with their respective agents and foreign and U.S.-based subsidiaries, affiliates, distributors, retail partners, suppliers, and customers, purposefully direct (and have purposefully directed) the Accused Products into established distribution channels within this District and the U.S. nationally.

18. On information and belief, LGE, LGEUS, and LGD, including their respective U.S.-based subsidiaries (*e.g.*, LGDUS), affiliates, distributors, 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. LGE, LGEUS, LGD, and their U.S.-based sales subsidiaries (*e.g.*, LGDUS), individually and/or in concert, conduct business (and have conducted business) in the United States, including importing, 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.").

19. On information and belief, New Optics, including its respective U.S.-based sales subsidiaries (*e.g.*, New Optics US), affiliates, distributors, retail partners, and/or 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. New Optics and its U.S.-based sales subsidiaries (*e.g.*, New Optics US), individually and/or in concert, conduct business (and have conducted business) in the United States, including importing, 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.").

20. Through offers to sell, sales, imports, distributions, and other related agreements to transfer ownership of Defendants' Accused Products by and/or to affiliates, distributors, subsidiaries, suppliers, retail partners, customers, agents, and/or other Defendants, Defendants are operating in (and have operated in) and maintaining (and maintained) a significant business presence in the U.S. and/or through their U.S. subsidiaries or agents, Defendants do business in the U.S., the state of Texas, and in the Eastern District of Texas.

JURISDICTION AND VENUE

21. Plaintiff incorporates paragraphs 1 through 20 herein by reference.

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

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

24. With respect to LGE, LGD, and New Optics (the "foreign Defendants"), venue is proper in this District pursuant to 28 U.S.C. §§ 1391(c). The foreign Defendants are foreign entities and may be sued in any judicial district under 28 U.S.C. § 1391(c)(3).

25. With respect to LGEUS, venue is proper in this District under 28 U.S.C. § 1400(b). LGEUS has committed acts of infringement in the District and/or has induced acts of patent infringement by others in this District and has a regular and established place of business within the District. For example, LGEUS has regular and established places of businesses, including a distribution facility, within this District at 2153-2155 Eagle Pkwy, Fort Worth, TX 76177 and 14901 Beach St, Fort Worth, TX 76177. In addition, the LGE Defendants have also conceded that venue is proper in this district in other recent patent infringement actions. *See e.g., SpaceTime3D, Inc. v. LG Elecs, Inc.*, No, 2:22-CV-00049- RWS, Dkt. 19 (E.D. Tex. June 20, 2022) at ¶¶ 18-19 (In a recent patent infringement case regarding LGE's accused smartphones, LGE stated that "LGE does not contest that the venue is proper in this District"); *WFR IP LLC v. LG Elecs.*, No. 2:22-CV-00245-RWS-RSP (E.D. Tex. Nov. 23, 2022), Dkt. 16 at ¶ 6; *Arigna Tech. Ltd., LG Elecs., Inc.*, No. 2:21-cv-00377, (E.D. Tex. Jan. 26, 2022) Dkt. 24 at ¶¶ 13-14; *Hardin v. LG Elecs., Inc.*, No. 2:21-cv-00289, (E.D. Tex. Nov. 22, 2021) Dkt. 14 at ¶ 6; *Seven Networks, LLC v. LG Elecs.*, Inc., No. 2:21-cv-88, (E.D. Tex. June 7, 2021) Dkt. 12 at ¶ 5.

26. This Court has general and specific personal jurisdiction over the Defendants pursuant to due process and/or the Texas Long Arm Statute because, inter alia, (i) the Defendants

have done and continue to do business in Texas and/or (ii) the Defendants have, directly and through intermediaries, distributers, agents, and/or others committed and continue to commit acts of patent infringement in the State of Texas, including making, using, offering to sell, and/or selling Accused Products in Texas, and/or importing Accused Products into Texas, including by Internet sales and/or sales via retail and wholesale stores, inducing others to commit acts of patent infringement in Texas, and/or committing a least a portion of any other infringements alleged herein. Defendants have placed, and are 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. Defendants have derived substantial revenues from their infringing acts occurring within Texas and within this District. Defendants have substantial business in this State and District (including, as relevant, in the past), including: (A) conducting at least part of their 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 their respective alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers.

27. This Court has personal jurisdiction over Defendants, directly or through intermediaries, distributors, importers, customers, subsidiaries, and/or consumers including their U.S.-based sales subsidiaries, as applicable. Through direction and control (including, as relevant, in the past) of such subsidiaries, affiliates, distributors, retail partners, agents, and/or customers, Defendants have 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 Defendants would not offend traditional

notions of fair play and substantial justice. Upon information and belief, Defendants compensate their U.S.-based subsidiaries and/or agents for their sales support services in the United States. As such, Defendants have a direct financial interest in their U.S.-based subsidiaries and/or agents, and vice versa.

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

29. Exercising personal jurisdiction over Defendants in this District would not be unreasonable given Defendants' 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.

30. In addition, Defendants, as applicable, have 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, and/or end users, and providing instructions, user manuals, advertising, and/or marketing materials which facilitate, direct or encourage the use of infringing functionality with knowledge thereof.

31. Personal jurisdiction also exists specifically over Defendants because Defendants, directly or through affiliates, subsidiaries, 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.

32. Personal jurisdiction also exists specifically because Defendants and/or their U.S.-based subsidiaries, as applicable, have overlapping executives, interlocking corporate structures, and close relationships as manufacturer, importer, distributor, and/or seller of the products accused of infringement.

33. To the extent the foreign Defendants are not subject to jurisdiction in any state's court of general jurisdiction, exercising jurisdiction over the foreign Defendants 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.

34. In addition, Defendants, directly or through other Defendants, 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.

35. Defendants have advertised their infringing products to customers in Texas and this District through their respective websites.

36. On information and belief, the foreign Defendants control (or have controlled) or otherwise direct (or directed) and authorize (or authorized) all activities of their U.S.-based agents and/or sales and/or distribution subsidiaries, as applicable. Such directed and authorized activities include the U.S.-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. The foreign Defendants' U.S.-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 the foreign Defendants. For example, the foreign Defendants researched, designed, developed, and manufactured the

Accused Products, and then directed their U.S.-based sales subsidiaries, distributers, agents, and 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, Defendants conducted infringing activities, and the foreign Defendants' U.S.-based sales subsidiaries and/or distributers and/or agents conducted infringing activities on behalf of the foreign Defendants.

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

38. Via Defendants' alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers that maintained a business presence, operating in, and/or residing in the U.S., Defendants' 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)).

39. On information and belief, Defendants have placed infringing products and/or products that practiced infringing processes into the stream of commerce via established distribution channels comprising at least their subsidiaries, 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, Defendants have, vicariously through and/or in concert with other Defendants, 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.

40. In addition, by way of example, New Optics 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 LG Chem Hangzhou Advanced Materials). Such Accused Products are directed to this District and available for purchase in this District via retailers, such as Best Buy. Also by way of example, and on information and belief, New Optics has (and has had) U.S. based employees that work in connection with the Accused Products.

41. In the alternative, the Court has personal jurisdiction over the foreign Defendants under Federal Rule of Civil Procedure 4(k)(2), because the claims for patent infringement in this action arise under federal law, foreign Defendants are not subject to the jurisdiction of the courts of general jurisdiction of any state and exercising jurisdiction over the foreign Defendants is consistent with the U.S. Constitution.

JOINDER

42. Plaintiff incorporates paragraphs 1 through 41 herein by reference.

43. Joinder is proper under at least Federal Rule of Civil Procedure 20 and 35 U.S.C. § 299 at least because Defendants' infringing conduct alleged herein arises out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering for sale, or selling of the same accused product or process, or portions thereof, and questions of fact common to all Defendants will arise in this action.

44. As to the '377 patent, the '706 patent, the '347 patent, and the '682 patent, the Accused Products fall into four categories: 1) LGD TFT-LCDs or LCMs; 2) New Optics TFT-LCDs or LCMs; 3) LGE and LGEUS products containing TFT-LCDs or LCMs; and 4) products containing LGD or New Optics TFT-LCDs or LCMs. LGE and LGEUS have made, used, imported, offered for sale, and/or sold infringing products containing New Optics LCMs which contain LGD TFT-LCDs. Thus, at least the LGD TFT-LCDs are common to all Defendants' infringement of the Asserted Patents. Thus, on information and belief, each of the Defendants infringe the same Asserted Patents for having made, used, imported, offered for sale, and/or sold, and/or induced others to make, use, import, offer for sale, and sell LGD TFT-LCDs or products containing LGD TFT-LCDs. Thus, on information and belief, LGD TFT-LCD technology is a

common issue for each Defendants' infringement of products containing LGD TFT LCDs, and the factual question of infringement related to LGD TFT-LCDs will thus substantially overlap for all Defendants regarding such products.

45. Further, on information and belief, there are common facts as to sales, importation, distribution, and marketing materials associated with the LGD TFT-LCDs and the LGE, LGEUS, and New Optics products containing the LGD TFT-LCDs.

46. Additionally, on information and belief, there are common facts as to the distribution, supply chain, knowledge, and inducement related to LGD TFT-LCDs and the LGE, LGEUS, and New Optics products containing LGD TFT-LCDs destined to be sold, used, imported, offered for sale, and/or sold in the United States.

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

47. Plaintiff incorporates paragraphs 1 through 46 herein by reference.

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

49. 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.

50. 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))

51. Defendants have 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.

52. Defendants 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, Defendants, either by themselves (individually and/or in concert) 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 their alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendants sold and made some Accused Products outside of the United States, delivered those products to their customers, distributors, and/or subsidiaries in the United States, or in the case that they delivered the Accused Products outside of the United States they 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).

53. Furthermore, LGE directly infringed the ’377 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, including by selling and offering for sale the Accused Products directly to such entities and/or importing the Accused Products into the United States for such entities. Such entities conducted activities that constituted direct infringement of the ’377 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGE is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGE, LGEUS, LGD, and LGDUS are (and were) essentially the same company, and/or agents of each other, and

LGE has (and had) the right and ability to control LGEUS, LGD, and LGDUS' infringing acts and receives a direct financial benefit from LGEUS, LGD, and LGDUS' infringement.

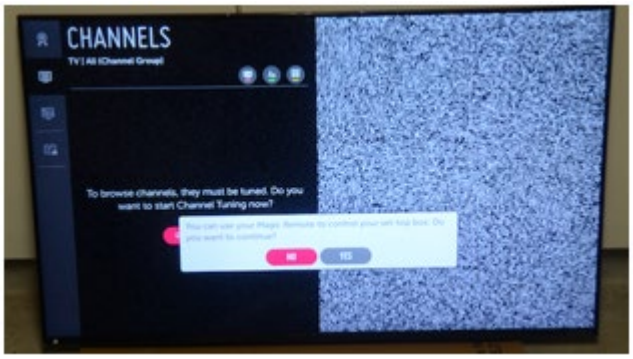
54. Additionally, LGD directly infringed the '377 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates, including LGDUS, including by selling (and having sold) and offering for sale (and having offered for sale) the Accused Products directly to such entities and/or importing (or having imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the '377 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant time period. Further, LGD is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGDUS is (and has been) essentially the same company, and LGD has (and has had) the right and ability to control LGDUS' infringing acts and received a direct financial benefit from LGDUS' infringement.

55. Further, New Optics directly infringed the '377 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including New Optics US, including by selling (or having sold) and offering for sale (or having offered for sale) the Accused Products directly to such entities and/or importing (or having imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the '377 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant timeframe. Further, New Optics is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including New Optics US, (under both

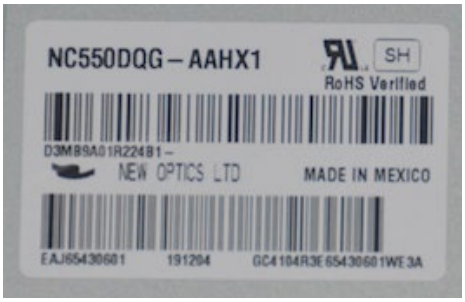
the alter ego and agency theories) because, as an example and on information and belief, New Optics US is (and has been) essentially the same company, and New Optics has (and has had) the right and ability to control New Optics US' infringing acts and received a direct financial benefit from New Optics US' infringement.

56. For example, Defendants infringed claim 1 of the '377 patent. The products accused of infringing the '377 patent comprise a liquid crystal display device. For example, LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1), which is used in products such as the Apple iMac Pro, comprises a liquid crystal display device:

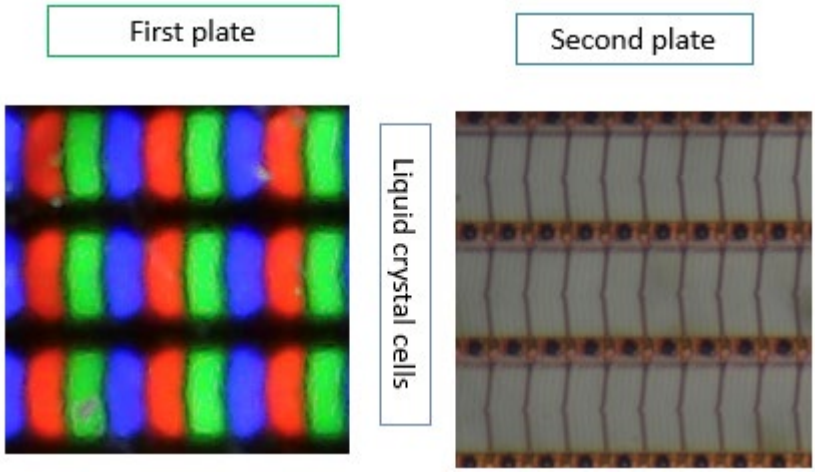
In another example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC49EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display device:



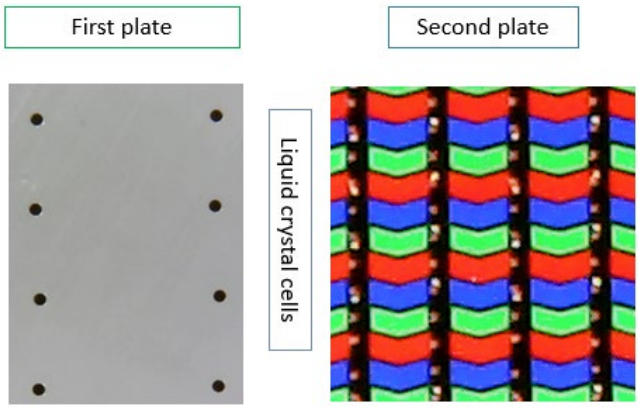
In a further example, LG's TV model no. 55UM7300PUA includes New Optics LCM model no. NC550DQG-AAHZ1, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display device:



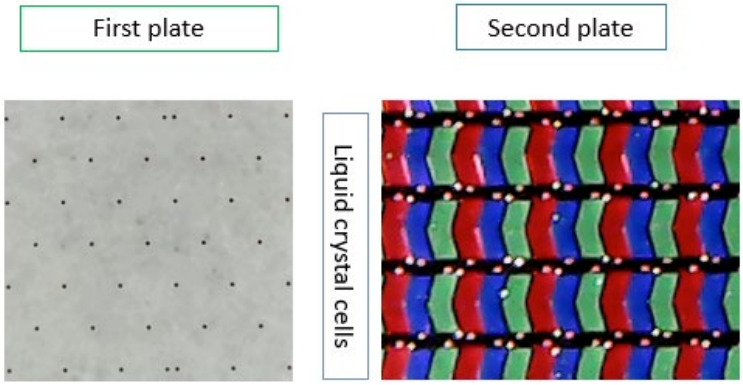
57. The products accused of infringing the ’377 patent comprise a liquid crystal panel comprising liquid crystal cells, a first plate disposed on a displaying side of the cells, and a second plate disposed on a reverse side of the cells. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



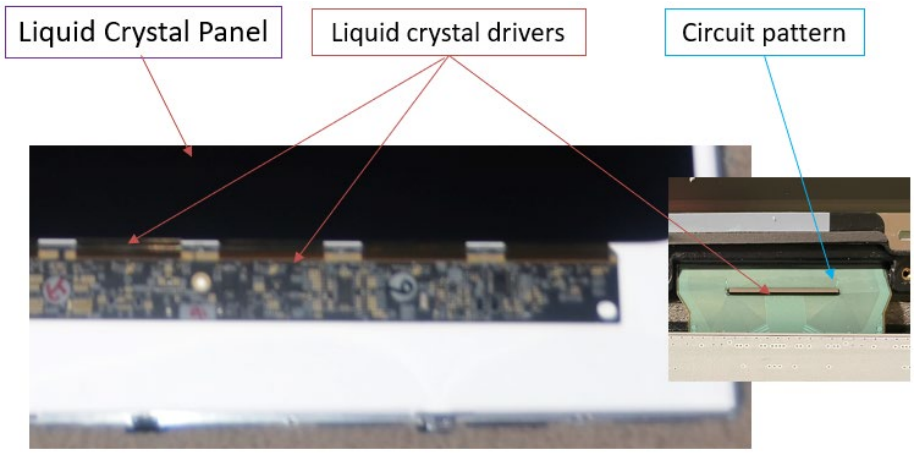
In another example, an examination of LGD’s TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE’s TV model no. 49SM8600PUA demonstrates this:



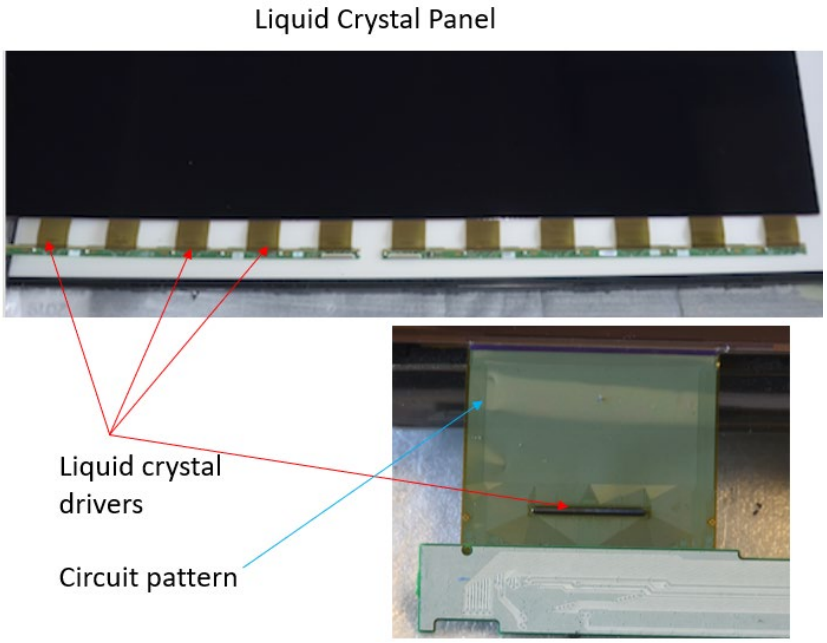
In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



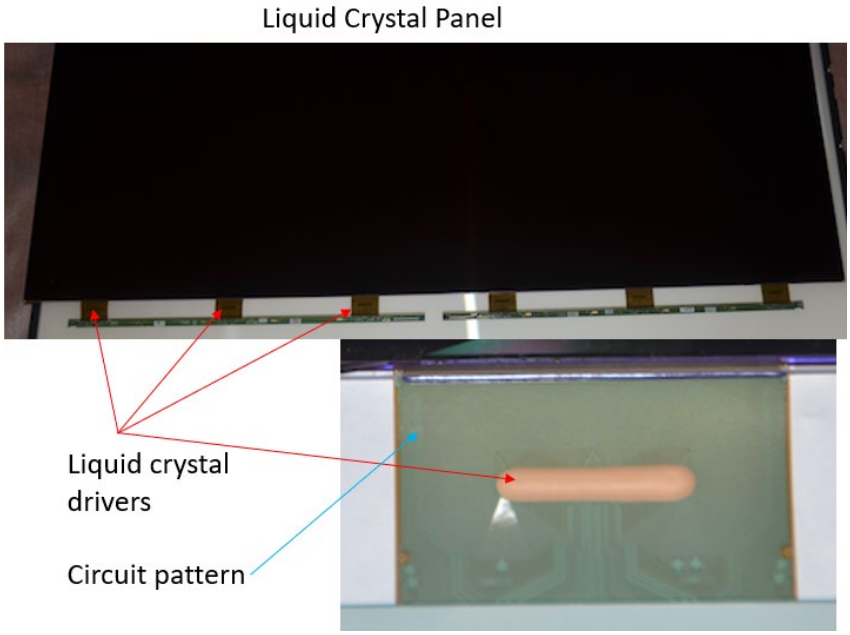
58. The products accused of infringing the '377 patent comprise a liquid crystal driver electrically connected with the liquid crystal panel through a circuit pattern. For example, an examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:

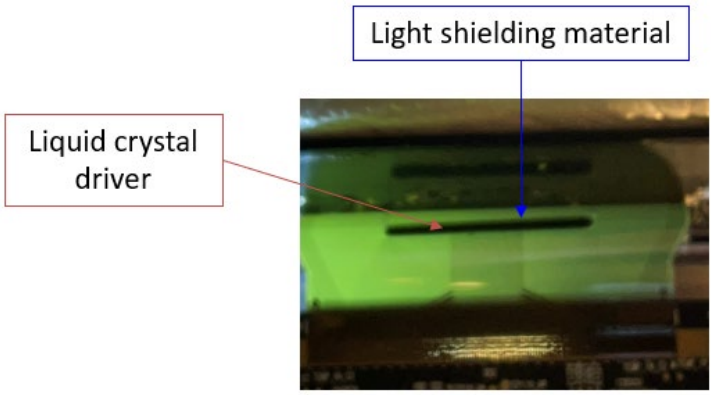


In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:

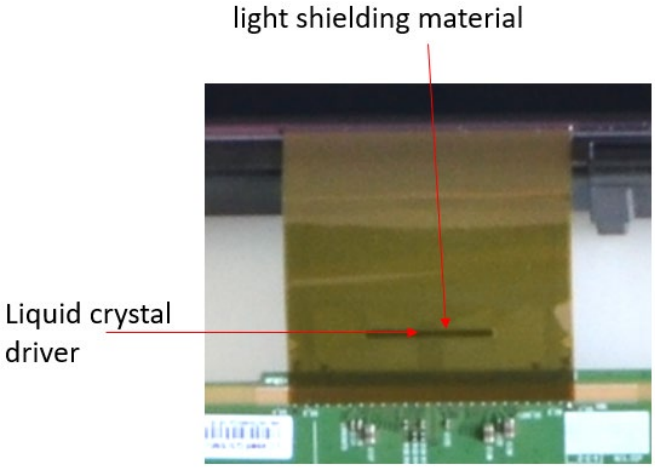


59. The products accused of infringing the '377 patent comprise a light shielding material disposed adjacent said liquid crystal driver so as to prevent an outer light from being

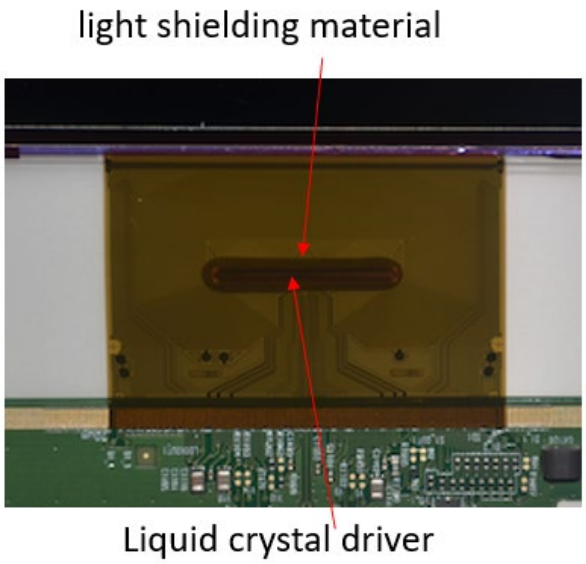
incident to said liquid crystal driver. An examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



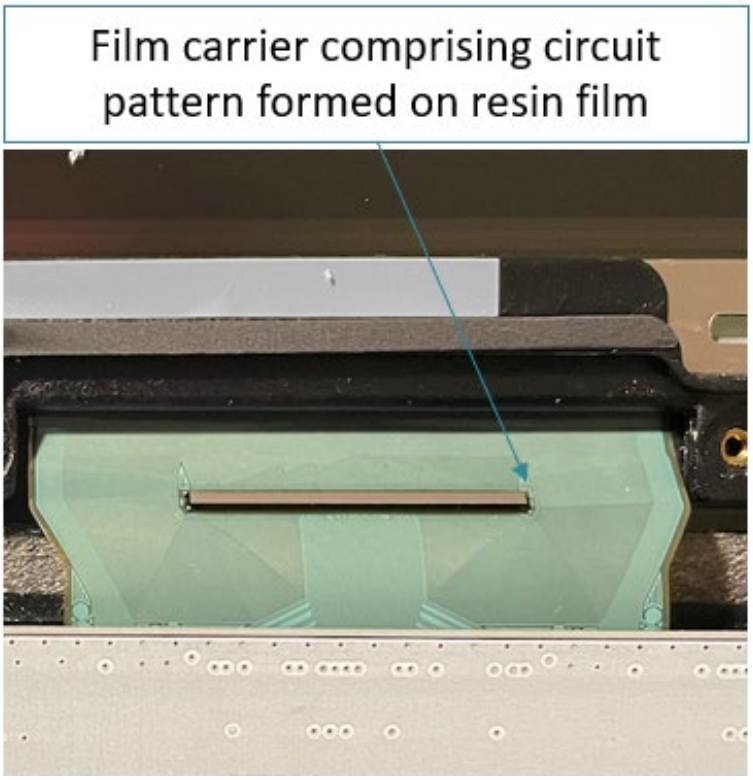
In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:



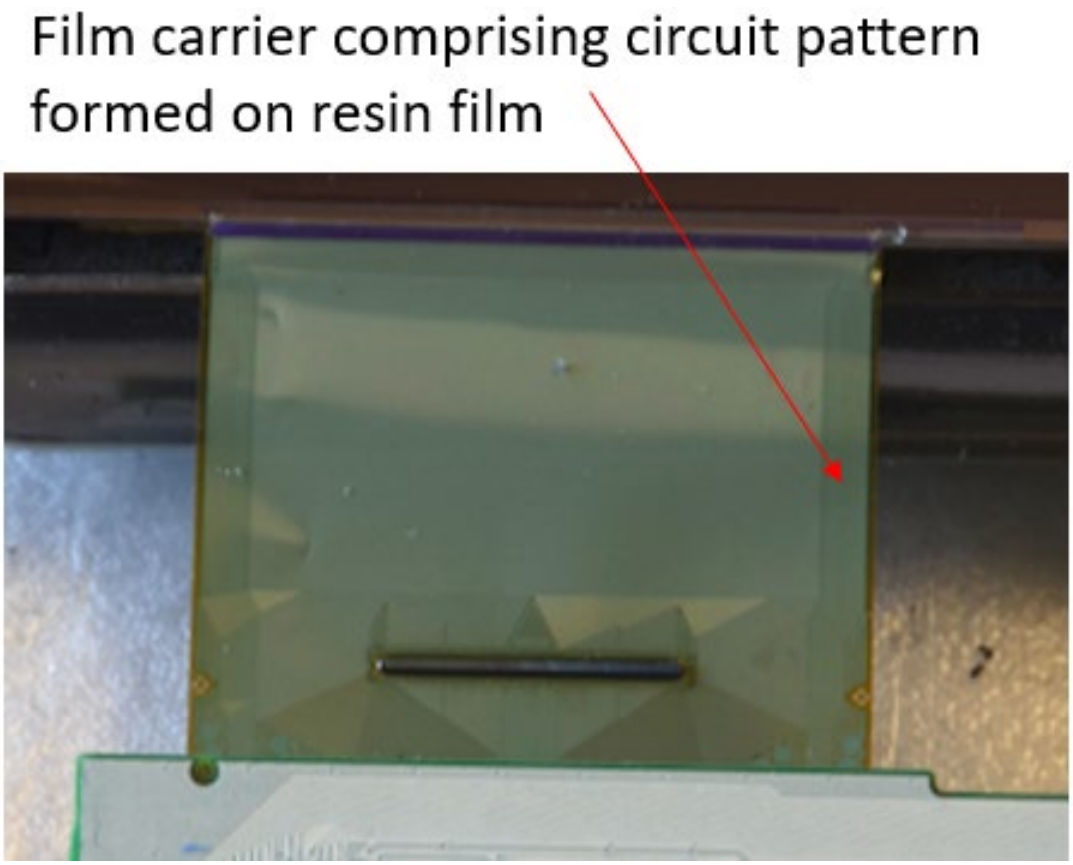
In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



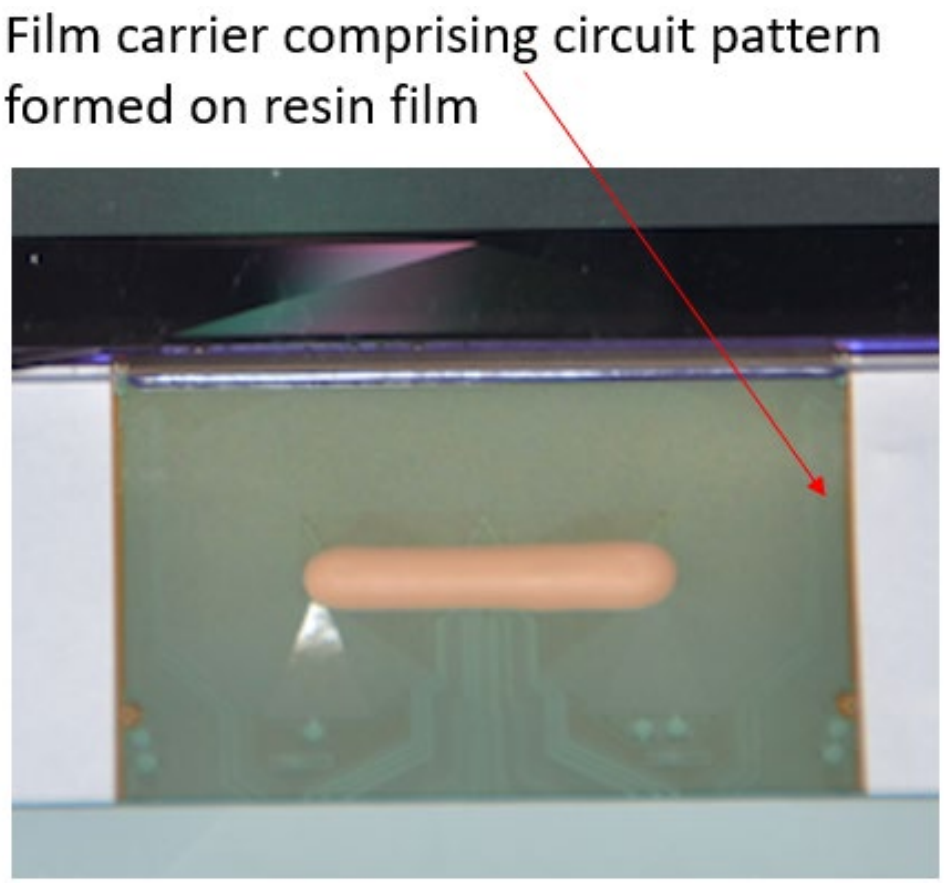
60. The products accused of infringing the ’377 patent comprise a film carrier comprising said circuit pattern formed on a resin film. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



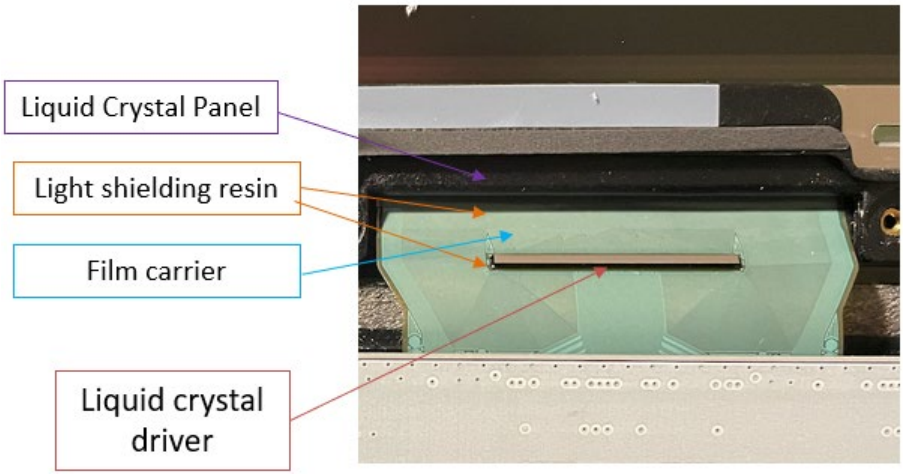
In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:



In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



61. 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/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



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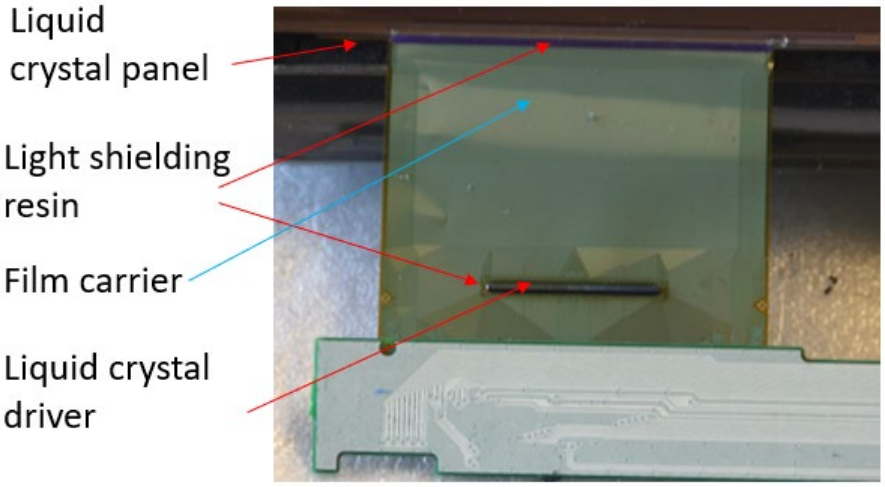
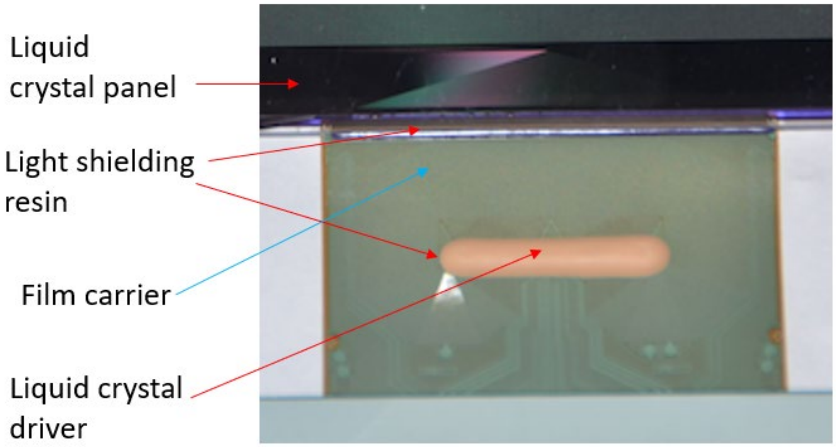


In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



62. Plaintiff has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for Defendants' 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.

63. 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 Defendants' infringements of the '377 patent.

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

64. Plaintiff incorporates paragraphs 1 through 63 herein by reference.

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

66. 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.

67. 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))

68. Defendants have 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.

69. Defendants 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, Defendants, either by themselves (individually and/or in concert) 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 their alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendants sold and made some Accused Products outside of the United States, delivered those products to their customers, distributors, and/or subsidiaries in the United States, or in the case that they delivered the Accused Products outside of the United States they 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).

70. Furthermore, LGE directly infringed the ’706 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, including by selling and offering for sale the Accused Products directly to such entities and/or importing the Accused Products into the United States for such entities. Such entities conducted activities that constituted direct infringement of the ’706 patent under 35 U.S.C.

§ 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGE is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGE, LGEUS, LGD, and LGDUS are (and were) essentially the same company, and/or agents of each other, and LGE has (and had) the right and ability to control LGEUS, LGD, and LGDUS' infringing acts and receives a direct financial benefit from LGEUS, LGD, and LGDUS' infringement.

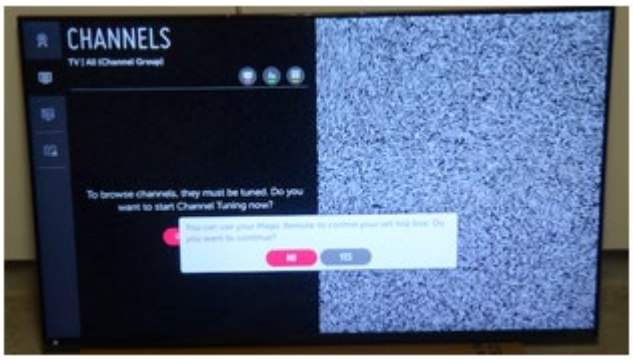
71. Additionally, LGD directly infringed the '706 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates, including LGDUS, including by selling (and having sold) and offering for sale (and having offered for sale) the Accused Products directly to such entities and/or importing (or having imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the '706 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant time period. Further, LGD is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGDUS is (and has been) essentially the same company, and LGD has (and has had) the right and ability to control LGDUS' infringing acts and received a direct financial benefit from LGDUS' infringement.

72. Further, New Optics directly infringed the '706 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including New Optics US, including by selling (or having sold) and offering for sale (or having offered for sale) the Accused Products directly to such entities and/or importing (or having

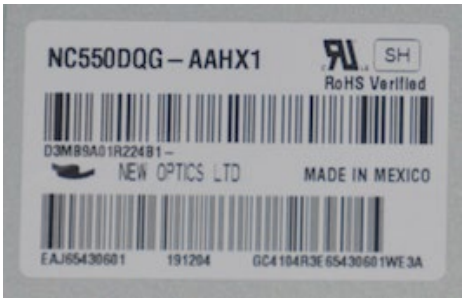
imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the ’706 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant timeframe. Further, New Optics is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including New Optics US, (under both the alter ego and agency theories) because, as an example and on information and belief, New Optics US is (and has been) essentially the same company, and New Optics has (and has had) the right and ability to control New Optics US’ infringing acts and received a direct financial benefit from New Optics US’ infringement.

73. For example, Defendants infringed claim 1 of the ’706 patent. The products accused of infringing the ’706 patent comprise a liquid crystal display device. For example, LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1), which is used in products such as the Apple iMac Pro, comprises a liquid crystal display device:

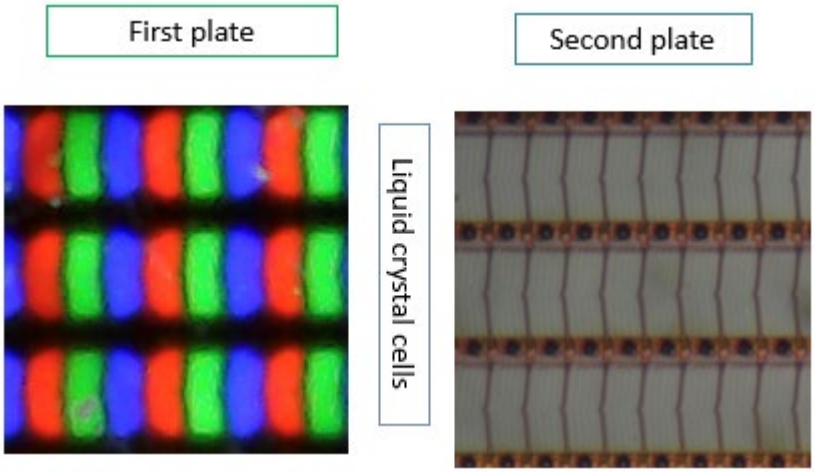
In another example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC49EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display device:



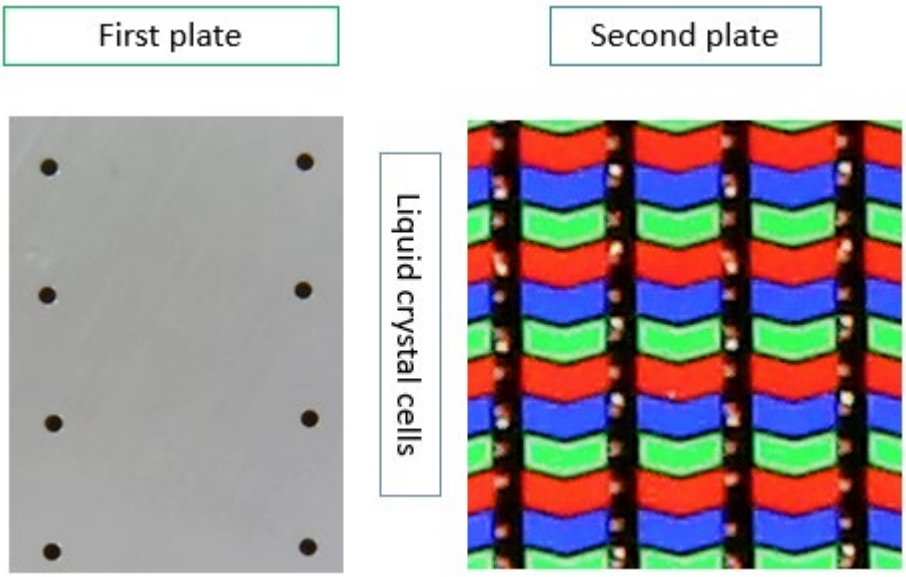
In a further example, LG's TV model no. 55UM7300PUA includes New Optics LCM model no. NC550DQG-AAHZ1, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display device:



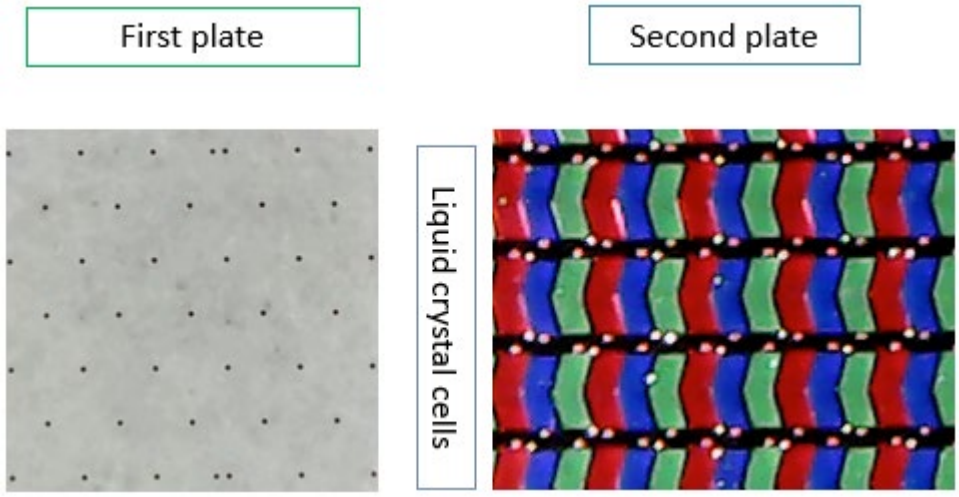
74. The products accused of infringing the ’706 patent comprise a liquid crystal device comprising liquid crystal cells, a first plate disposed on a displaying side of the cells, and a second plate disposed on a reverse side of the cells. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



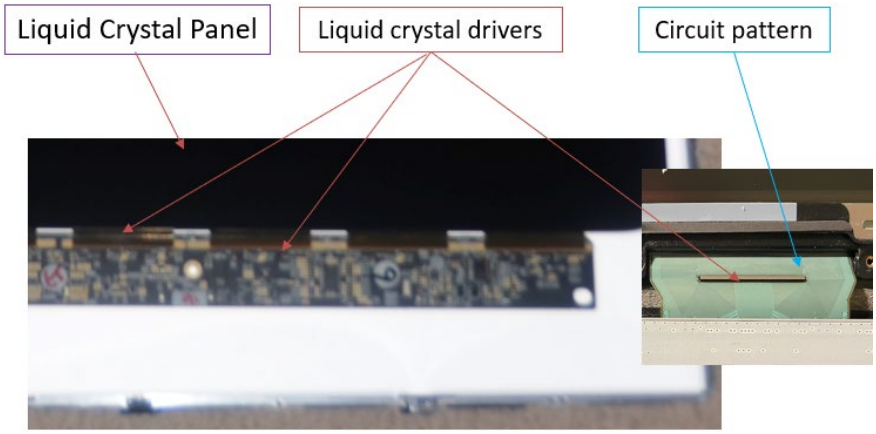
In another example, an examination of LGD’s TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE’s TV model no. 49SM8600PUA demonstrates this:



In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



75. 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/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



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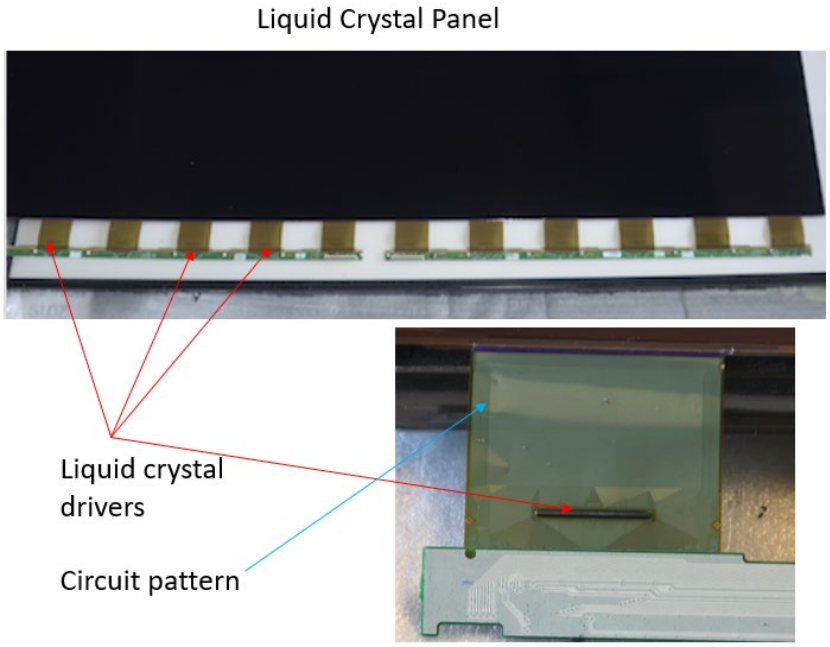

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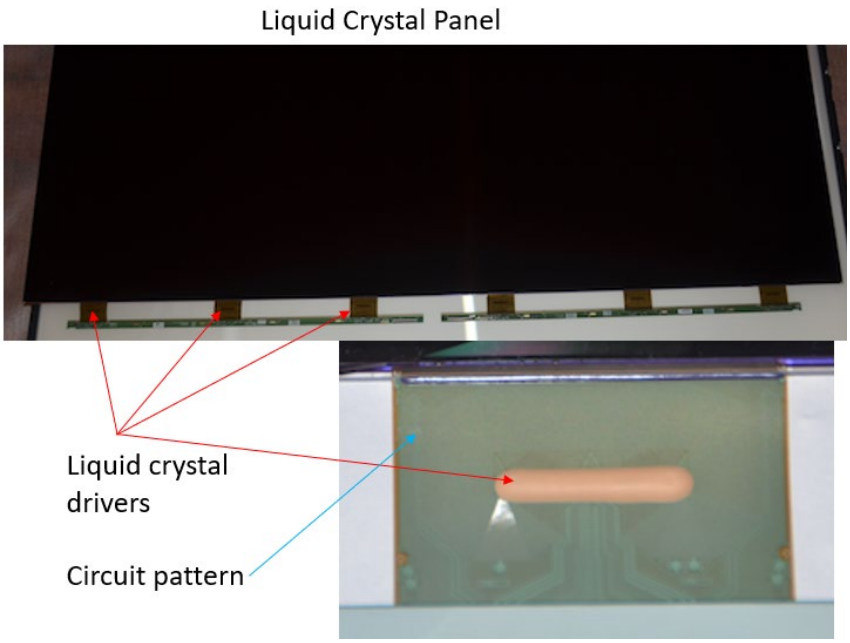
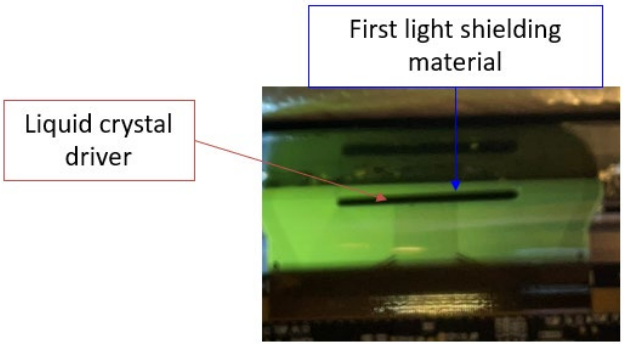
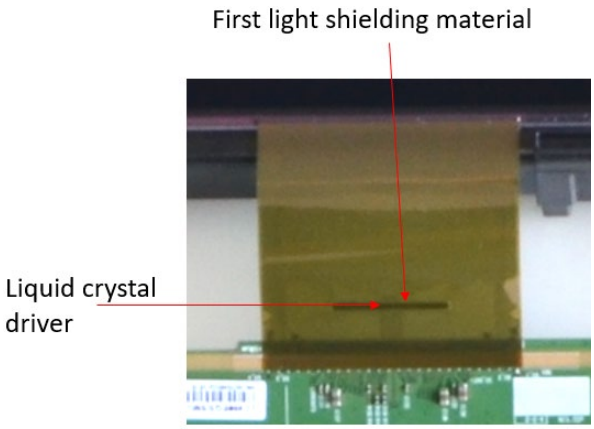


76. The products accused of infringing the ’706 patent comprise a first light shielding material disposed adjacent a face of said liquid crystal driver so as to prevent an outer light from being incident to said liquid crystal driver. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



In another example, an examination of LGD’s TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE’s TV model no. 49SM8600PUA demonstrates this:



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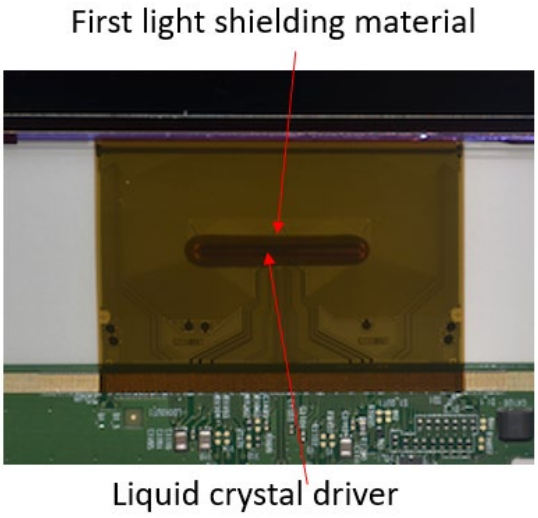
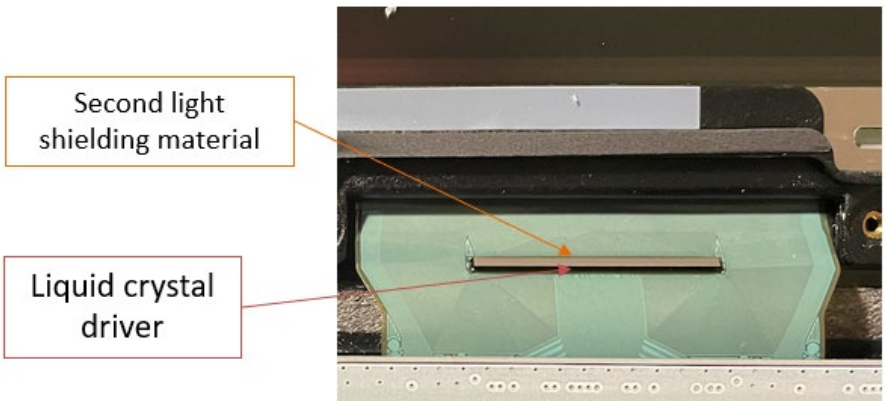


77. The products accused of infringing the '706 patent comprise a second light shielding material disposed adjacent an opposite face of said liquid crystal driver so as to prevent an outer light from being incident to said liquid crystal driver. For example, an examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



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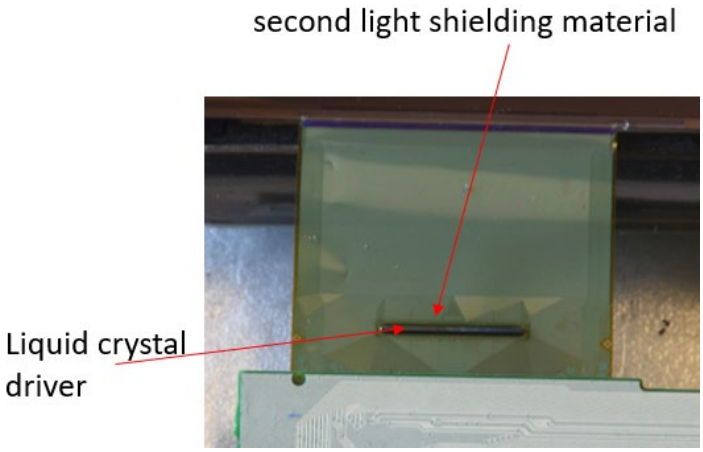

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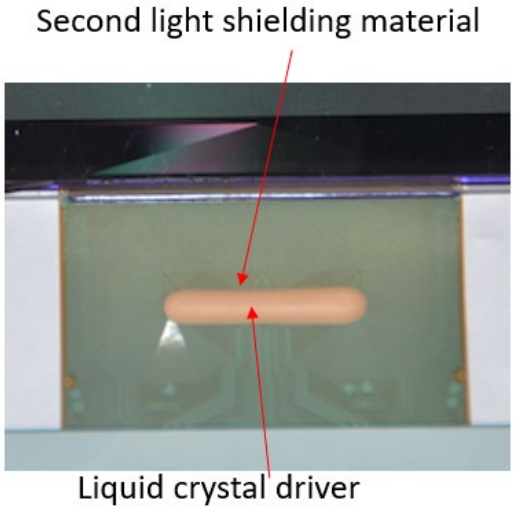
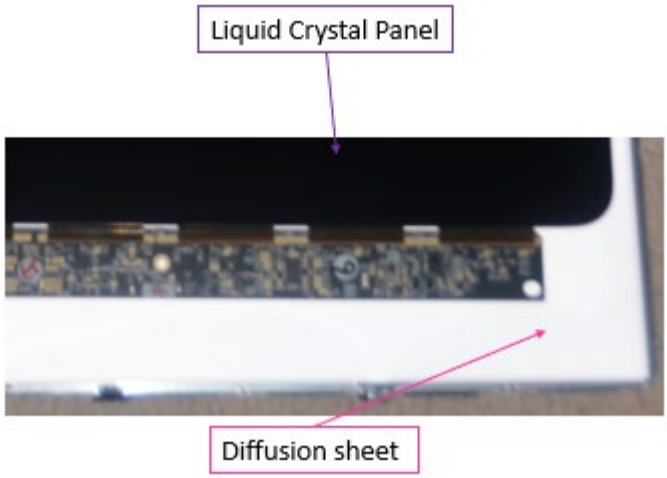
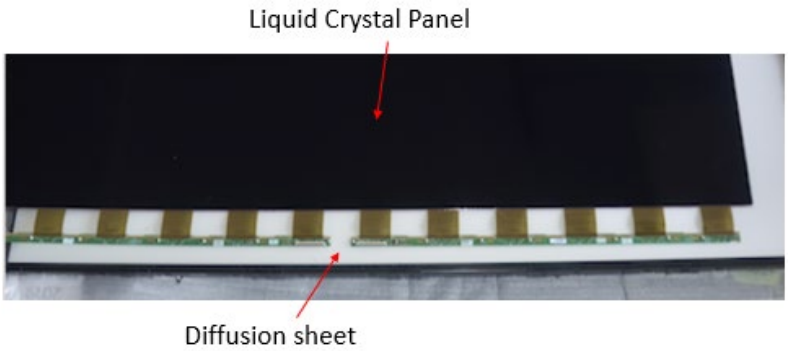


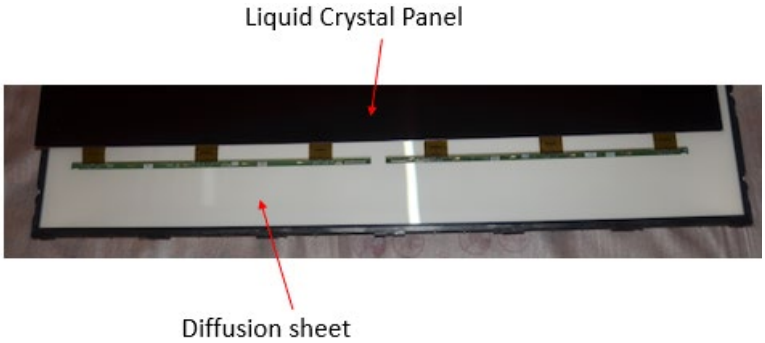
78. The products accused of infringing the ’706 patent comprise a diffusion sheet located adjacent said liquid crystal display panel. An examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



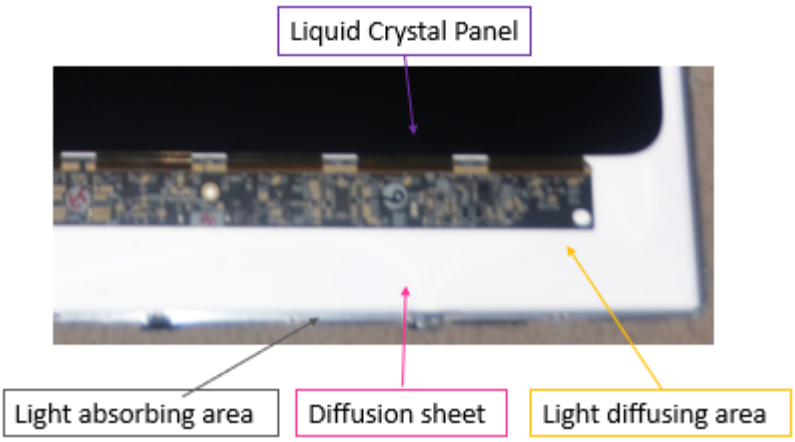
In another example, LG’s TV model no. 49SM8600PUA, Heesung LCM model no. HC49EQH-SLXA1-211X, and/or the LGD LCD (model no. not identified on device) demonstrate this:



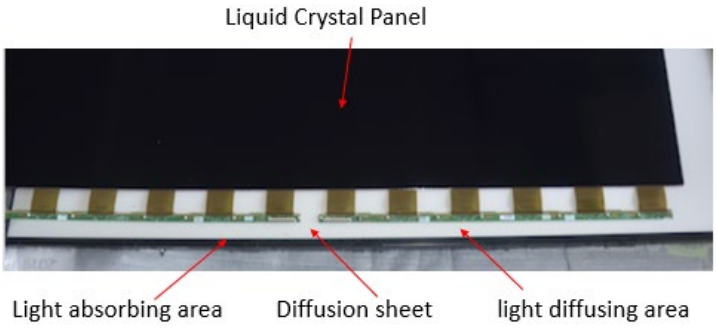
In a further example, LG's TV model no. 55UM7300PUA, New Optics LCM model no. NC550DQG-AAHZ1, and/or the LGD LCD (model no. not identified on device) demonstrate this:



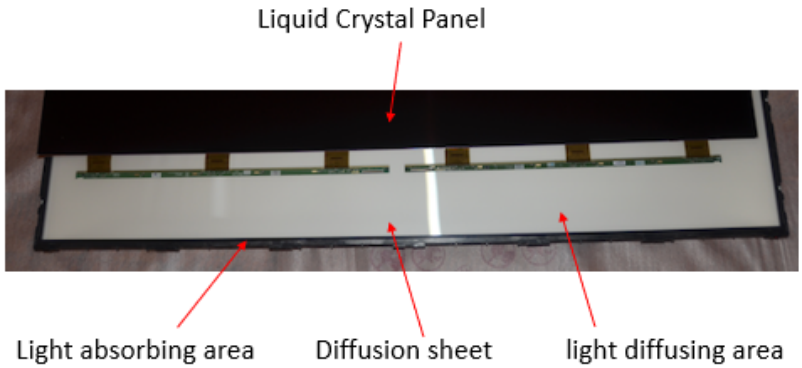
79. The products accused of infringing the '706 patent are configured such that the diffusion sheet comprises a light diffusing area and a light absorbing area located on the outer periphery thereof, the light diffusing area serving to diffuse illumination light from a light source to the liquid crystal display panel, and the light absorbing area serving to absorb the extraneous light incident on said liquid crystal driver. For example, an examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



In another example, LG's TV model no. 49SM8600PUA, Heesung LCM model no. HC49EQH-SLXA1-211X, and/or the LGD LCD (model no. not identified on device) demonstrate this:



In a further example, LG's TV model no. 55UM7300PUA, New Optics LCM model no. NC550DQG-AAHZ1, and/or the LGD LCD (model no. not identified on device) demonstrate this:



80. 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. Based on information and belief, LGE was on notice of the ’706 patent from at least the foregoing dates that LGD was on notice of the ’706 patent as a result of receiving notice from LGD, which was (and is) LGE’s supplier and a closely related company controlled by LGE.[1] On information and belief, LGD is an agent and alter ego of LGE. Based on information and belief, LGEUS was on notice of the ’706 patent from at least the foregoing dates that LGD was on notice of the ’706 patent as a result of receiving notice from LGD, which was (and is) LGEUS’ supplier and a closely related company to LGEUS.[2] On information and belief, LGEUS is an alter ego of LGD. Based on information and belief, LGEUS was on notice of the ’706 patent from at least the foregoing dates that LGE was on notice of the ’706 patent as a result of receiving notice from LGE, which has wholly owned and controlled its U.S. subsidiary LGEUS.[3] On information and belief, LGEUS is an agent and alter ego of LGE. Moreover, New Optics, 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

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[1] *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.”).

[2] *See* FN 1, *supra*.

[3] *See* FN 1, *supra*.

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.[4]

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

81. On information and belief, since at least the above-mentioned dates when LGE, LGEUS, LGD, and New Optics were on notice of their infringement, LGE, LGEUS, LGD, and New Optics 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, LGE, LGEUS, LGD, and New Optics did so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the '706 patent. LGE, LGEUS, LGD, and New Optics have caused and/or intended to cause, and took affirmative steps to induce infringement by their 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, LGE, LGEUS, LGD, and New Optics have actively induced distributors, retailers, customers, subsidiaries, importers, testing outfits,

[4] *See* FN 1, *supra*.

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, LGE, LGEUS, LGD, and New Optics have 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 LGD and New Optics 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 LGD and New Optics 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/.

82. On information and belief, despite having knowledge of the ’706 patent and their infringement, LGE, LGEUS, LGD, and New Optics specifically intended for others to import and sell products accused of infringing the ’706 patent. For example, LGE, LGEUS, LGD, and New Optics 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, LGE, LGEUS, LGD, and New Optics instructed and encouraged the importers to import and/or sell products accused of infringing the ’706 patent. On information and belief, the purchase and sale agreements between LGE, LGEUS, LGD, and New Optics and the importers provide such instruction and/or encouragement. Further, on information and belief, LGE, LGEUS, LGD, and New Optics’ U.S.-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.

83. Upon information and belief, despite having knowledge of the ’706 patent and knowledge that they were directly and/or indirectly infringing one or more claims of the ’706 patent, LGE, LGEUS, LGD, and New Optics nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. LGE, LGEUS, LGD, and New Optics’ 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.

84. Plaintiff has been damaged as a result of Defendants’ infringing conduct described in this Count. Defendants are, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for Defendants’ 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.

85. 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 Defendants’ infringements of the ’706 patent.

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

86. Plaintiff incorporates paragraphs 1 through 85 herein by reference.

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

88. 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.

89. 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))

90. Defendants have 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.

91. Defendants 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, Defendants, either by themselves (individually and/or in concert) 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 their alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendants sold and made some Accused Products outside of the United States, delivered those products to their customers, distributors, and/or subsidiaries in the United States, or in the case that they delivered the Accused Products outside of the United States they 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).

92. Furthermore, LGE directly infringed the ’347 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, including by selling and offering for sale the Accused Products directly to

such entities and/or importing the Accused Products into the United States for such entities. Such entities conducted activities that constituted direct infringement of the ’347 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGE is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGE, LGEUS, LGD, and LGDUS are (and were) essentially the same company, and/or agents of each other, and LGE has (and had) the right and ability to control LGEUS, LGD, and LGDUS’ infringing acts and receives a direct financial benefit from LGEUS, LGD, and LGDUS’ infringement.

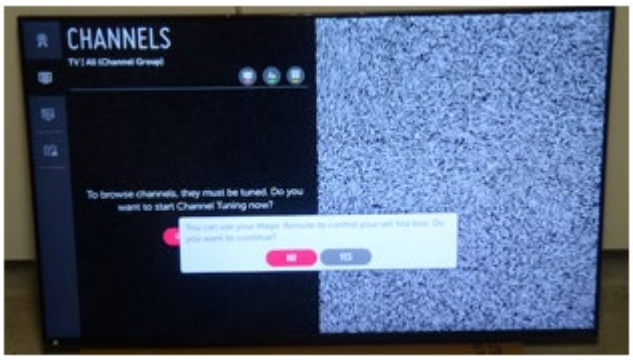
93. Additionally, LGD directly infringed the ’347 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates, including LGDUS, including by selling (and having sold) and offering for sale (and having offered for sale) the Accused Products directly to such entities and/or importing (or having imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the ’347 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant time period. Further, LGD is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGDUS is (and has been) essentially the same company, and LGD has (and has had) the right and ability to control LGDUS’ infringing acts and received a direct financial benefit from LGDUS’ infringement.

94. Further, New Optics directly infringed the ’347 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents,

including New Optics US, including by selling (or having sold) and offering for sale (or having offered for sale) the Accused Products directly to such entities and/or importing (or having imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the ’347 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant timeframe. Further, New Optics is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including New Optics US, (under both the alter ego and agency theories) because, as an example and on information and belief, New Optics US is (and has been) essentially the same company, and New Optics has (and has had) the right and ability to control New Optics US’ infringing acts and received a direct financial benefit from New Optics US’ infringement.

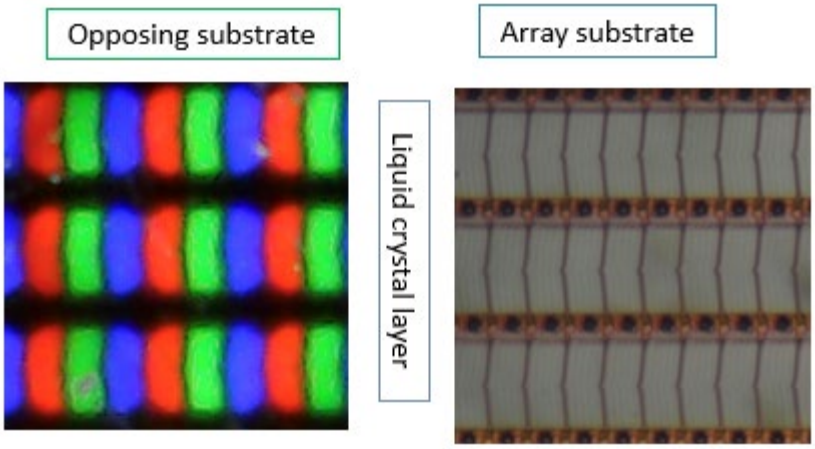
95. For example, Defendants infringed claim 1 of the ’347 patent. The products accused of infringing the ’347 patent comprise a liquid crystal display. For example, LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1), which is used in products such as the Apple iMac Pro, comprises a liquid crystal display:

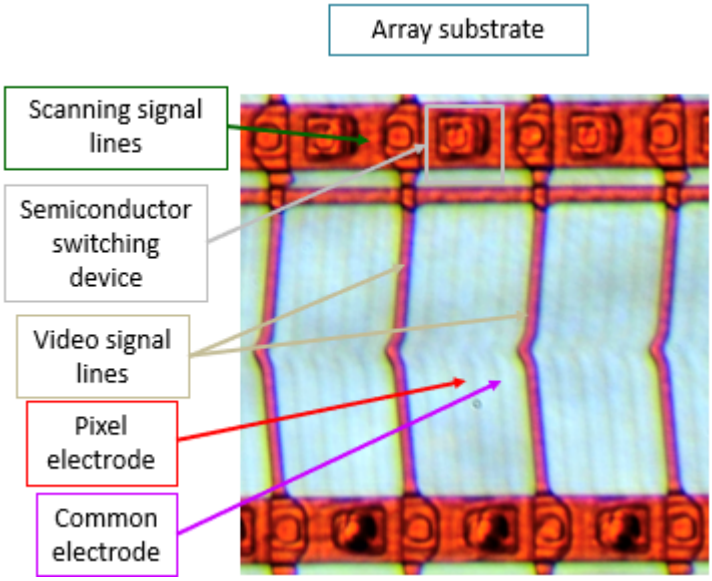
In another example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC49EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display:



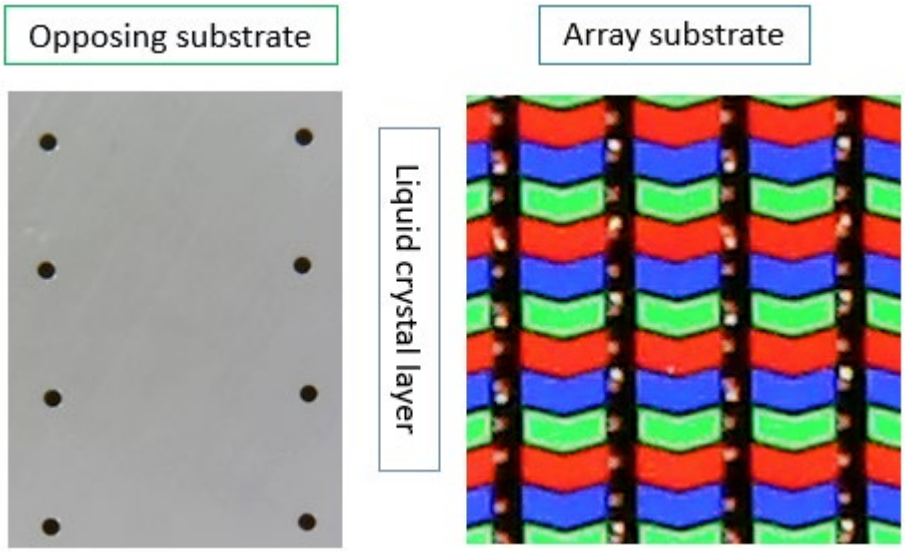
In a further example, LG's TV model no. 55UM7300PUA includes New Optics LCM model no. NC550DQG-AAHZ1, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display:

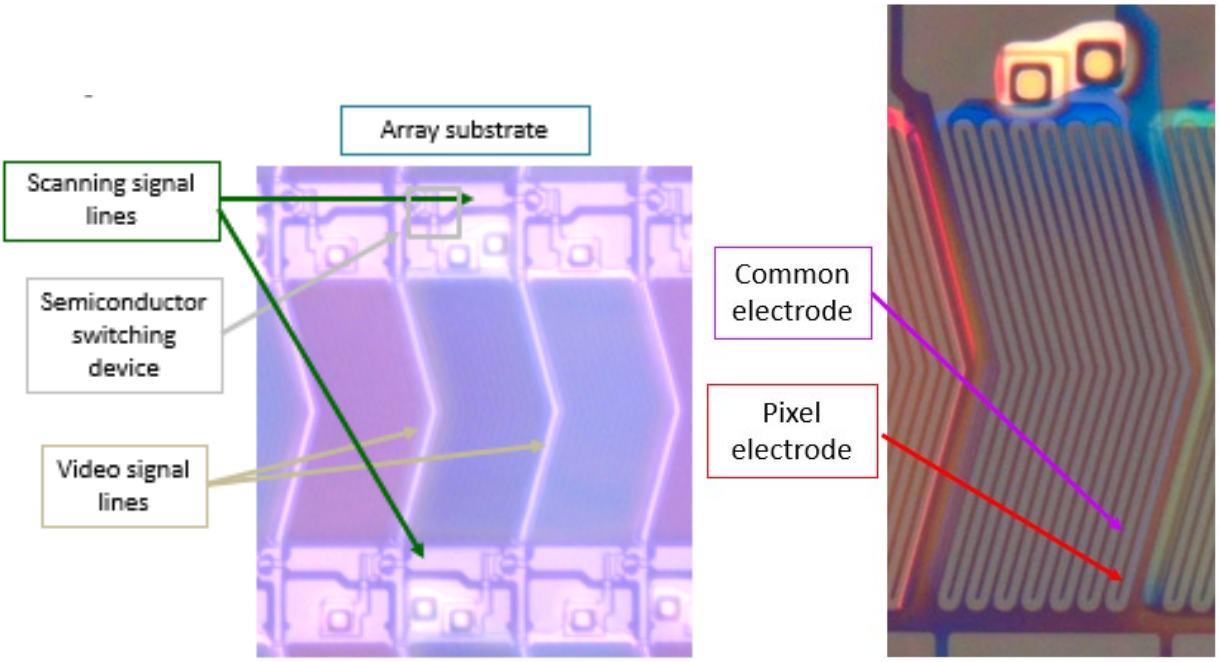
96. The products accused of infringing the ’347 patent comprise a liquid crystal panel including an array substrate having an upper surface on which a common electrode, a pixel electrode, a scanning signal line, a video signal line, and a semiconductor switching device are formed, an opposing substrate 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/LCM model no. LM270QQ1(SD)(D1) demonstrates this:





In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:





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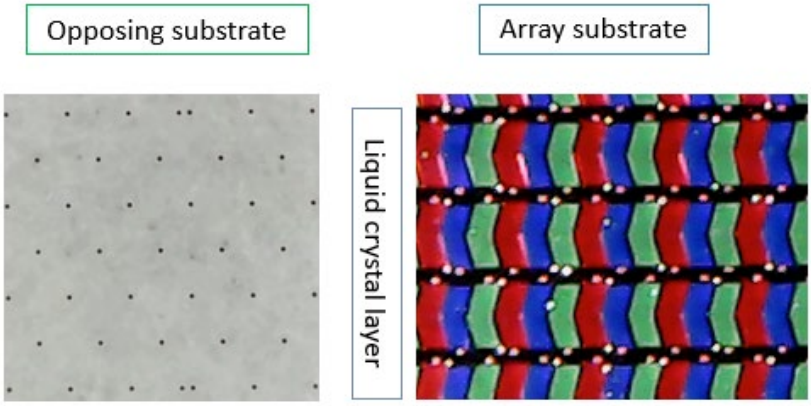
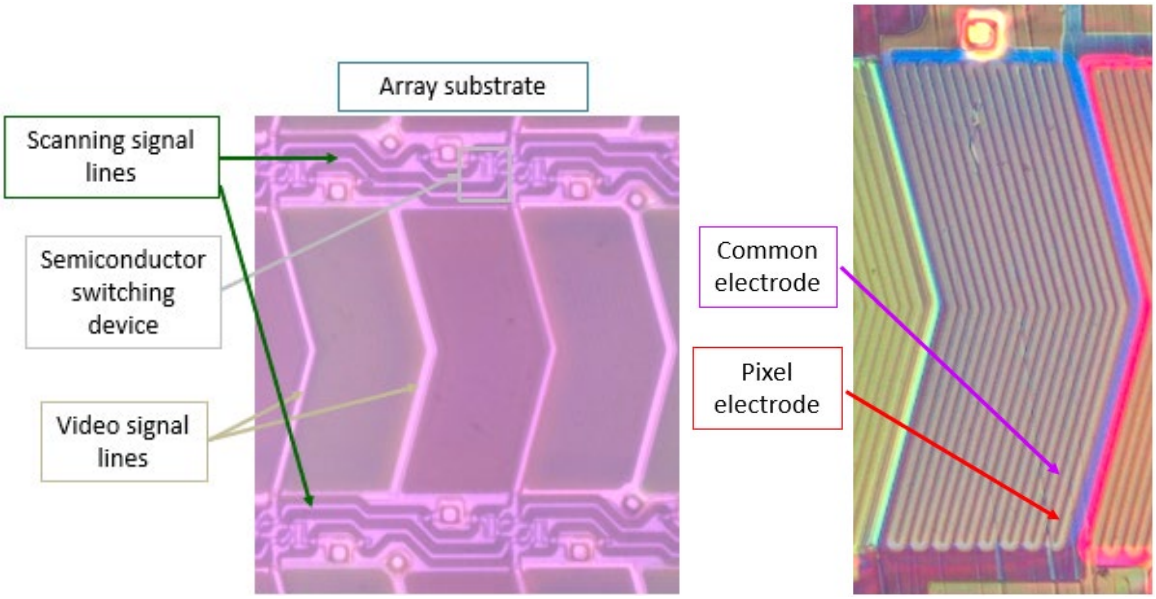
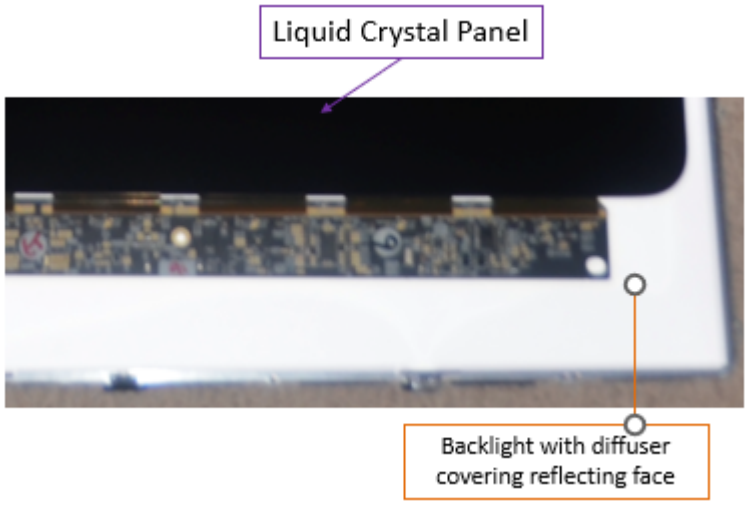
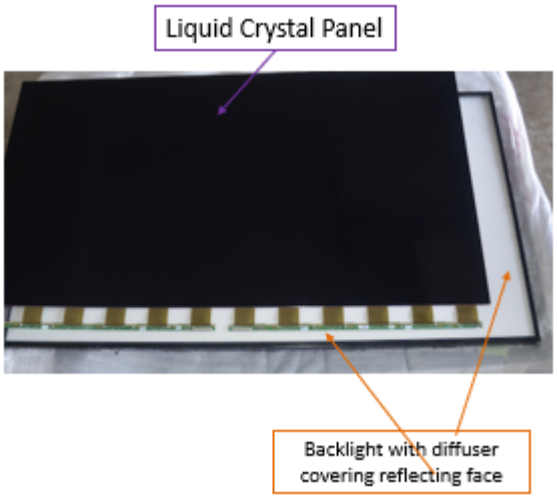




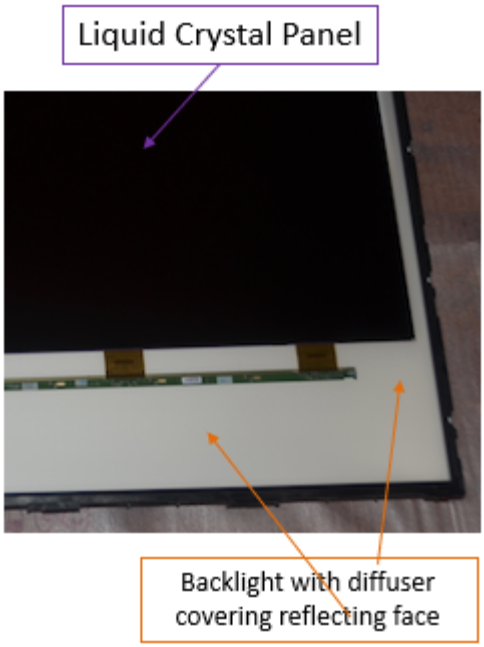
97. The products accused of infringing the ’347 patent comprise a reflecting face formed below the liquid crystal panel, wherein a light reflected on the reflecting face is transmitted through the liquid crystal panel. The configuration of the products accused of infringing the ’347 patent is such that 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 LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



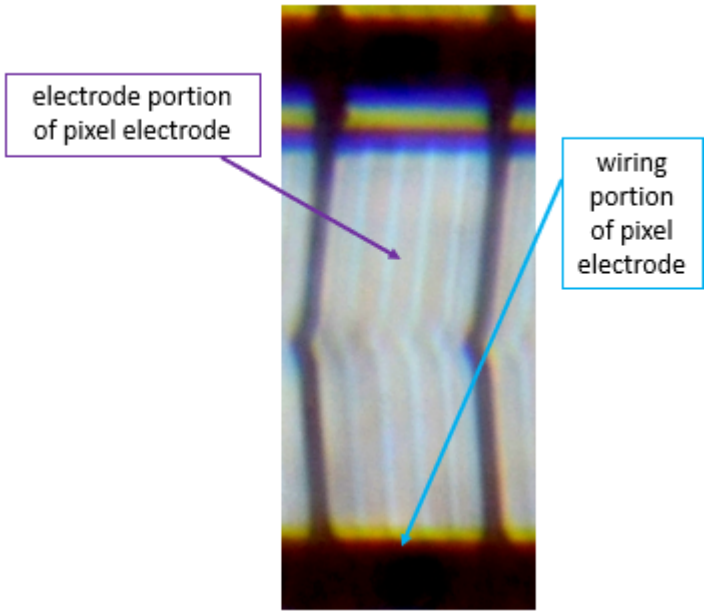
In another example, LG's TV model no. 49SM8600PUA, Heesung LCM model no. HC49EQH-SLXA1-211X, and/or the LGD LCD (model no. not identified on device) demonstrate this:



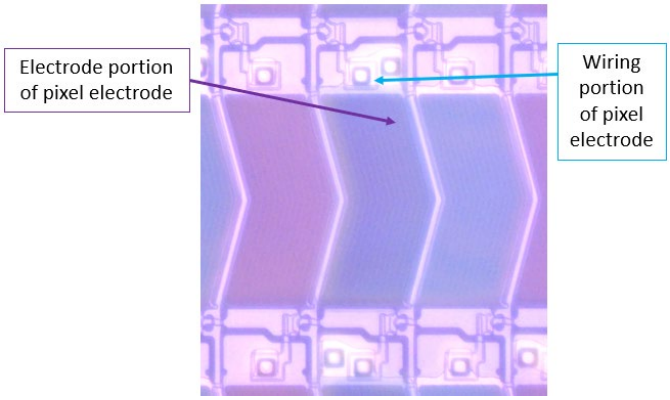
In a further example, LG's TV model no. 55UM7300PUA, New Optics LCM model no. NC550DQG-AAHZ1, and/or the LGD LCD (model no. not identified on device) demonstrate this:



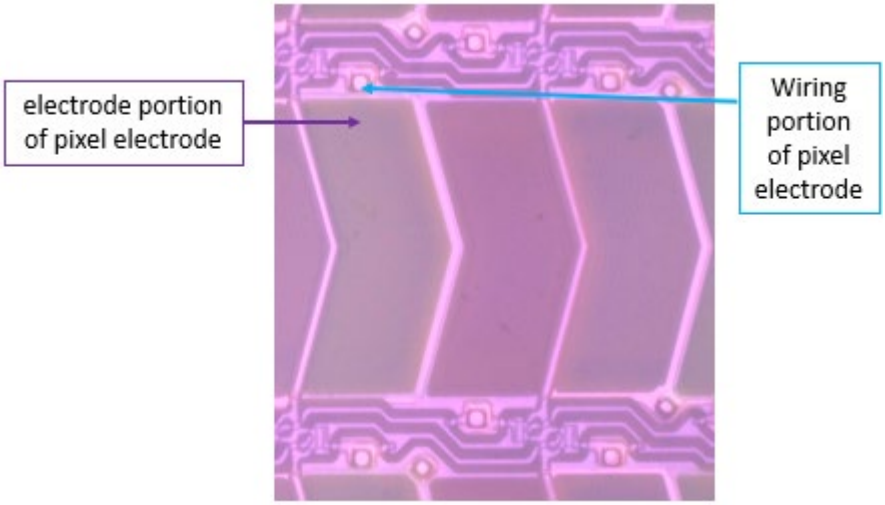
98. The products accused of infringing the ’347 patent are configured such that at least one electrode of the common electrode and the pixel electrode is constituted by an electrode portion and a wiring portion. For example, the pixel electrode is constituted by an electrode portion and a wiring portion. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



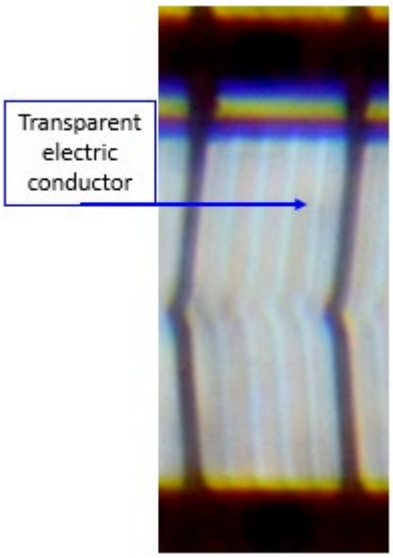
In another example, an examination of LGD’s TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE’s TV model no. 49SM8600PUA demonstrates this:



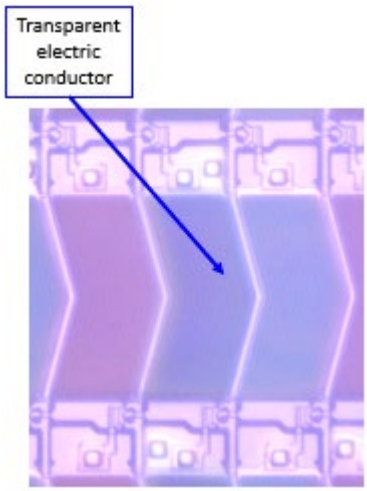
In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



99. 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/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:



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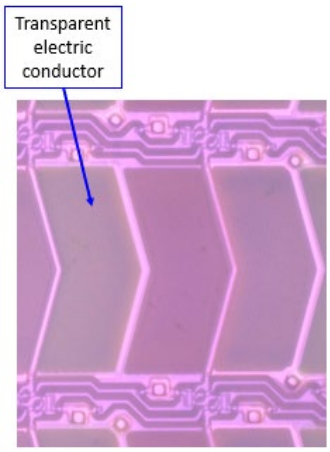
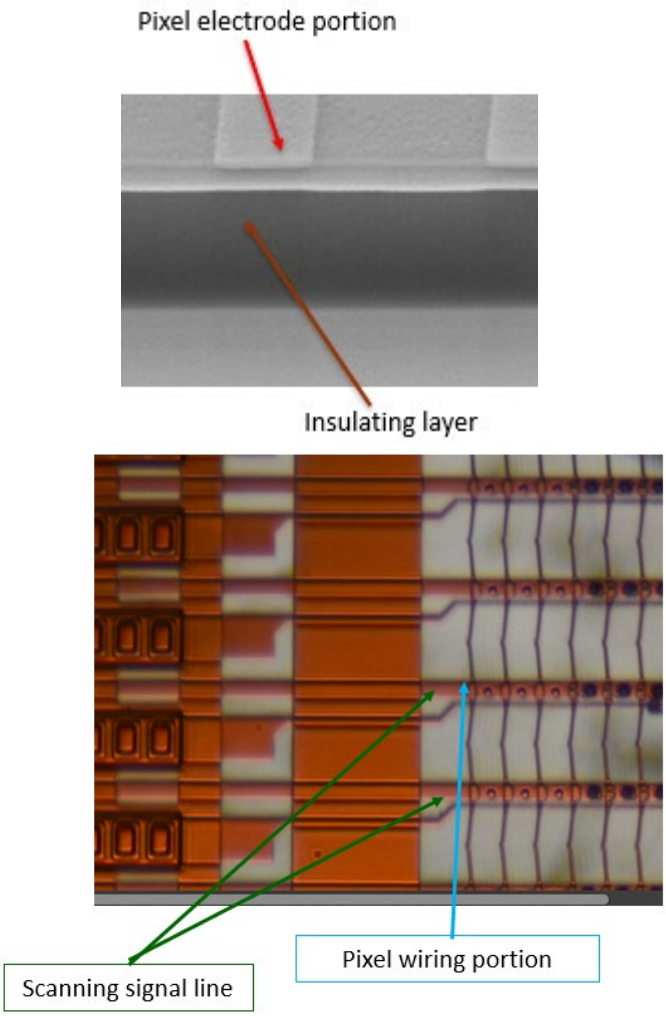
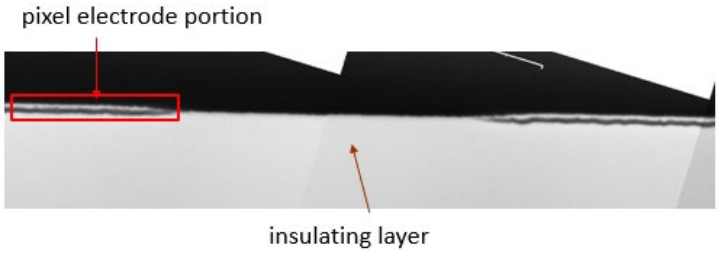
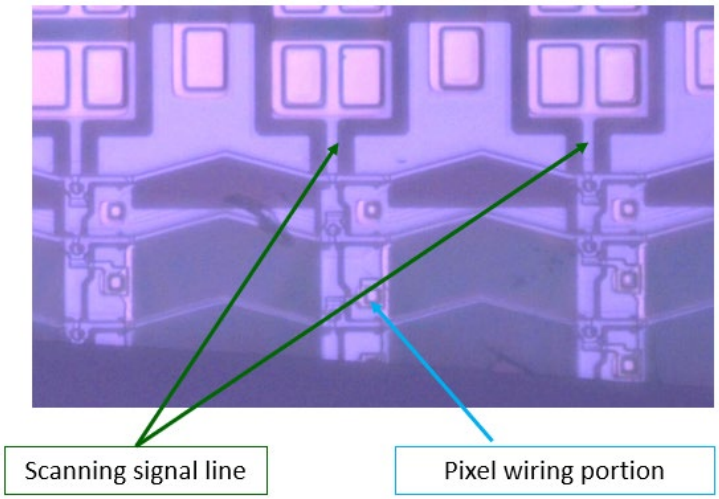


100. The products accused of infringing the '347 patent are configured such that the pixel electrode portion is formed in a layer separated by an insulating layer from a layer in which the scanning signal line is formed, and the pixel wiring portion is formed in the layer in which the scanning signal line is formed. For example, an examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:

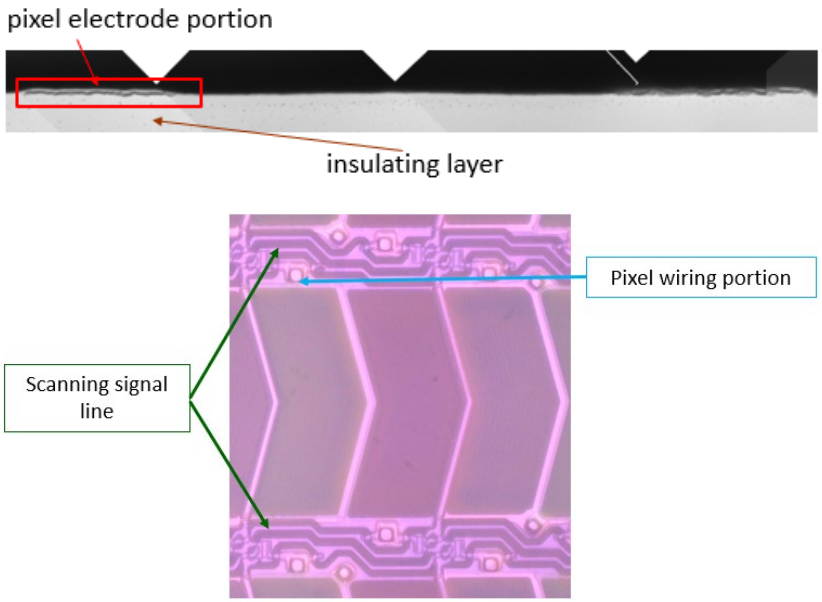


In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:





In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



101. 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. Based on information and belief, LGE was on notice of the '347 patent from at least the foregoing dates that LGD was on notice of the '347 patent as a result

of receiving notice from LGD, which was (and is) LGE's supplier and a closely related company controlled by LGE.[5] On information and belief, LGD is an agent and alter ego of LGE. Based on information and belief, LGEUS was on notice of the '347 patent from at least the foregoing dates that LGD was on notice of the '347 patent as a result of receiving notice from LGD, which was (and is) LGEUS' supplier and a closely related company to LGEUS.[6] On information and belief, LGEUS is an alter ego of LGD. Based on information and belief, LGEUS was on notice of the '347 patent from at least the foregoing dates that LGE was on notice of the '347 patent as a result of receiving notice from LGE, which has wholly owned and controlled its U.S. subsidiary LGEUS.[7] On information and belief, LGEUS is an agent and alter ego of LGE. Moreover, New Optics, based on information and belief, was 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.[8]

102. At a minimum, New Optics has known about the '347 patent since at least April 27, 2021, when New Optics received notice of its infringement.

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

103. On information and belief, since at least the above-mentioned dates when LGE, LGEUS, LGD, and New Optics were on notice of their infringement, LGE, LGEUS, LGD, and New Optics actively induced, under U.S.C. § 271(b), distributors, retailers, customers,

[5] *See* FN 1, *supra*.
[6] *See* FN 1, *supra*.
[7] *See* FN 1, *supra*.
[8] *See* FN 1, *supra*.

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 dates, LGE, LGEUS, LGD, and New Optics did so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the ’347 patent. LGE, LGEUS, LGD, and New Optics have caused and/or intended to cause, and took affirmative steps to induce infringement by their 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, LGE, LGEUS, LGD, and New Optics have 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, LGE, LGEUS, LGD, and New Optics have 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 LGD and New Optics 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 LGD and New Optics 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/.

104. On information and belief, despite having knowledge of the ’347 patent and their infringement, LGE, LGEUS, LGD, and New Optics specifically intended for others to import and sell products accused of infringing the ’347 patent. For example, LGE, LGEUS, LGD, and New Optics specifically intended for its U.S.-based subsidiaries or customers to import and sell products accused of infringing the ’347 patent. On information and belief, LGE, LGEUS, LGD, and New Optics instructed and encouraged the importers to import and/or sell products accused of infringing the ’347 patent. On information and belief, the purchase and sale agreements between LGE, LGEUS, LGD, and New Optics and the importers provide such instruction and/or encouragement. Further, on information and belief, LGE, LGEUS, LGD, and New Optics’ U.S.-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.

105. Upon information and belief, despite having knowledge of the ’347 patent and knowledge that they were directly and/or indirectly infringing one or more claims of the ’347 patent, LGE, LGEUS, LGD, and New Optics nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. LGE, LGEUS, LGD, and New Optics’ 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.

106. Plaintiff has been damaged as a result of Defendants infringing conduct described in this Count. Defendants are, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for Defendants' 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.

107. 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 Defendants' infringements of the '347 patent.

COUNT IV
(Infringement of U.S. Patent No. 7,995,047)

108. Plaintiff incorporates paragraphs 1 through 107 herein by reference.

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

110. Plaintiff is the owner of the '047 patent with all substantial rights to the '047 patent including the exclusive right to enforce, sue, and recover damages for past and future infringement.

111. The '047 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))

112. On information and belief, LG, LGEUS, and LGD have infringed and continue to infringe literally, and/or under the Doctrine of Equivalents, one or more claims of the '047 patent in this District and elsewhere in Texas and the United States.

113. LG, LGEUS, and LGD directly infringe the '047 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, using, testing, and/or importing those Accused Products, their

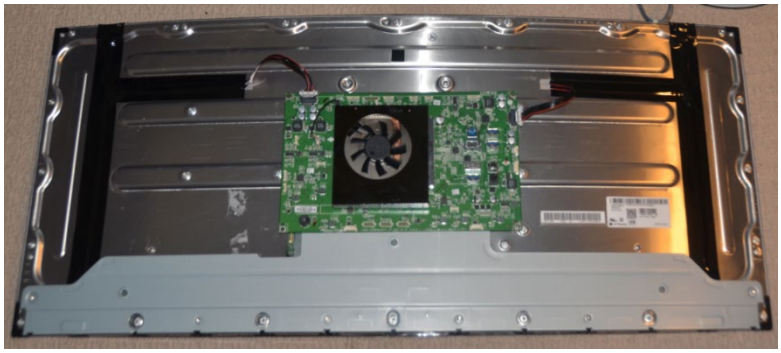
components and processes, and/or products containing the same that incorporate the fundamental technologies and claims of the ’047 patent. For example, LG, LGEUS, and LGD, either by themselves (individually and/or in concert) and/or via an agent, directly infringe the ’047 patent by offering for sale, 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 ’047 patent, to and via their alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, LG, LGEUS, and LGD sell and make some Accused Products outside of the United States, deliver those products to their customers, distributors, and/or subsidiaries in the United States, or in the case that they deliver the Accused Products outside of the United States they do so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the ’047 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).

114. Furthermore, LGE directly infringes the ’047 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, including by selling and offering for sale the Accused Products directly to such entities and/or importing the Accused Products into the United States for such entities. Such entities conduct activities that constitute direct infringement of the ’047 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGE is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGE, LGEUS, LGD, and LGDUS are (and were) essentially the same company and/or agents of each other, and

LGE has (and had) the right and ability to control LGEUS, LGD, and LGDUS' infringing acts and receives a direct financial benefit from LGEUS, LGD, and LGDUS' infringement.

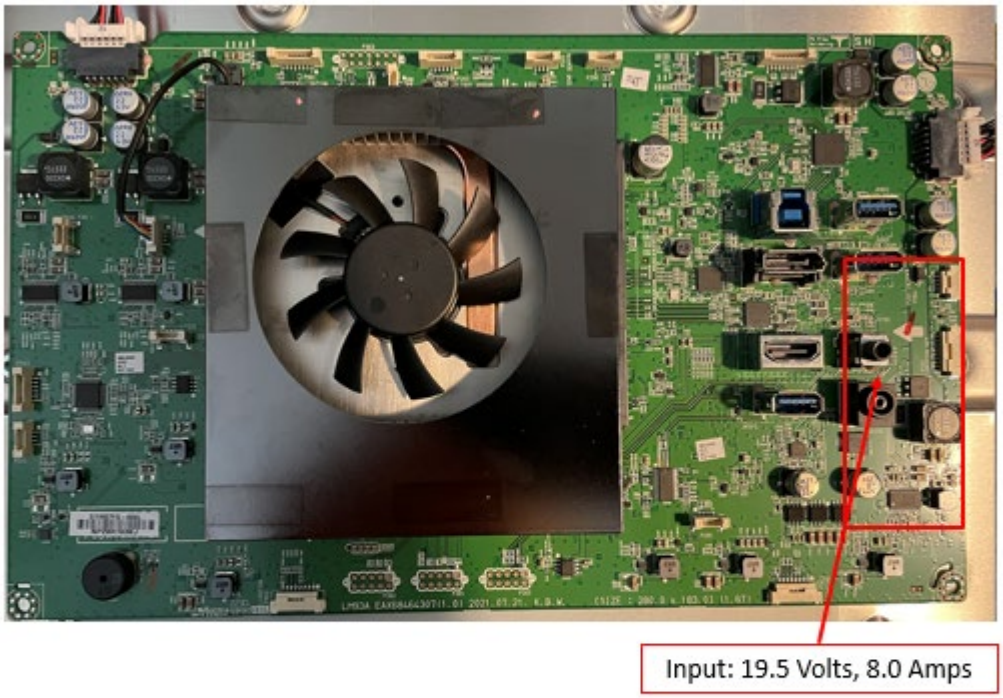
115. Additionally, LGD directly infringes the '047 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates, including LGDUS, including by selling and offering for sale the Accused Products directly to such entities and/or importing the Accused Products into the United States for such entities. Such entities conduct activities that constitute direct infringement of the '047 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGD is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGDUS is essentially the same company, and LGD has (and has had) the right and ability to control LGDUS' infringing acts and receives (and has received) a direct financial benefit from LGDUS' infringement.

116. For example, LG, LGEUS, and LGD infringe claim 1 of the '047 patent. The products accused of infringing the '047 patent comprise a current driving device. For example, LG power supply board model no. LM93A EAX68464307, which is used in products such as the LG 38GL950G monitor, comprises a current driving device:



117. The products accused of infringing the ’047 patent comprise a first voltage supply source for supplying a first voltage. An examination of LG power supply board model no. LM93A EAX68464307 included in the LG 38GL950G monitor demonstrates this:

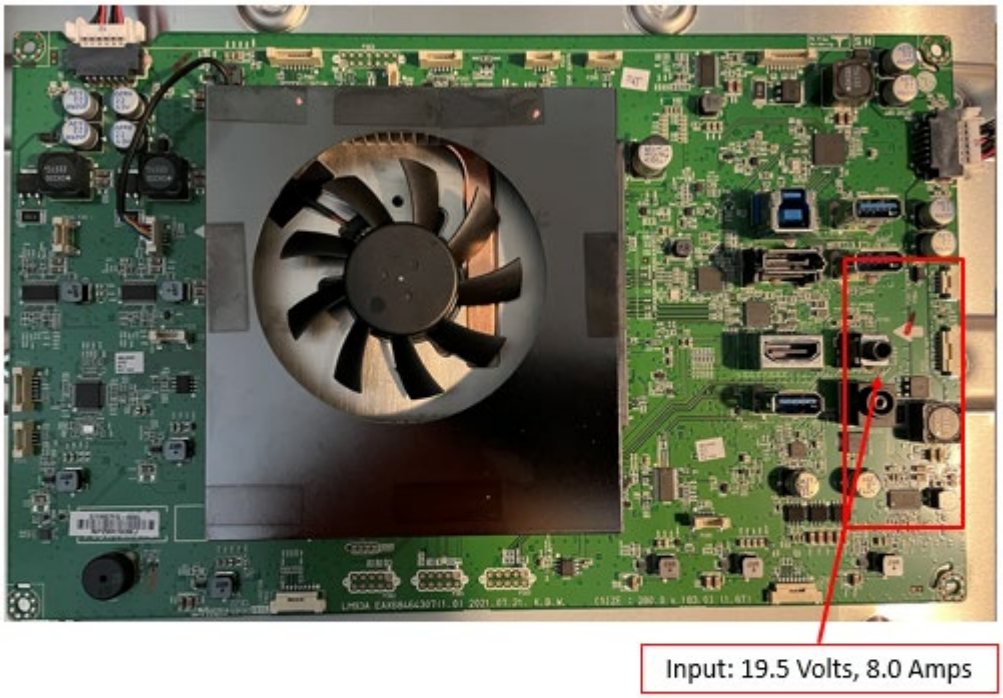
Power Supply Board



Monitor label

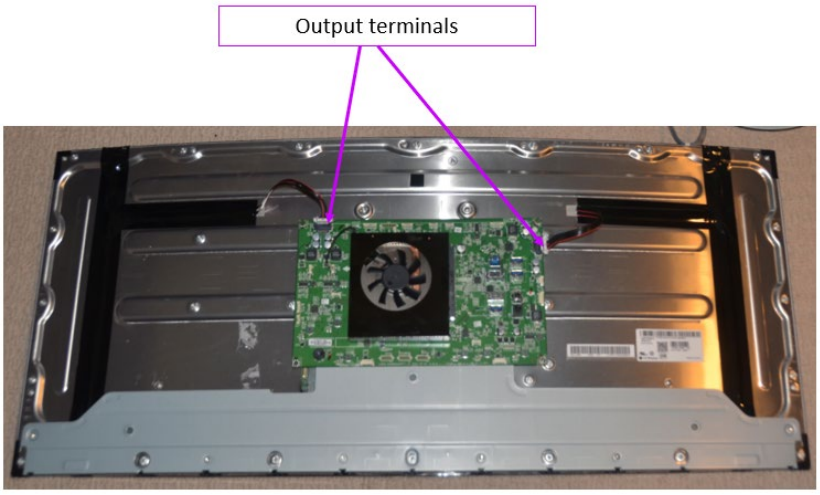
118. The products accused of infringing the ’047 patent comprise a first current supply source for supplying a first electric current. An examination of LG power supply board model no. LM93A EAX68464307 included in the LG 38GL950G monitor demonstrates this:

Power Supply Board

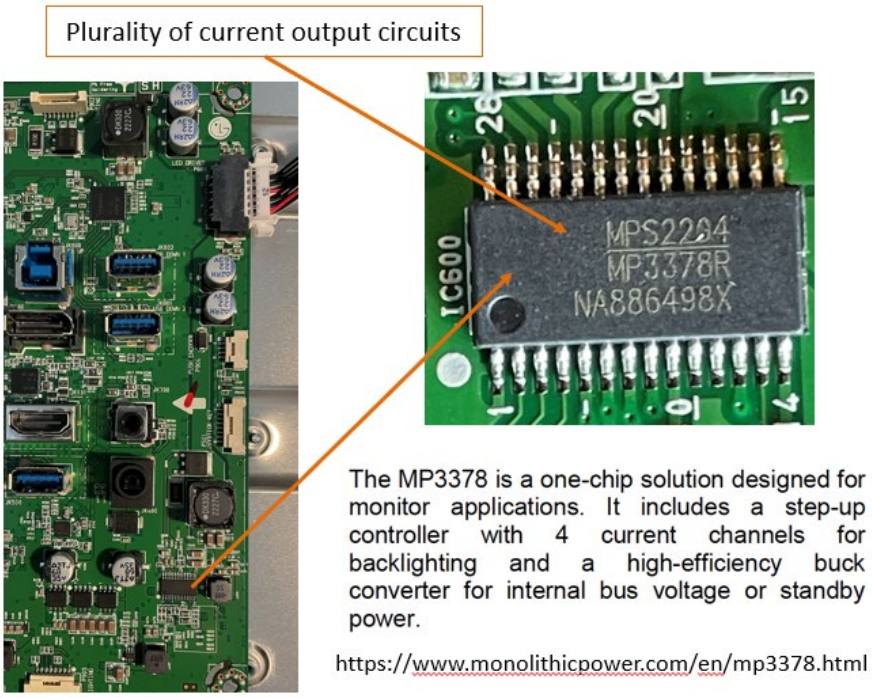


Monitor label

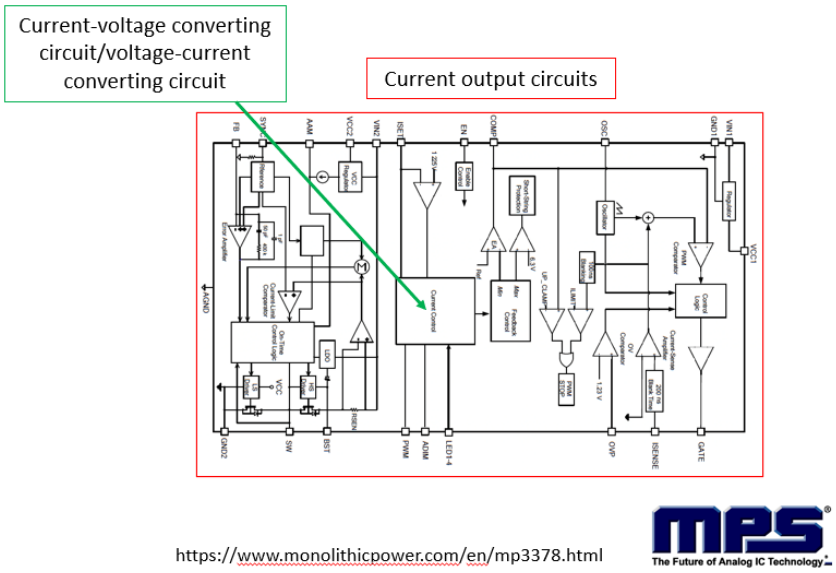
119. The products accused of infringing the ’047 patent comprise a plurality of output terminals. An examination of LG power supply board model no. LM93A EAX68464307 included in the LG 38GL950G monitor demonstrates this:



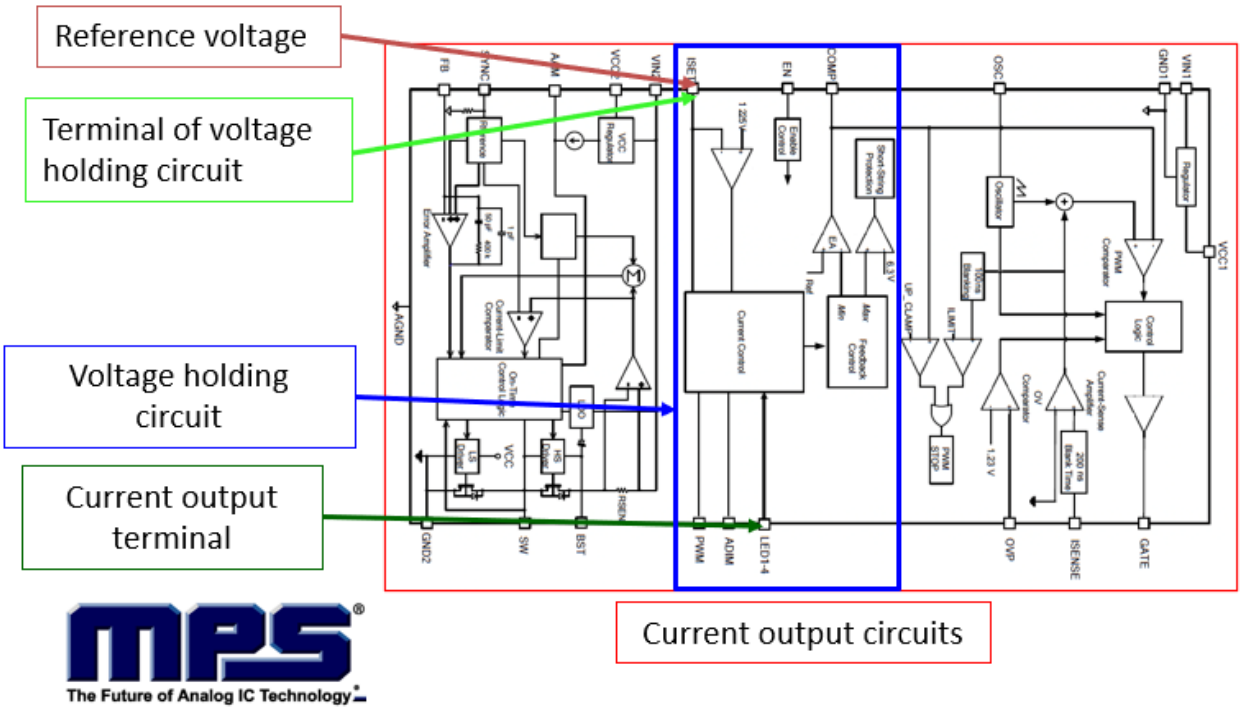
120. The products accused of infringing the ’047 patent comprise a plurality of current output circuits for outputting an electric current in accordance with said first electric current, each of said current output circuits comprising a current-voltage converting circuit, a voltage-current converting circuit, a voltage holding circuit having a terminal being connected to a reference voltage different from the first voltage, and at least one current output terminal. An examination of LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor demonstrates the presence of a plurality of current output circuits for outputting an electric current in accordance with said first electric current:



121. The products accused of infringing the ’047 patent are configured such that each of the current output circuits comprise a current-voltage converting circuit, and a voltage-current converting circuit. For example, an examination of LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor demonstrates this:



122. The products accused of infringing the ’047 patent are configured such that each of the current output circuits comprise a voltage holding circuit having a terminal being connected to a reference voltage different from the first voltage, and at least one current output terminal. For example, an examination of LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor demonstrates this:



https://www.monolithicpower.com/en/mp3378.html

123. The products accused of infringing the ’047 patent are configured such that each of said current output circuits operates in three operation modes including a voltage supply mode, a current supply mode, and a current output mode. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor supports all three operation modes. As demonstrated above and below, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset is configured such that each

of the circuits operate in three operation modes, including a voltage supply mode, a current supply mode, and a current output mode:

The WLED controller employs a programmable constant frequency, peak-current–mode, step-up converter with 4 channel regulated current sources to drive an array of up to 4 strings of white LEDs.

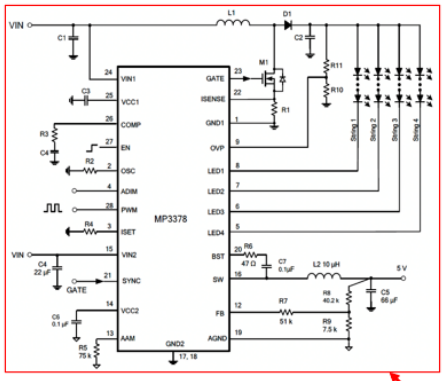
Internal 6 V Regulator

When VIN1 is greater than 6.5 V, VCC1 outputs a 6 V power supply to the external MOSFET switch gate driver and the internal control circuitry. The VCC1 voltage drops to 0 V when the WLED controller shuts down.

FEATURES

WLED Controller:

- 4-String, Max 350 mA/String WLED Controller
- Up to 24 V Input Voltage Range
- 2.5% Current Matching Accuracy
- Programmable Switching Frequency
- PWM and Analog Dimming Mode



Current output circuits

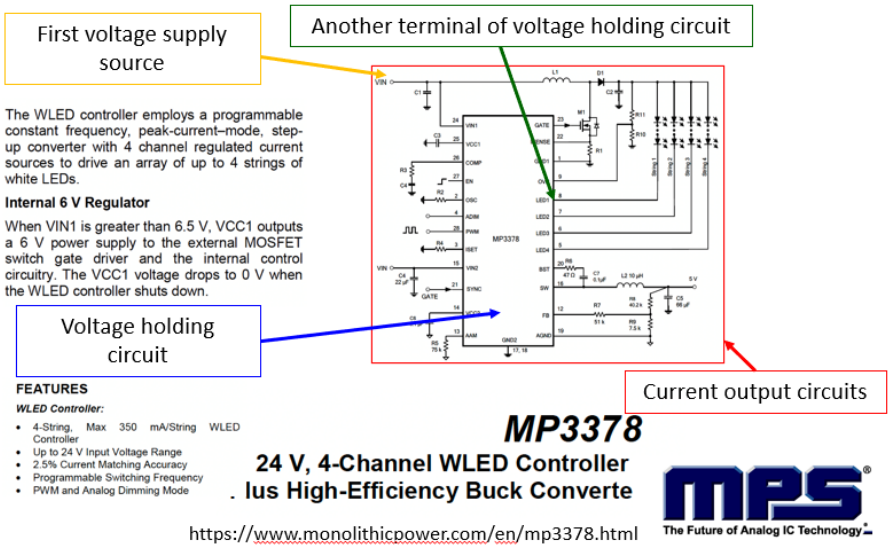
MP3378

24 V, 4-Channel WLED Controller Plus High-Efficiency Buck Converter

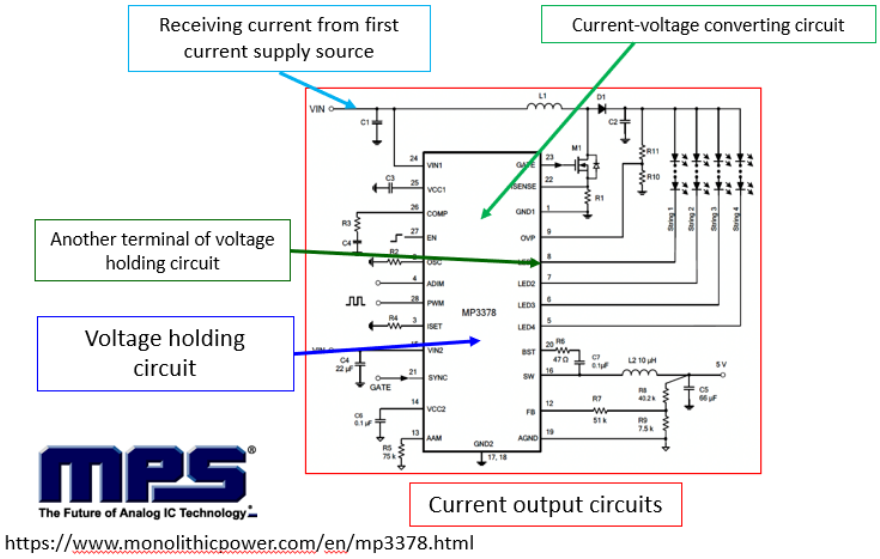
https://www.monolithicpower.com/en/mp3378.html

The Future of Analog IC Technology

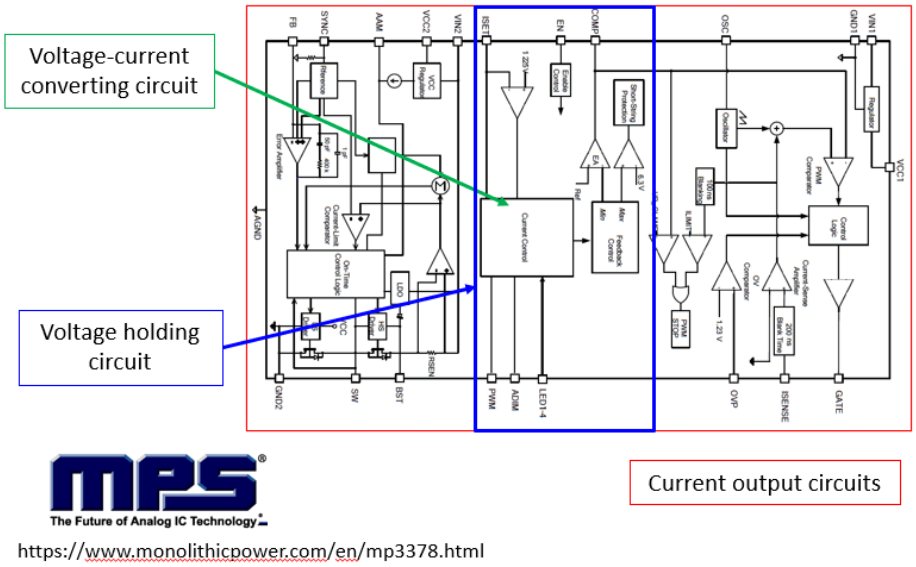
124. The products accused of infringing the ’047 patent are configured such that under said voltage supply mode, each of said current output circuits receives said first voltage from said first voltage supply source, and the first voltage is supplied to another terminal of said voltage holding circuit. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor is configured in such a manner:



125. The products accused of infringing the ’047 patent are configured such that under said current supply mode, each of said current output circuits receives said first current from said first current supply source, and generates a second voltage by said current-voltage converting circuit, and the first current is supplied to said another terminal of said voltage holding circuit. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor is configured in such a manner:



126. The products accused of infringing the ’047 patent are configured such that under said current output mode, each of said current output circuits outputs an output current according to said voltage held in said voltage holding circuit by said voltage-current converting circuit. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor is configured in such a manner:



https://www.monolithicpower.com/en/mp3378.html

127. At a minimum, LGE, LGEUS, and LGD have known about the ’047 patent since at least as early as the service date of this Original Complaint. Additionally, LGE, LGEUS, and LGD have known about the ’047 patent since at least July 29, 2020, when LGD received notice of their infringement. Furthermore, LGE, LGEUS, and LGD have known about the ’047 patent since at least July 29, 2020, when LGE received notice of their infringement. Based on information and belief, LGE was on notice of the ’047 patent from at least the foregoing dates that LGD was on notice of the ’047 patent as a result of receiving notice from LGD, which was (and is) LGE’s supplier and a closely related company controlled by LGE.[9] On information and belief, LGD is an agent and alter ego of LGE. Based on information and belief, LGEUS was on notice of the ’047

[9] *See* FN 1, *supra*.

patent from at least the foregoing dates that LGD was on notice of the ’047 patent as a result of receiving notice from LGD, which was (and is) LGEUS’ supplier and a closely related company to LGEUS.[10] On information and belief, LGEUS is an alter ego of LGD. Based on information and belief, LGEUS was on notice of the ’047 patent from at least the foregoing dates that LGE was on notice of the ’047 patent as a result of receiving notice from LGE, which has wholly owned and controlled its U.S. subsidiary LGEUS.[11] On information and belief, LGEUS is an agent and alter ego of LGE.

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

128. On information and belief, since at least the above-mentioned dates when LGE, LGEUS, and LGD were on notice of their infringement, LGE, LGEUS, and LGD have 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 ’047 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, LGE, LGEUS, and LGD did so and continue to do so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the ’047 patent. LGE, LGEUS, and LGD have caused and/or intend to cause, and have taken and/or continue to take affirmative steps to induce infringement by their 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

[10] *See* FN 1, *supra*.
[11] *See* FN 1, *supra*.

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, LGE, LGEUS, and LGD have 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, LGE, LGEUS, and LGD have 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 power supply boards 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 power supply boards have already been certified by UL Solutions. https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and-significance/marks-for-north-america/.

129. On information and belief, despite having knowledge of the ’047 patent and their infringement, LGE, LGEUS, and LGD specifically intend for others to import and sell products accused of infringing the ’047 patent. For example, LGE, LGEUS, and LGD specifically intend for its U.S.-based subsidiaries or customers to import and/or sell products accused of infringing the ’047 patent. On information and belief, LGE, LGEUS, and LGD instruct and encourage the importers to import and/or sell products accused of infringing the ’047 patent. On information and belief, the purchase and sale agreements between LGE, LGEUS, and LGD and the importers

provide such instruction and/or encouragement. Further, on information and belief, LGE, LGEUS, and LGD's U.S.-based subsidiaries, affiliates, and related companies exist for inter alia, the purpose of importing and selling products accused of infringing the '047 patent in the United States.

130. Upon information and belief, despite having knowledge of the '047 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the '047 patent, LGE, LGEUS, and LGD nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. LGE, LGEUS, and LGD's infringing activities relative to the '047 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.

131. Plaintiff has been damaged as a result of LGE, LGEUS, and LGD's infringing conduct described in this Count. LGE, LGEUS, and LGD are, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for their 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.

132. 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 LGE, LGEUS, and LGD's infringements of the '047 patent.

COUNT V
(Infringement of U.S. Patent No. 8,093,830)

133. Plaintiff incorporates paragraphs 1 through 132 herein by reference.

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

135. Plaintiff is the owner of the ’830 patent with all substantial rights to the ’830 patent including the exclusive right to enforce, sue, and recover damages for past and future infringement.

136. The ’830 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))

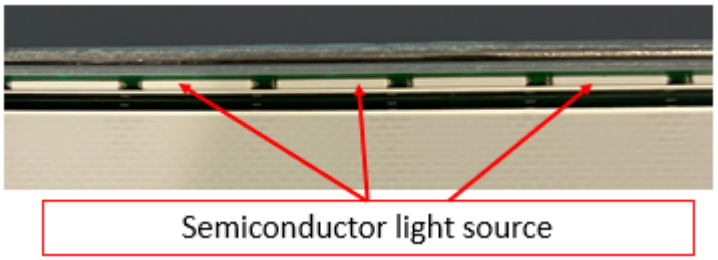
137. On information and belief, LG, LGEUS, and LGD have infringed and continue to infringe literally, and/or under the Doctrine of Equivalents, one or more claims of the ’830 patent in this District and elsewhere in Texas and the United States.

138. LG, LGEUS, and LGD directly infringe the ’830 patent via 35 U.S.C. § 271(a) by making, offering for sale, selling, using, testing, 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 ’830 patent. For example, LG, LGEUS, and LGD, either by themselves (individually and/or in concert) and/or via an agent, directly infringe the ’830 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 ’830 patent, to and via their alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, LG, LGEUS, and LGD sell and make some Accused Products outside of the United States, deliver those products to their customers, distributors, and/or subsidiaries in the United States, or in the case that they deliver the Accused Products outside of the United States they do so intending and/or knowing that those products are destined for the United States and/or designing those products for sale in the United States, thereby directly infringing the ’830 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).

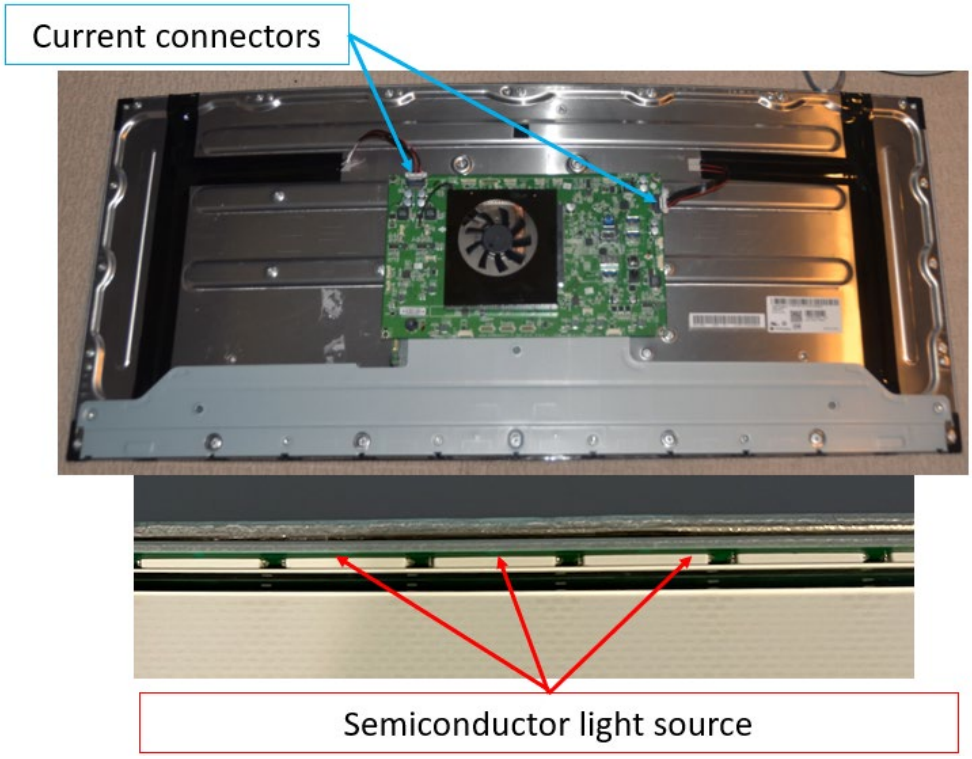
139. Furthermore, LGE directly infringes the ’830 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, including by selling and offering for sale the Accused Products directly to such entities and/or importing the Accused Products into the United States for such entities. Such entities conduct activities that constitute direct infringement of the ’830 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGE is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGE, LGEUS, LGD, and LGDUS are (and were) essentially the same company, and/or agents of each other, and LGE has (and had) the right and ability to control LGEUS, LGD, and LGDUS’ infringing acts and receives a direct financial benefit from LGEUS, LGD, and LGDUS’ infringement.

140. Additionally, LGD directly infringes the ’830 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates, including LGDUS, including by selling and offering for sale the Accused Products directly to such entities and/or importing the Accused Products into the United States for such entities. Such entities conduct activities that constitute direct infringement of the ’830 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGD is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGDUS is (and has been) essentially the same company, and LGD has (and has had) the right and ability to control LGDUS’ infringing acts and receives a direct financial benefit from LGDUS’ infringement.

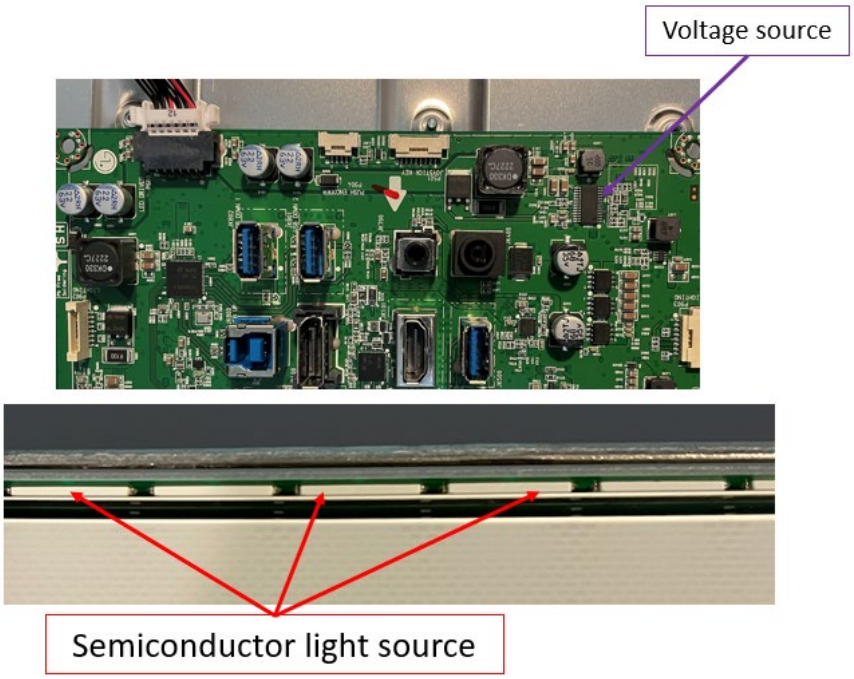
141. For example, LGE, LGEUS, and LGD infringe claim 1 of the ’830 patent. The products accused of infringing the ’830 patent comprise a semiconductor light source driving apparatus. For example, the LG 38GL950G monitor and the LG power supply board model no. LM93A EAX68464307, which is used in products such as the LG 38GL950G monitor, are a semiconductor light source driving apparatus:



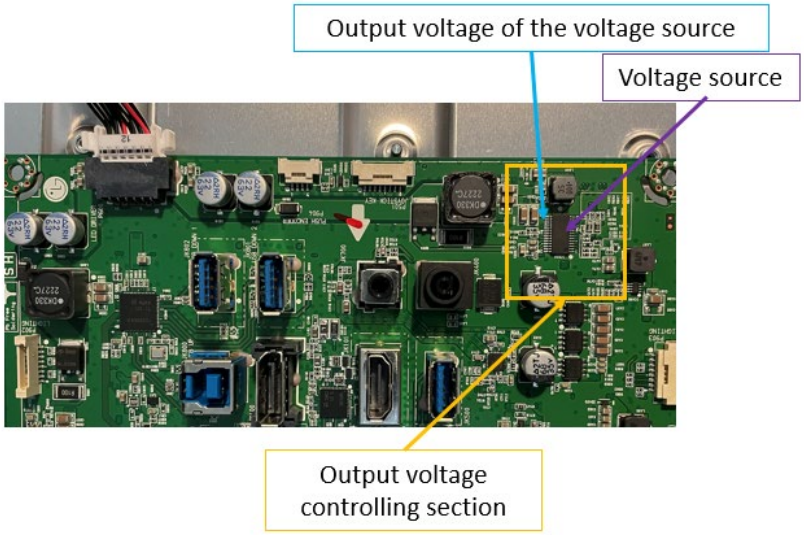
142. The products accused of infringing the ’830 patent comprise a semiconductor light source that is driven by a current. An examination of the LG 38GL950G monitor and LG power supply board model no. LM93A EAX68464307 demonstrate this:



143. The products accused of infringing the ’830 patent comprise a voltage source that drives the semiconductor light source. An examination of the LG 38GL950G monitor and LG power supply board model no. LM93A EAX68464307 demonstrate this:

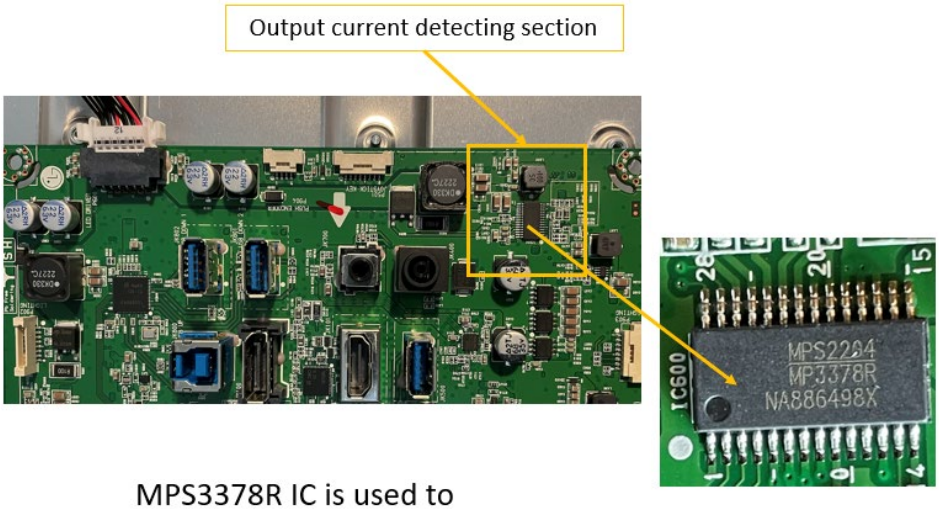


144. The products accused of infringing the ’830 patent comprise an output voltage controlling section that controls a drive current value for driving the semiconductor light source by controlling an output voltage of the voltage source. An examination of LG power supply board model no. LM93A EAX68464307 included in the LG 38GL950G monitor demonstrates this:



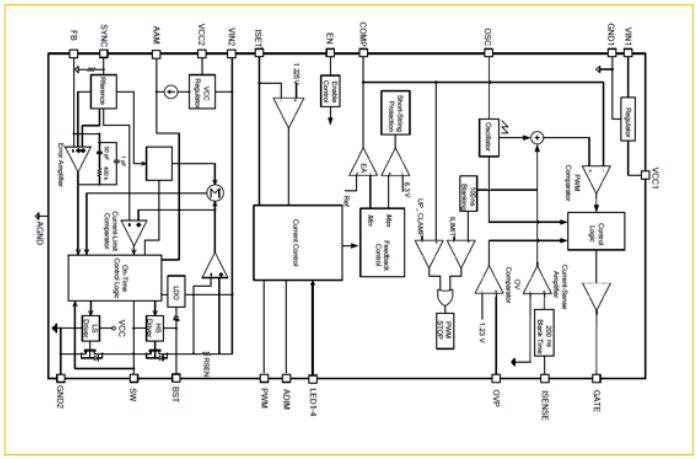
145. The products accused of infringing the ’830 patent comprise an output current detecting section that detects an output current of the semiconductor light source. An examination

of LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor demonstrates this:



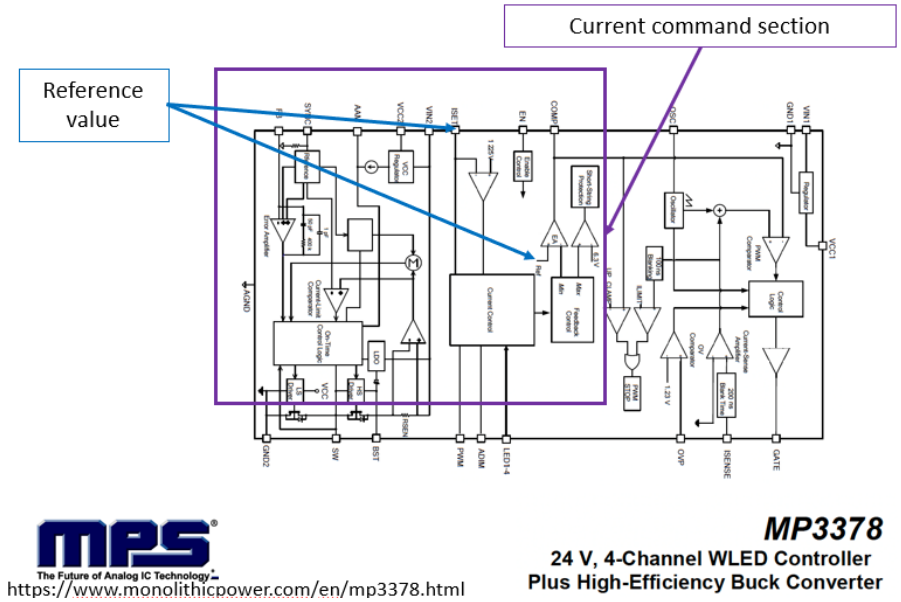
MPS3378R IC is used to drive 4 channels of LEDs for backlight.

https://www.monolithicpower.com/en/mp3378.html

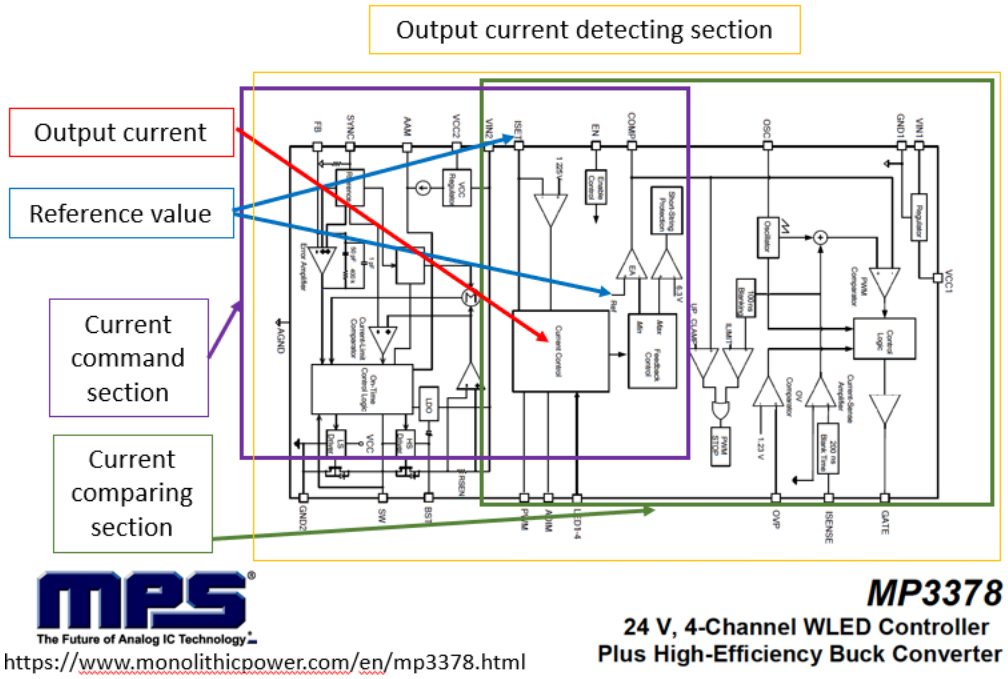


Output current detecting section

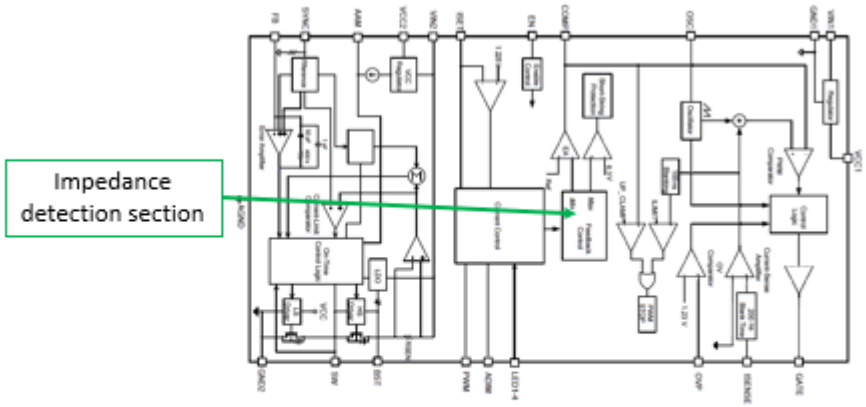
146. https://www.monolithicpower.com/en/mp3378.html The products accused of infringing the ’830 patent comprise a current command section that specifies a reference value of a drive current which is applied to the semiconductor light source. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor is configured in such a manner:



147. The products accused of infringing the ’830 patent comprise a current comparing section that compares the output current detected by the output current detecting section and the reference value specified by the current command section. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor is configured in such a manner:



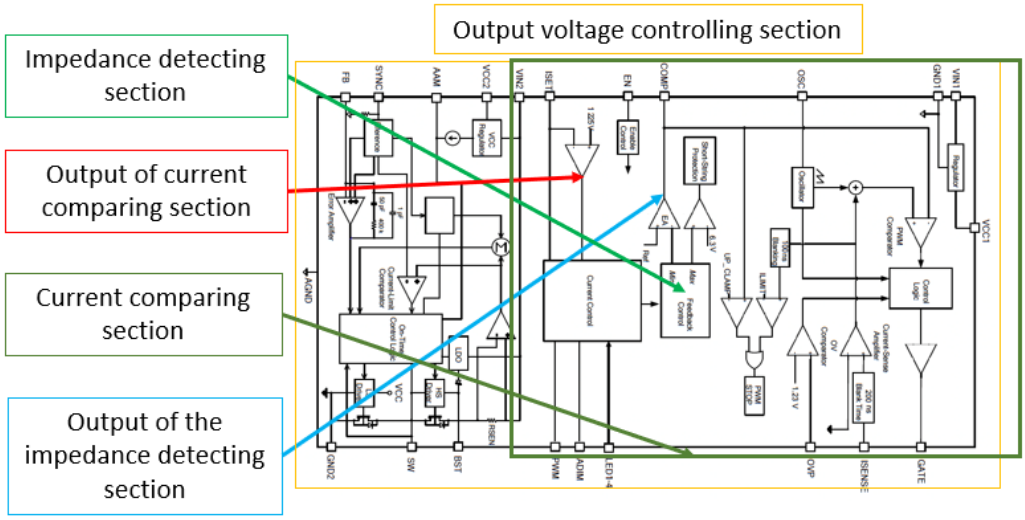
148. The products accused of infringing the ’830 patent comprise an impedance detecting section that detects an impedance of the semiconductor light source. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor is configured in such a manner:



MPS
The Future of Analog IC Technology
https://www.monolithicpower.com/en/mp3378.html

MP3378
24 V, 4-Channel WLED Controller
Plus High-Efficiency Buck Converter

149. The products accused of infringing the ’830 patent are configured such that the output voltage controlling section controls the output voltage of the voltage source based on an output of the current comparing section and an output of the impedance detecting section. For example, LG power supply board model no. LM93A EAX68464307 comprising an MP3378R chipset included in the LG 38GL950G monitor is configured in such a manner:



The Future of Analog IC Technology

https://www.monolithicpower.com/en/mp3378.html

MP3378

24 V, 4-Channel WLED Controller Plus High-Efficiency Buck Converter

150. At a minimum, LGE, LGEUS, and LGD have known about the ’830 patent since at least as early as the service date of this Original Complaint. Additionally, LGE, LGEUS, and LGD have known about the ’830 patent since at least July 29, 2020, when LGD received notice of their infringement. Furthermore, LGE, LGEUS, and LGD have known about the ’830 patent since at least July 29, 2020, when LGE received notice of their infringement. Based on information and belief, LGE was on notice of the ’830 patent from at least the foregoing dates that LGD was on notice of the ’830 patent as a result of receiving notice from LGD, which was (and is) LGE’s supplier and a closely related company controlled by LGE.[12] On information and belief, LGD is an agent and alter ego of LGE. Based on information and belief, LGEUS was on notice of the ’830 patent from at least the foregoing dates that LGD was on notice of the ’830 patent as a result of receiving notice from LGD, which was (and is) LGEUS’ supplier and a closely related company to LGEUS.[13] On information and belief, LGEUS is an alter ego of LGD. Based on information

[12] *See* FN 1, *supra*.
[13] *See* FN 1, *supra*.

and belief, LGEUS was on notice of the ’830 patent from at least the foregoing dates that LGE was on notice of the ’830 patent as a result of receiving notice from LGE, which has wholly owned and controlled its U.S. subsidiary LGEUS.[14] On information and belief, LGEUS is an agent and alter ego of LGE.

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

151. On information and belief, since at least the above-mentioned dates when LGE, LGEUS, and LGD were on notice of their infringement, LGE, LGEUS, and LGD have 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 ’830 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, LGE, LGEUS, and LGD did so and continue to do so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the ’830 patent. LGE, LGEUS, and LGD have caused and/or intend to cause, and have taken affirmative steps to induce infringement by their 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, LGE, LGEUS, and LGD have actively induced distributors,

[14] *See* FN 1, *supra*.

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, LGE, LGEUS, and LGD have 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 power supply boards 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 power supply boards have already been certified by UL Solutions. https://marks.ul.com/about/ul-listing-and-classification-marks/appearance-and-significance/marks-for-north-america/.

152. On information and belief, despite having knowledge of the ’830 patent and their infringement, LGE, LGEUS, and LGD specifically intend for others to import and sell products accused of infringing the ’830 patent. For example, LGE, LGEUS, and LGD specifically intend for its U.S.-based subsidiaries or customers to import and sell products accused of infringing the ’830 patent. On information and belief, LGE, LGEUS, and LGD instruct and encourage the importers to import and/or sell products accused of infringing the ’830 patent. On information and belief, the purchase and sale agreements between LGE, LGEUS, and LGD and the importers provide such instruction and/or encouragement. Further, on information and belief, LGE, LGEUS, and LGD’s U.S.-based subsidiaries, affiliates, and related companies exist for inter alia, the

purpose of importing and selling products accused of infringing the ’830 patent in the United States.

153. Upon information and belief, despite having knowledge of the ’830 patent and knowledge that they are directly and/or indirectly infringing one or more claims of the ’830 patent, LGE, LGEUS, and LGD nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. LGE, LGEUS, and LGD’s infringing activities relative to the ’830 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.

154. Plaintiff has been damaged as a result of LGE, LGEUS, and LGD’s infringing conduct described in this Count. LGE, LGEUS, and LGD are, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for their 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.

155. 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 LGE, LGEUS, and LGD’s infringements of the ’830 patent.

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

156. Plaintiff incorporates paragraphs 1 through 155 herein by reference.

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

158. 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.

159. 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))

160. Defendants have 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.

161. Defendants 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, Defendants, either by themselves (individually and/or in concert) 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 their alter egos, agents, intermediaries, distributors, importers, customers, subsidiaries, and/or consumers. Furthermore, on information and belief, Defendants sold and made some Accused Products outside of the United States, delivered those products to their customers, distributors, and/or subsidiaries in the United States, or in the case that they delivered the Accused Products outside of the United States they 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).

162. Furthermore, LGE directly infringed the ’682 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, including by selling and offering for sale the Accused Products directly to

such entities and/or importing the Accused Products into the United States for such entities. Such entities conducted activities that constituted direct infringement of the ’682 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products. Further, LGE is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGEUS, LGD, and LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGE, LGEUS, LGD, and LGDUS are (and were) essentially the same company, and/or agents of each other, and LGE has (and had) the right and ability to control LGEUS, LGD, and LGDUS’ infringing acts and receives a direct financial benefit from LGEUS, LGD, and LGDUS’ infringement.

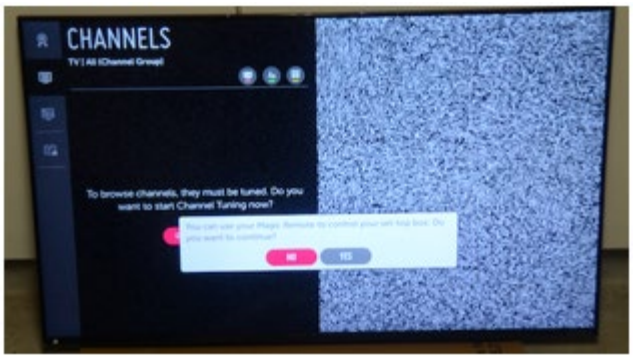
163. Additionally, LGD directly infringed the ’682 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates, including LGDUS, including by selling (and having sold) and offering for sale (and having offered for sale) the Accused Products directly to such entities and/or importing (or having imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the ’682 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant time period. Further, LGD is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including LGDUS, (under both the alter ego and agency theories) because, as an example and on information and belief, LGDUS is (and has been) essentially the same company, and LGD has (and has had) the right and ability to control LGDUS’ infringing acts and received a direct financial benefit from LGDUS’ infringement.

164. Further, New Optics directly infringed the ’682 patent through its direct involvement in the activities of its subsidiaries, related companies, and/or affiliates or agents,

including New Optics US, including by selling (or having sold) and offering for sale (or having offered for sale) the Accused Products directly to such entities and/or importing (or having imported) the Accused Products into the United States for such entities. Such entities conducted activities that constitute direct infringement of the ’682 patent under 35 U.S.C. § 271(a) by making, using, testing, offering for sale, selling, and/or importing those Accused Products during the relevant timeframe. Further, New Optics is vicariously liable for the infringing conduct of its subsidiaries, related companies, and/or affiliates or agents, including New Optics US, (under both the alter ego and agency theories) because, as an example and on information and belief, New Optics US is (and has been) essentially the same company, and New Optics has (and has had) the right and ability to control New Optics US’ infringing acts and received a direct financial benefit from New Optics US’ infringement.

165. Defendants 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, LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1), which is used in products such as the Apple iMac Pro, comprises a liquid crystal display of transversal electric field type:

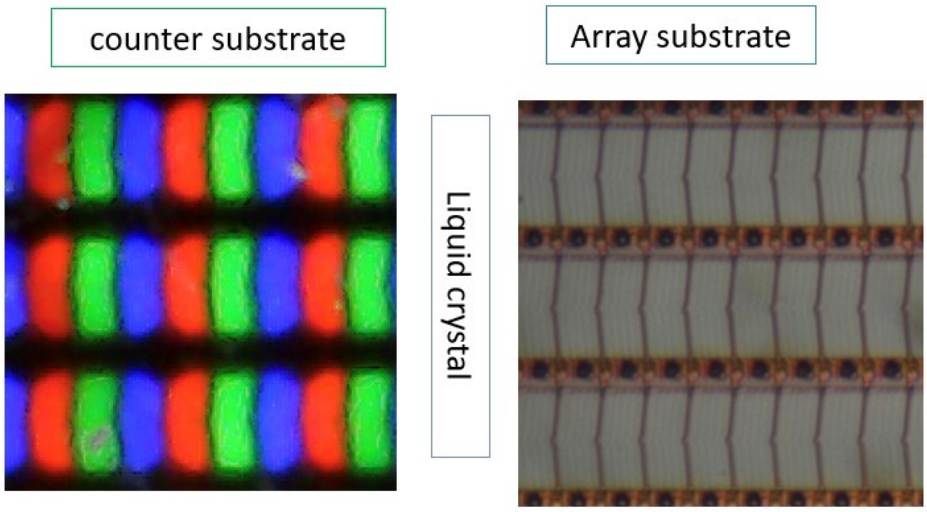
In another example, LG's TV model no. 49SM8600PUA includes Heesung LCM model no. HC49EQH-SLXA1-211X, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display of transversal electric field type:



In a further example, LG's TV model no. 55UM7300PUA includes New Optics LCM model no. NC550DQG-AAHZ1, which includes an LGD LCD (model no. not identified on device), such that each comprises a liquid crystal display of transversal electric field type:

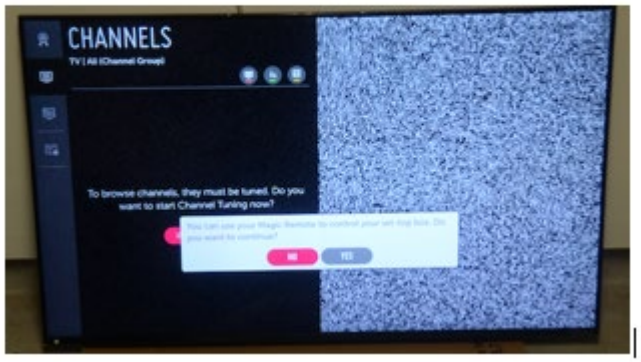
166. The products accused of infringing the '682 patent comprise a liquid crystal panel in which liquid crystal is retained between a pair of substrates. For example, an examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:

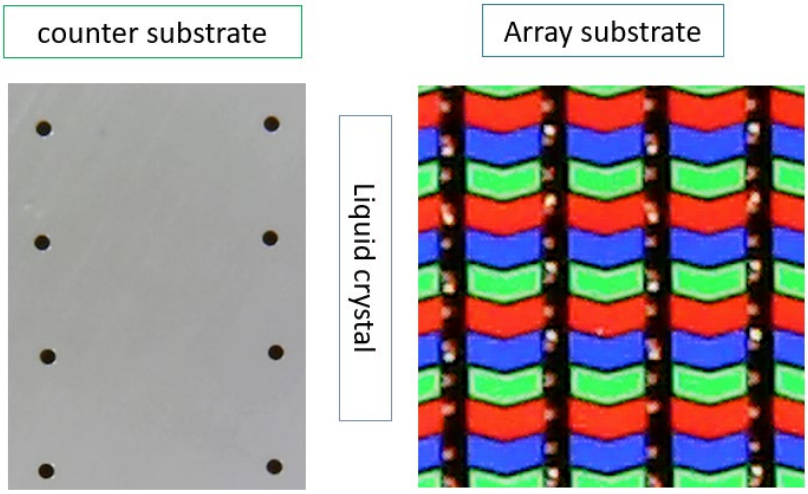
Liquid crystal panel



In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:

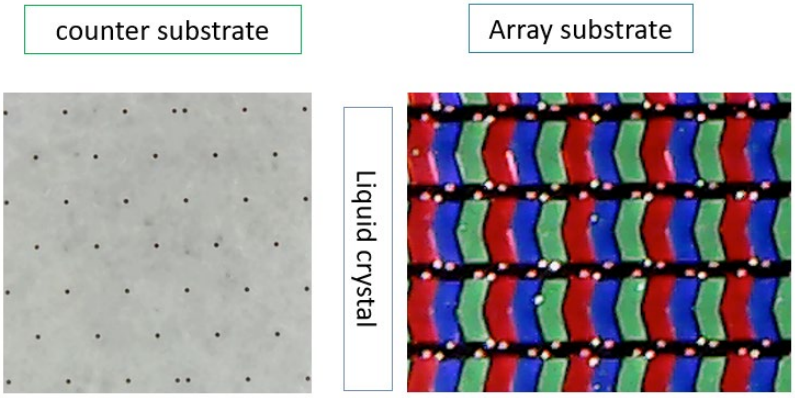
Liquid crystal panel





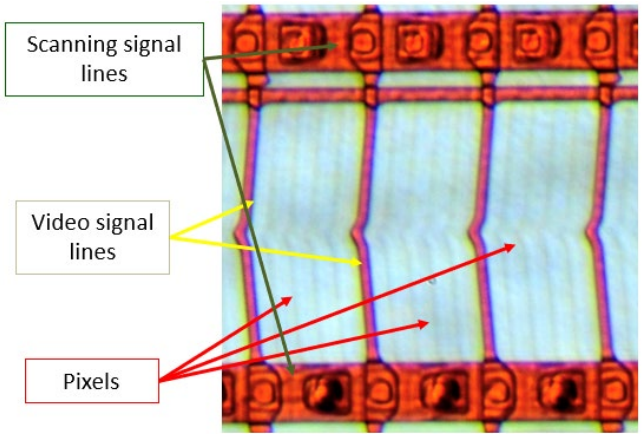
In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:

Liquid crystal panel

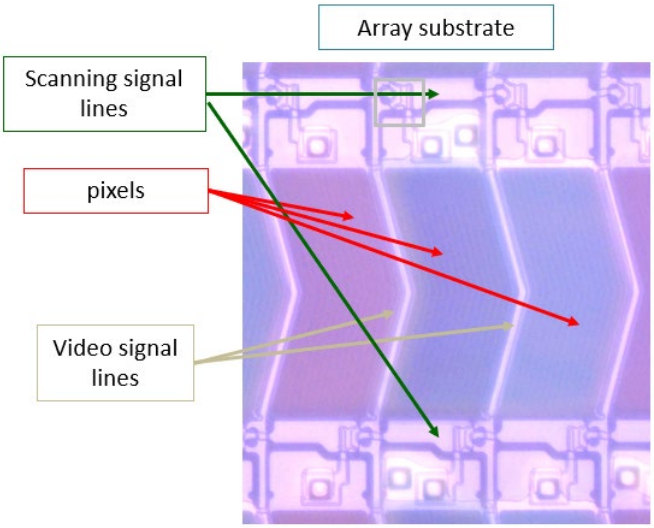


167. The products accused of infringing the ’682 patent comprise a plurality of scanning signal lines and a plurality of video signal lines formed so as to define a plurality of pixels in a matrix on an inner surface of one of the pair of substrates. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:

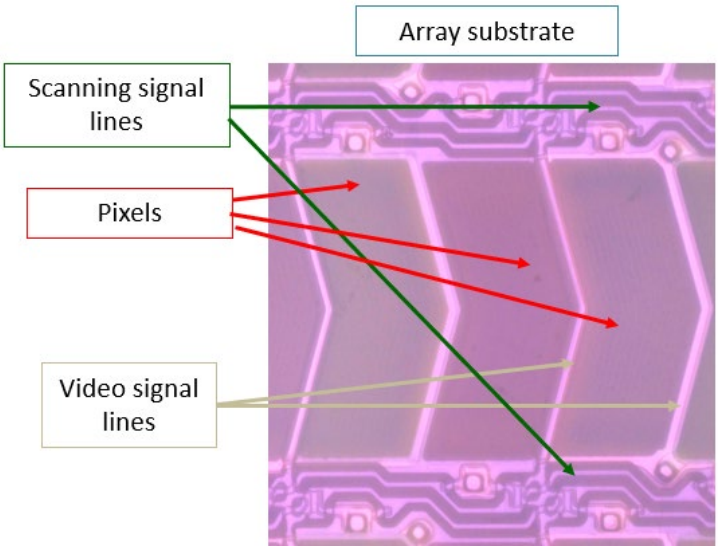
Array Substrate



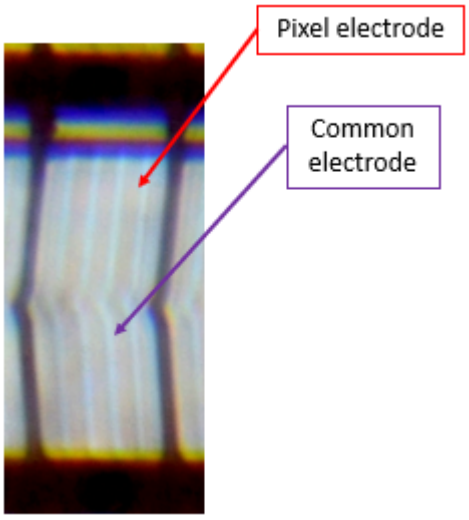
In another example, an examination of LGD’s TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE’s TV model no. 49SM8600PUA demonstrates this:



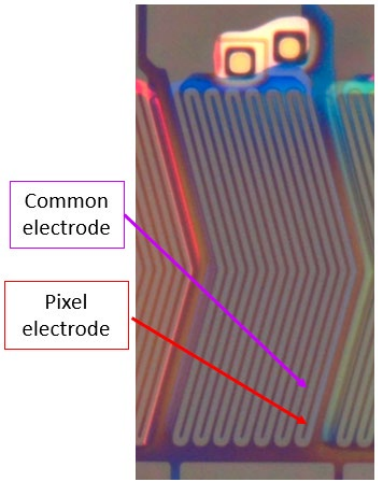
In a further example, an examination of LGD’s TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE’s TV model no. 55UM7300PUA demonstrates this:



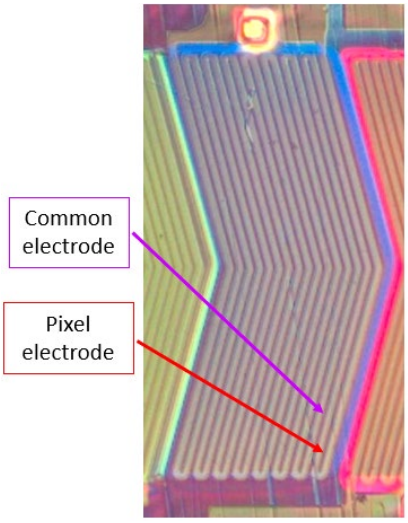
168. The products accused of infringing the ’682 patent comprise a pixel electrode and a common electrode formed opposite to each other in each pixel in a plan view. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



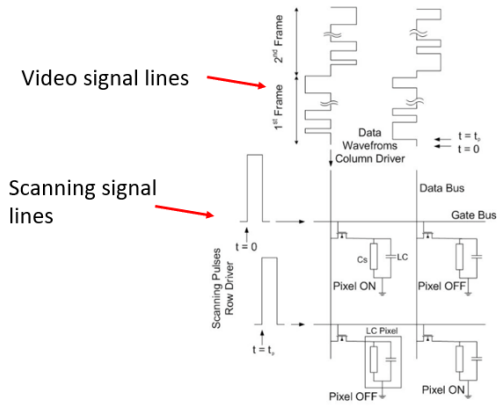
In another example, an examination of LGD’s TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE’s TV model no. 49SM8600PUA demonstrates this:



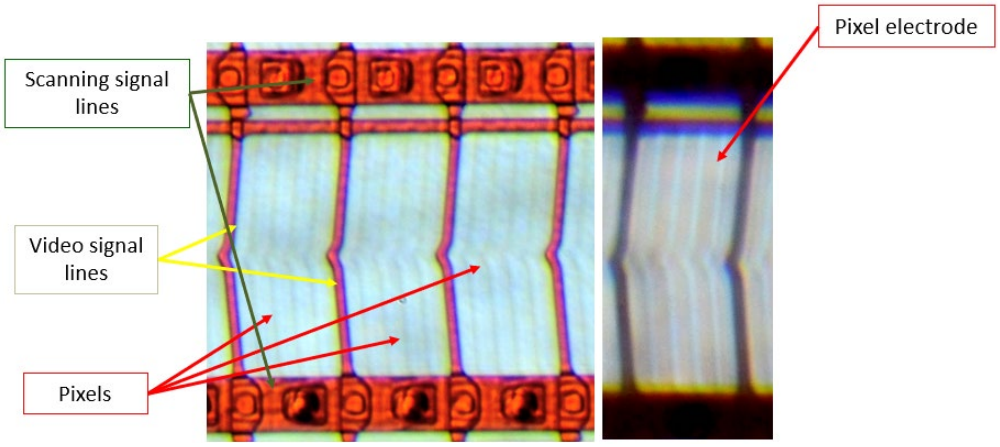
In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



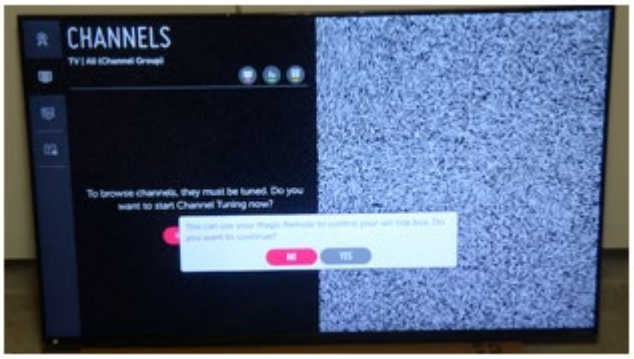
169. The products accused of infringing the '682 patent are configured such that an image is displayed on the liquid crystal panel by inputting a video signal from the video signal line into the pixel electrode while sequentially selecting the pixel through the scanning signal line. For example, an examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:

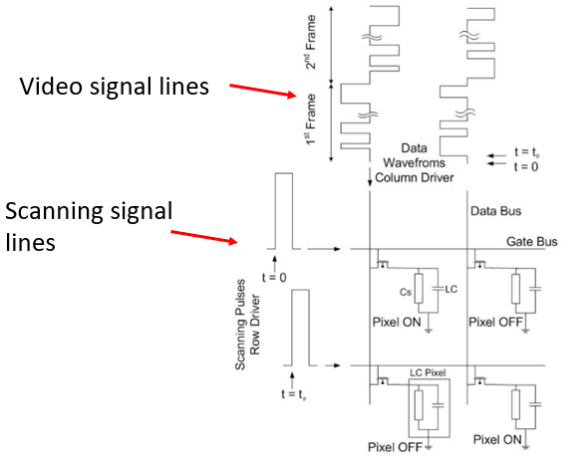


https://www.intechopen.com/books/new-developments-in-liquid-crystals/active-matrix-liquid-crystal-displays-operation-electronics-and-analog-circuits-design

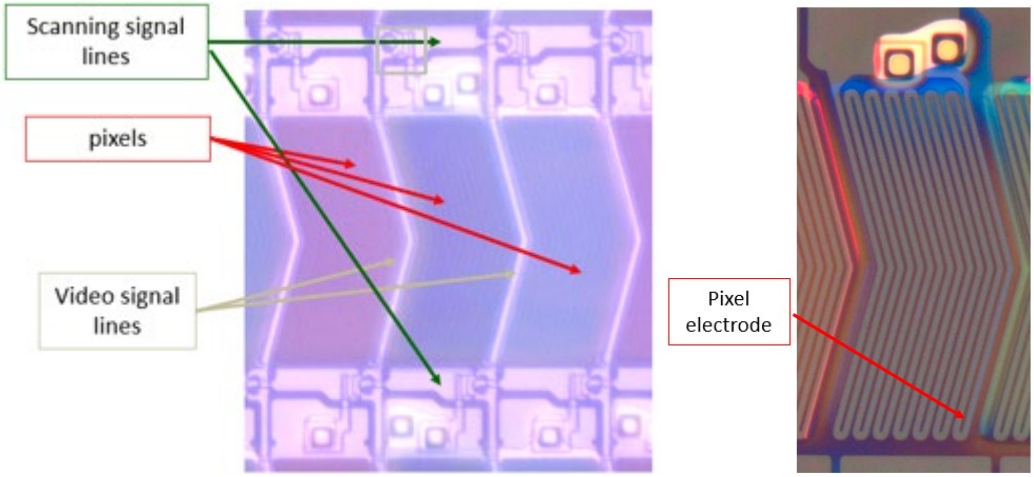


In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:

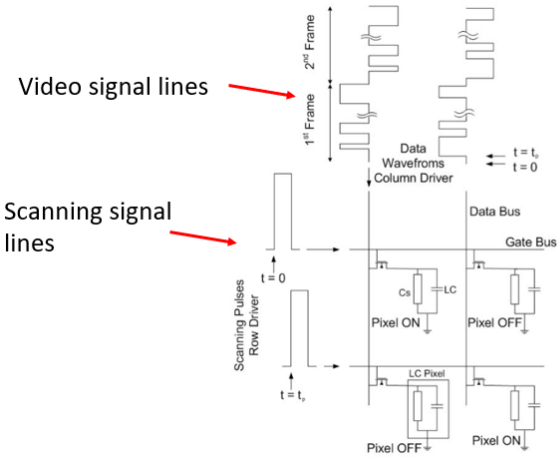




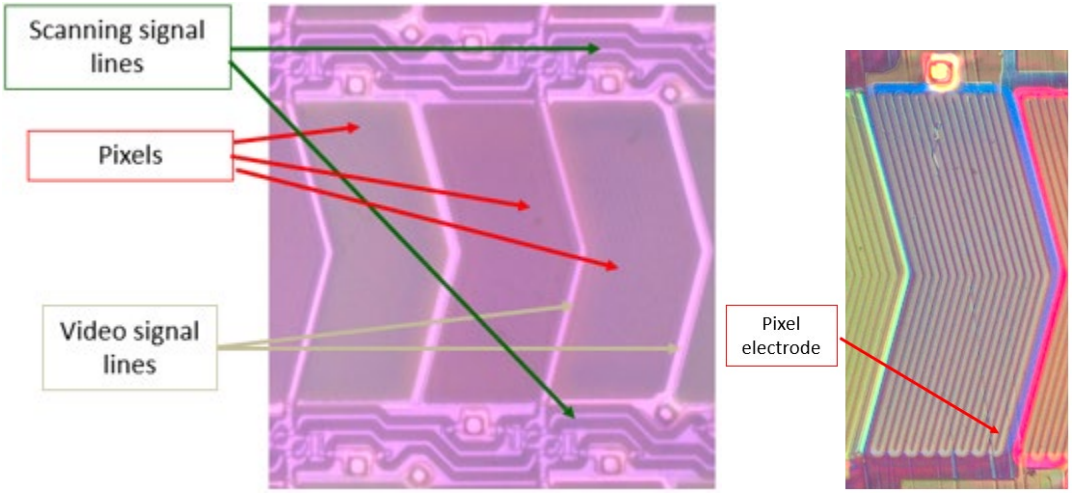
https://www.intechopen.com/books/new-developments-in-liquid-crystals/active-matrix-liquid-crystal-displays-operation-electronics-and-analog-circuits-design



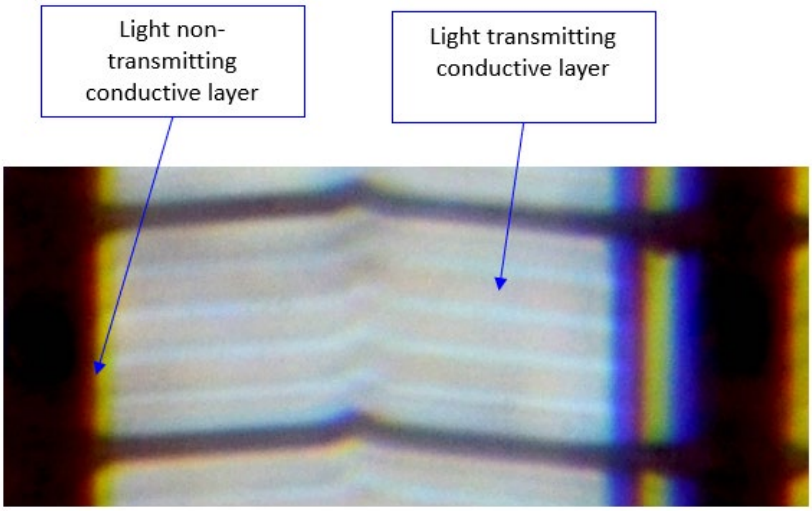
In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



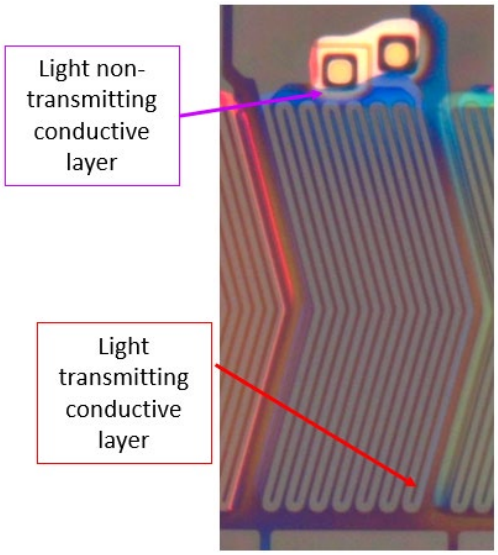
https://www.intechopen.com/books/new-developments-in-liquid-crystals/active-matrix-liquid-crystal-displays-operation-electronics-and-analog-circuits-design



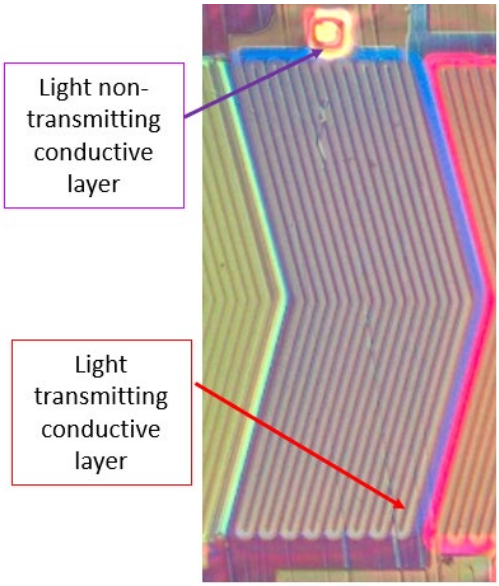
170. The products accused of infringing the ’682 patent are configured such that at least one of the scanning signal lines, the video signal lines, the pixel electrode, or the common electrode is at least partially constituted by a light-transmitting conductive layer and a light-non-transmitting conductive layer. For example, an examination of LGD’s TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates that the pixel electrode is at least partially constituted by a light-transmitting conductive layer and a light-non-transmitting conductive layer:



In another example, an examination of LGD’s TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE’s TV model no. 49SM8600PUA demonstrates that the pixel electrode is at least partially constituted by a light-transmitting conductive layer and a light-non-transmitting conductive layer:

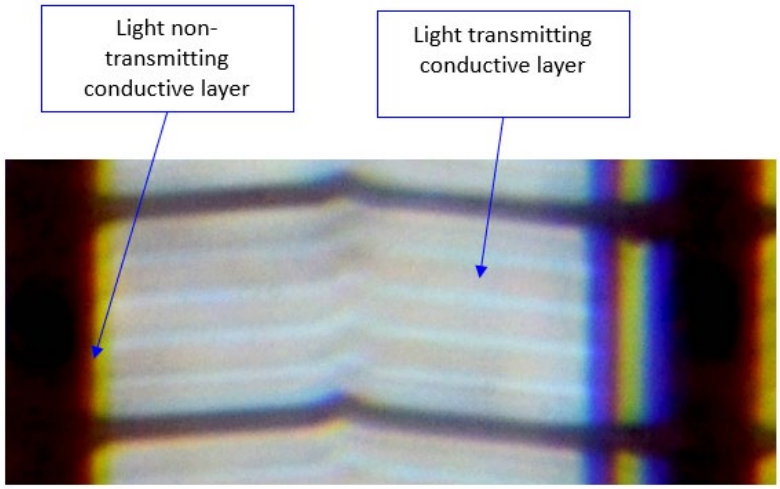


In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates that the pixel electrode is at least partially constituted by a light-transmitting conductive layer and a light-non-transmitting conductive layer:

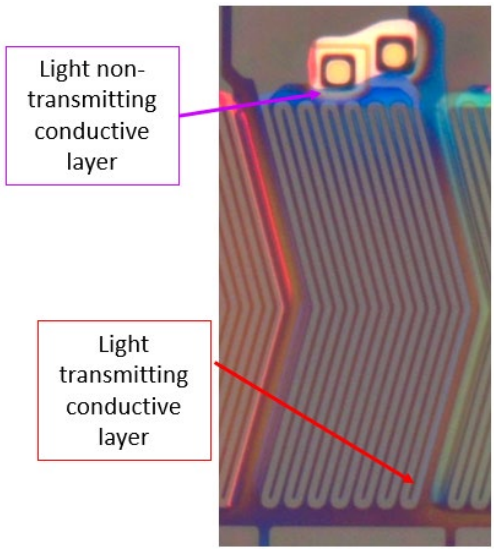


171. The products accused of infringing the '682 patent are configured such that a width of the light-transmitting conductive layer is wider than a width of the light-non-transmitting layer.

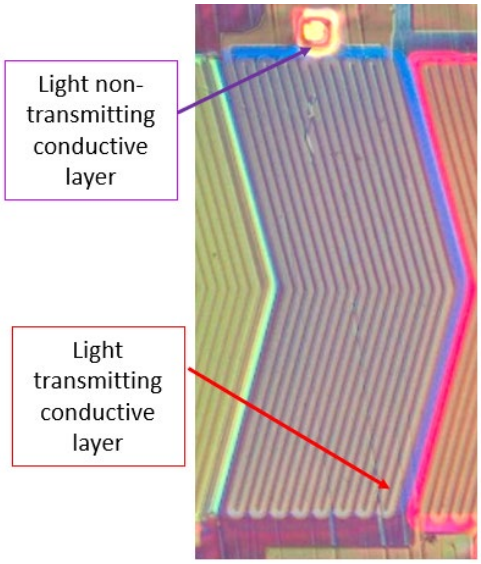
For example, an examination of LGD's TFT-LCD/LCM model no. LM270QQ1(SD)(D1) demonstrates this:



In another example, an examination of LGD's TFT-LCD included in Heesung LCM model no. HC49EQH-SLXA1-211X and/or LGE's TV model no. 49SM8600PUA demonstrates this:



In a further example, an examination of LGD's TFT-LCD included in New Optics LCM model no. NC550DQG-AAHZ1 and/or LGE's TV model no. 55UM7300PUA demonstrates this:



172. 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. Further, on information and belief, LGE and LGD’s conduct before the United States Patent and Trademark Office (“USPTO”) and foreign offices, suggest that they were aware of the ’682 patent prior to receiving any letters. For example, in prosecuting U.S. Patent No. 6,067,140, LGE has known of the ’682 patent. In another example, in prosecuting U.S. Patent No. 6,335,770, LGD has known of the ’682 patent. In a further example, in prosecuting U.S. Patent No. 6,335,776, LGD has known of the ’682 patent. In another example, in prosecuting U.S. Patent No. 6,466,291, LGD has known of the ’682 patent. In a further example, in prosecuting U.S. Patent No. 6,583,836, LGD has known of the ’682 patent. Based on information and belief, LGE was on notice of the ’682 patent from at least the foregoing dates that LGD was on notice of the ’682

patent as a result of receiving notice from LGD, which was (and is) LGE's supplier and a closely related company controlled by LGE.[15] On information and belief, LGD is an agent and alter ego of LGE. Based on information and belief, LGEUS was on notice of the '682 patent from at least the foregoing dates that LGD was on notice of the '682 patent as a result of receiving notice from LGD, which was (and is) LGEUS' supplier and a closely related company to LGEUS.[16] On information and belief, LGEUS is an alter ego of LGD. Based on information and belief, LGEUS was on notice of the '682 patent from at least the foregoing dates that LGE was on notice of the '682 patent as a result of receiving notice from LGE, which has wholly owned and controlled its U.S. subsidiary LGEUS.[17] On information and belief, LGEUS is an agent and alter ego of LGE. Moreover, New Optics, 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.[18]

173. At a minimum, New Optics has known about the '682 patent since at least April 27, 2021, when New Optics received notice of its infringement.

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

174. On information and belief, since at least the above-mentioned dates when LGE, LGEUS, LGD, and New Optics were on notice of their infringement, LGE, LGEUS, LGD, and New Optics actively induced, under U.S.C. § 271(b), distributors, retailers, customers,

[15] *See* FN 1, *supra*.
[16] *See* FN 1, *supra*.
[17] *See* FN 1, *supra*.
[18] *See* FN 1, *supra*.

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, LGE, LGEUS, LGD, and New Optics did so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement of the ’682 patent. LGE, LGEUS, LGD, and New Optics have caused and/or intended to cause, and took affirmative steps to induce infringement by their 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, LGE, LGEUS, LGD, and New Optics have 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, LGE, LGEUS, LGD, and New Optics have 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 LGD and New Optics 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 LGD and New Optics 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/.

175. On information and belief, despite having knowledge of the ’682 patent and their infringement, LGE, LGEUS, LGD, and New Optics specifically intended for others to import and sell products accused of infringing the ’682 patent. For example, LGE, LGEUS, LGD, and New Optics 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, LGE, LGEUS, LGD, and New Optics instructed and encouraged the importers to import and/or sell products accused of infringing the ’682 patent. On information and belief, the purchase and sale agreements between LGE, LGEUS, LGD, and New Optics and the importers provide such instruction and/or encouragement. Further, on information and belief, LGE, LGEUS, LGD, and New Optics’ U.S.-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.

176. Upon information and belief, despite having knowledge of the ’682 patent and knowledge that they were directly and/or indirectly infringing one or more claims of the ’682 patent, LGE, LGEUS, LGD, and New Optics nevertheless continued their infringing conduct and disregarded an objectively high likelihood of infringement. LGE, LGEUS, LGD, and New Optics’ 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.

177. Plaintiff has been damaged as a result of Defendants infringing conduct described in this Count. Defendants are, thus, liable to Plaintiff in an amount that adequately compensates Plaintiff for Defendants' 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.

178. 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 Defendants' infringements of the '682 patent.

CONCLUSION

179. Plaintiff is entitled to recover from Defendants the damages sustained by Plaintiff as a result of the Defendants' 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.

180. 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 Defendants and that the Court grant Plaintiff the following relief:

1. A judgment that Defendants have infringed and are infringing 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 Defendants;
3. A judgment and order requiring Defendants 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 Defendants 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 Defendants 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: February 8, 2024

Respectfully submitted,

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