Case No. 8:21-CV-00554-JAK-ADS

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT Plaintiff Semiconductor Energy Laboratory Co., Ltd. ("SEL"), files this Complaint and demand for a jury trial seeking relief for patent infringement by TCL China Star Optoelectronics Technology Co., Ltd.; Wuhan China Star Optoelectronics Semiconductor Display Technology Co., Ltd.; TCL Technology Group Corporation; TTE Technology, Inc.; TCL Communication Technology Holdings Limited; TCT Mobile Inc.; TCT Mobile (US) Inc.; Huizhou TCL Mobile Communication Co. Ltd.; and TCL Communication Limited¹ of United States Patent Nos. 7,372,199 ("the '199 patent"), 9,208,717 ("the '717 patent"), 10,680,049 ("the '049 patent"), and 10,777,290 ("the '290 patent") (collectively, "the Asserted Patents"). SEL states and alleges the following: NATURE OF ACTION

1. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, specifically including 35 U.S.C. § 271.

THE PARTIES

- 2. SEL is a Japan-based research and development company, and has a regular and established place of business at 398 Hase, Atsugi-shi, Kanagawa, 243-0036, Japan.
- 3. Upon information and belief, TCL China Star Optoelectronics
 Technology Co., Ltd. ("TCL CSOT") is a China-based display company, and has a regular and established place of business at No. 9-2 TangMing Ave., GuangMing New District, ShenZhen, Guangdong, 518132, China. TCL China Star
 Optoelectronics Technology Co., Ltd. is a majority shareholder of a China-based display company, Wuhan China Star Optoelectronics Semiconductor Display

¹ Unless specified otherwise, "TCL" as used herein refers to TCL Technology Group Corporation; TTE Technology, Inc.; TCL Communication Technology Holdings Limited; TCT Mobile Inc.; TCT Mobile (US) Inc., Huizhou TCL Mobile Communication Co. Ltd.; and TCL Communication Limited.

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collectively, "CSOT"), which has a regular and established place of business at

Room 305, Building C5, Optics Valley Biological Innovation Park, No.666, Gaoxin

Ave., Donghu New Technology Development Zone Wuhan, Hubei, 430077 China.

References herein to "CSOT" without a further modifier are intended to include

both TCL CSOT and Wuhan CSOT Display.

- 4. Upon information and belief, TCL Technology Group Corporation is a China-based global electronics company, and has a regular and established place of business at No. 17, Huifeng Third Road, Zhongkai High-tech Zone, Huizhou, Guangdong, 516001, China. TCL Technology Group Corporation is the ultimate parent of CSOT, TTE Technology, Inc., TCL Communication Technology Holdings Limited, TCT Mobile Inc., TCT Mobile (US) Inc., Huizhou TCL Mobile Communication Co. Ltd., and TCL Communication Limited.
- 5. Upon information and belief, TTE Technology, Inc. is a corporation organized and existing under the laws of Delaware with its principal place of business at 1860 Compton Ave., Corona, California, 92881.
- 6. Upon information and belief, TCL Communication Technology Holdings Limited is incorporated in the Cayman Islands, is a global mobile and internet products company, a subsidiary of TCL Technology Group Corporation, and has a regular and established place of business at Block F4, TCL Communication Technology Building, TCL International E City, Zhong Shan Yuan Road, Nanshan District, Shenzhen, Guangdong, China. Huizhou TCL Mobile Communication Co. Ltd. is a company that has a regular and established principal place of business at No. 86 Hechang Qi Lu Xi, Zhongkai Gaoxin District, Huizhou City, Guangdong Province, P.R. China. TCL Communication Limited is a company that has a regular and established place of business at 7/F, Block F4, TCL

International E City Zhong Shan Yuan Road, Nanshan District, Shenzhen, P.R. China.

- 7. Upon information and belief, TCT Mobile Inc. is a corporation organized and existing under the laws of Delaware with its principal place of business at 25 Edelman, Suite 200, Irvine, California 92618. TCT Mobile Inc. is a subsidiary of TCL Communication Technology Holdings Limited.
- 8. Upon information and belief, TCT Mobile (US) Inc. is a corporation organized and existing under the laws of Delaware with its principal place of business at 25 Edelman, Suite 200, Irvine, California 92618. TCT Mobile (US) Inc. is a subsidiary of TCL Communication Technology Holdings Limited.

JURISDICTION AND VENUE

- 9. This action arises under the patent laws of the United States, Title 35 U.S.C. § 1, *et seq*. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).
- Defendants are located in the Central District of California and/or have purposely availed themselves of the privilege of conducting activities within this state and judicial district. On information and belief, each of the Defendants, directly or indirectly through intermediaries (including distributors, retailers, and others), ships, distributes, offers for sale, sells, and advertises products in the United States, the State of California, and the Central District of California. Each Defendant has purposefully and voluntarily sold one or more of its infringing products with the expectation that they will be purchased by consumers in the Central District of California. On information and belief, these infringing products have been and continue to be purchased by consumers in the Central District of California. The Defendants have committed acts of patent infringement within the United States and, more particularly, within the Central District of California.

12. On information and belief, TTE Technology, Inc., TCL
Communication Technology Holdings Limited, TCT Mobile, and TCL
Communication Limited on behalf of TCL Technology Group Corporation,
participates in the promotion and marketing of mobile devices to U.S. customers,
and facilitates TCL Technology Group Corporation's U.S. activities. TCL
Technology Group Corporation controls its subsidiaries, including the other
Defendants in this case, as well as many other subsidiaries. TTE Technology, Inc.,
TCT Mobile, and TCL Communication Limited give TCL Technology Group
Corporation and TCL Communication Technology Holdings Limited business
advantages that they would have enjoyed if they conducted their business through
their own offices or paid agents in the state.

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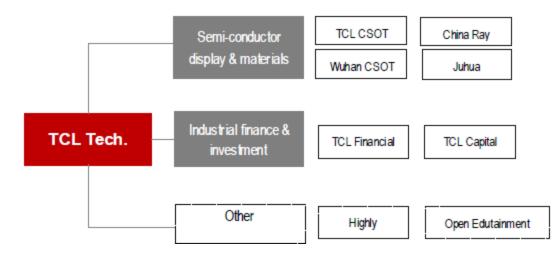
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- 13. On information and belief, CSOT, TTE Technology, Inc., TCL Communication Technology Holdings Limited, TCT Mobile Inc., TCT Mobile (US) Inc., Huizhou TCL Mobile Communication Co. Ltd., and TCL Communication Limited are alter egos of TCL Technology Group Corporation. As a result of these relationships, CSOT, TCL Technology Group Corporation, and TCL Communication Technology Holdings Limited are subject to personal jurisdiction in this judicial district based at least on their alter-ego status.
- For example, TCL Technology Group Corporation publicly represents 14. that TCL CSOT is a subsidiary of TCL Technology Group Corporation at least as of 2008. See, e.g., https://www.tcl.com/ge/en/aboutTCL/the-group.html ("TCL completed the infrastructure of 8.5th gen LCD panel for its subsidiary [TCL] CSOT.")) Further, TCL Technology Group Corporation publicly represents that "TCL-owned Shenzhen China Star Optoelectronics Technology Co., Ltd ([TCL] CSOT)" is TCL Technology Group Corporation's panel manufacturer. (See https://www.tcl.com/ge/en/news/csot-news.html; see also https://www.tcl.com/ge/en/blogs/tcl-launch-ai-smart-tv-ifa-2017.html ("TCL-owned") Shenzhen China Star Optoelectronics Technology Co., Ltd ([TCL] CSOT) continually expanded its share in the TV panel market.").
- 15. TCL Technology Group Corporation files a consolidated annual report that includes at least some of the TCL Technology Group Corporation companies, including [TCL] CSOT, TCL Communication Technology Holdings Limited, and TCT Mobile (US) Inc. (See TCL 集团股份有限公司 2019 年年度报告 (cs.com.cn); TCL **科技集**团股份有限公司 2019 **年年度**报告摘要 (dfcfw.com); https://q.stock.sohu.com/newpdf/201935609389.pdf).
- 16. On information and belief, TCL CSOT and Wuhan CSOT Display are part of the organizational structure of TCL Technology Group Corporation (as of March 31, 2020), which is publicly represented in TCL Technology Group

Corporation's Annual Report 2019 (see TCL 集团股份有限公司 2019 年年度报告



- 17. According to the diagram above, and thus based on information and belief, TCL CSOT is part of TCL Technology Group Corporation's "semiconductor display & materials" business segment. (See id.) TCL Technology Group Corporation further states that it "will further concentrate its resources to increase scale and market competitiveness of semi-conductor display and material business based on TCL CSOT as the core, so as to strengthen and deepen the semi-conductor display and material industrial chain." (See id. at pp. 47-48.)
- 18. On information and belief, Mr. LI Dongsheng is "currently the chairman and chief executive offices of TCL Technology Group Corporation" and is also "the chairman and the legal representative of [TCL] CSOT." http://electronics.tcl.com/en/cg/lidongsheng.php.
- 19. This Court also has personal jurisdiction over Defendants because they have committed acts within California giving rise to this action and/or have established minimum contacts with California such that personal jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. The Defendants are also subject to this Court's jurisdiction pursuant to due process

20. As a further example, CSOT has placed and continues to place infringing cell phone displays into the stream of commerce via an established distribution channel with the knowledge and/or intent that those products were sold and continue to be sold in the United States and California, including in this District.

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CSOT supplies infringing displays to customers who target the U.S. market and California, including TCL and Motorola Mobility LLC ("Motorola").

TCL incorporates CSOT displays into its infringing TCL 10 Pro

this District. TCL markets its phones directly to customers through its website (see

https://www.tcl.com/us/en/products/mobile/tcl-10-pro), and offers to sell and sells

its phones through numerous physical third-party store locations within California

pro/t799b). For example, TCL's website has a "Where to Buy" tool for the TCL 10

Walmart, and Best Buy in or near Irvine, among other locations in this District. See

id. Additionally, the TCL 10 Pro is designed to comply with United States Federal

https://static.helpjuice.com/helpjuice_production/uploads/upload/image/2771/direct/

1588826968150-T1 10 Pro_T799B_English_UM_20200304_draft1%5B1%5D.pdf).

smartphone that is marketed and sold to customers located in California and within

CSOT displays are also incorporated into Motorola's infringing razr 5G

Communications Commission (FCC) regulations, as required for sale and

importation in the United States. (See, e.g.,

Pro, with a "Find Nearby" option showing major third-party retailers like Target,

and this District (see, e.g., https://www.tcl.com/us/en/products/mobile/tcl-10-

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4 smartphone that is marketed and sold to customers located in California and within

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this District. The razr 5G is offered for sale and sold directly to customers through the Motorola website (*see* https://www.motorola.com/us/smartphones-razr-gen-2/p), through the website of its carrier partner Verizon (*see* https://www.verizon.com/smartphones/moto-razr/), and through numerous physical Verizon Wireless store locations within California and this District (*see* https://www.verizonwireless.com/stores/california/#/state). In addition, service and warranty repair for the razr 5G is provided within California and this District, including Authorized Motorola Repair Centers (*see*, *e.g.*, https://motorola-global-

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portal.custhelp.com/app/mcp/track-repair/service-center-locator/type/inw (showing

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belief, certain customer support and service may also be available at local physical

Authorized Motorola Repair Center in Orange, California)). On information and

- 3 Verizon stores within California and this District. Additionally, the razr 5G is
- designed to comply with United States Federal Communications Commission (FCC) 4
- 5 regulations, as required for sale and importation in the United States. (See, e.g.,
- https://fccid.io/IHDT56XL1; https://fcc.report/FCC-ID/IHDT56XL1). 6
 - On information and belief, CSOT induces TCL and Motorola to include 23. its infringing displays into phones sold by TCL and Motorola with the knowledge that these phones will be sold in the U.S. and California. As a result, CSOT has placed and continues to place infringing cell phone displays into the stream of commerce knowing that many of its products will end up in California.
 - Thus, on information and belief, Defendants' presence and activities in 24. this District, including patent infringement as described below, give rise to the claims set forth herein.
 - 25. This Court has jurisdiction over this action against the Defendants because the subject matter of the action satisfies the requirements of 35 U.S.C. § 299(a) in that (1) it arises, at least in part, 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, and/or selling of the same products accused of infringing the patents asserted in this action, and (2) questions of fact common to the Defendants will arise in the action.
 - 26. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b), 1391(c) and 1400 because the Defendants do business here and are subject to personal jurisdiction in this judicial District. Venue is also proper because Defendants' presence and activities in this District give rise to the claims set forth herein. On information and belief, TCT Mobile's office in Irvine is its headquarters and the North America headquarters of TCL Communication Technology Holdings

- Limited. TCT Mobile and TCL Communication Technology Holdings Limited, on 1 2 3 4 5 6
 - behalf of TCL and CSOT, conduct activities within this District related to the
 - promotion and marketing of CSOT displays and/or phones containing such displays
 - to U.S. customers. On information and belief, TCT Mobile and TCL
 - Communication Technology Holdings Limited facilitate TCL and CSOT's U.S.
 - activities from this District. In addition, venue is proper for all defendants other
 - 7 than TCT Mobile and TTE Technology, Inc. because they are not residents of the
 - 8 U.S., so they may be sued in any judicial district. Therefore, venue is proper in this

9 Court.

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FACTUAL BACKGROUND

SEL'S Patented Technology

- The Asserted Patents relate to a number of semiconductor technologies 27. used in the design and manufacturing of semiconductor displays, including OLED displays, used in various consumer products.
- The '199 patent relates to technology for constructing a light emitting 28. device that is capable of equalizing and raising the luminance of different colors of the emitted light. The patented device uses a combination of a triplet organic compound that emits light via phosphorescence and a singlet organic compound that emits light via fluorescence in conjunction with multiple hole transporting layers. In this way, the patented invention makes it possible to control and equalize the luminance of light emitted, as well as reduce the power consumption and prevent lopsided degradation of the electroluminescent elements.
- The '717 patent generally relates to a circuit configuration of a display 29. device. The patented circuit includes a particular arrangement and interconnection of circuit components. The inventions of the '717 patent realize many benefits, including implementing error correction using a threshold value of a driver

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transistor of a circuit, such as a pixel circuit, itself and therefore correctly performing threshold value correction.

3 4 30. The '049 patent relates to an OLED device with an improved thin film

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27 28 ² CSOT's infringing displays, including but not limited to those supplied for the TCL 10 Pro and Motorola razr 5G, along with the phones themselves, are collectively referred to herein as the "Accused Products." 11

transistor channel design that provides several benefits over preexisting designs. The inventions of the '049 patent provide many benefits, including decreased dispersion, more uniform brightness, and constant brightness despite OLED deterioration.

31. The '290 patent generally relates to a circuit configuration of a semiconductor device that includes a gate driver and/or a pixel circuit. The patented circuit includes a particular arrangement and interconnection of circuit components. The inventions of the '290 patent realize many benefits, such as providing a circuit for sequentially outputting low or high level signals, reducing the circuit scale, and/or reducing power consumption.

Defendants' Use of SEL's Innovations

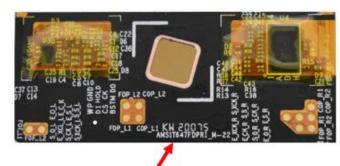
CSOT's infringing display panels are a primary component in the TCL 32. 10 Pro and razr 5G smart phones sold by TCL and Motorola respectively.² Upon information and belief, CSOT sells its displays, including OLED displays, to TCL and Motorola, who install the displays into their TCL 10 Pro and razr 5G phones, then import them into the U.S. for marketing and sale to U.S. customers. See https://www.gsmarena.com/tcl_unveils_selfbranded_quadcamera_10series_smartph ones starting at under 500-news-40889.php; https://www.gizchina.com/2020/01/07/tcl-10-series-ces2020/; https://www.devicespecifications.com/en/news/46841059; https://www.oled-

a.org/motorola-replaced-auo-with-boe--csot-as-folded-oled-source-for-new-

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<u>razr_121519.html</u>. On information and belief, the serial numbers on displays found in the Accused Products indicate CSOT is the source of the displays:





AMS1T647FDPRI_M-22

(TCL 10 Pro)





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AMD20062FDFRIM-71

(Motorola razr 5G)

- 33. Display technology that improves quality, performance, or cost in a smart phone is critical for both consumers of smart phones and companies who develop and market them. On information and belief, display capability and performance has been a driver of sales for the smart phone industry generally for many years.
- 34. For example, TCL's advertising and marketing of its displays are a key part of its sales strategy for TCL 10 Pro, evident by TCL's website for the TCL 10 Pro which focuses on the display with statements like "Display Greatness with Unparalleled Visual Power, "Brilliant Color, Clarity and Contrast," and "Elevated Viewing Experience." *See* https://www.tcl.com/us/en/products/mobile/tcl-10-pro. The TCL 10 Pro's display is the prominent feature of the TCL 10 Pro. *See id*.
- 35. As another example, the advertising and marketing of the razr 5G's displays are a key part of the sales strategy for razr 5G, as evident by the website for the razr 5G which focuses on the displays with photos and videos of the displays. See https://www.motorola.com/us/smartphones-razr-gen-2/p. The razr 5G's displays are a prominent feature of the razr 5G. See id.
- 36. SEL's patented technology, used by Defendants, improves the performance and capability of displays, allowing for an improved experience by end-users. SEL's technology also results in higher yields reducing cost to phone providers and consumers.

Licensing Negotiations And Notice Of The Asserted Patents

37. Defendants have knowingly used, and are using, SEL's patented technology without a license. Defendants' infringement of SEL's patented technology is willful, as described further below.

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- 38. To protect its intellectual property rights and try to collaborate with CSOT, SEL sent a letter to CSOT on July 13, 2018 about its semiconductor technology and patent portfolio and again on October 25, 2018. These letters could not be successfully delivered, but later that year in November and December of 2018, SEL exchanged communications with an employee of TCL to arrange a meeting. In December of 2018, SEL met with representatives of TCL and CSOT to present its technology and explore possible collaboration. However, no relationship between SEL, CSOT, and TCL was formed.
- 39. On January 31, 2020, SEL sent a letter to CSOT again inviting a discussion of its technology and patent portfolio. After not receiving a response, SEL again wrote a letter to CSOT and TCL on November 30, 2020 to invite licensing discussions and provide a summary of its patent portfolio.
- 40. Finally, in December of 2020, CSOT and TCL responded to SEL, and the parties subsequently met on January 28, 2021 and February 26, 2021. At those meetings, the '717 patent was discussed along with other patents, and the parties discussed their relevance to TCL and CSOT's products. However, no resolution was reached. On March 10, 2021, SEL sent CSOT and TCL letters providing specific notice of each of the Asserted Patents, and identifying their relevance to the Accused Products.
- 41. As a result of Defendants' disregard for SEL's patent rights, Defendants' infringement has been, and continues to be done willfully and with notice of the Asserted Patents.

COUNT I

(Infringement of U.S. Patent No. 7,372,199)

42. SEL incorporates by reference the allegations in the preceding paragraphs of its Complaint.

- 43. The U.S. Patent Office duly and properly issued the '199 patent, entitled "Light emitting device and image playback device having triplet and singlet compounds in electroluminescent layer." SEL is the assignee of all rights, title, and interest in and to the '199 patent and possesses the exclusive right of recovery for past, present, and future infringement. Each and every claim of the '199 patent is valid and enforceable. A true and correct copy of the '199 patent is attached to this Complaint as Exhibit A.
- 44. On information and belief, Defendants have directly infringed at least claims 1, 9, and 13 of the '199 patent by making, using, selling, offering for sale, and/or importing into the United States the Accused Products in violation of 35 U.S.C. § 271(a). Charts providing exemplary evidence of infringement of the '199 patent are attached to this Complaint as Exhibits B and C.
- 45. On information and belief, CSOT has infringed at least claims 1, 9, and 13 of the '199 patent by inducing others, including TCL and Motorola, to infringe at least said claims of the '199 patent in violation of 35 U.S.C. § 271(b). On information and belief, CSOT is also an alter ego of TCL and has induced, and continues to induce, infringement in the same ways as TCL.
- 46. In addition, on information and belief, CSOT takes active steps to induce infringement of at least claims 1, 9, and 13 of the '199 patent by others, including TCL and Motorola, by, among other things, actively and knowingly aiding and abetting others who make, use, test, sell, license, offer to sell within the United States and import into the United States infringing products (including TCL and Motorola, authorized dealers and repair service providers, retailers, consumers, and end users), and CSOT takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. For example, on information and belief, CSOT induces TCL to maintain and/or provide content for web sites (*see*, *e.g.*, https://www.tcl.com/us/en/products/mobile/tcl-10-pro/t799b;

- 47. On information and belief, CSOT contributes to the infringement of at least claims 1, 9, and 13 of the '199 patent by others, including TCL and Motorola, in violation of 35 U.S.C. § 271(c). In addition, on information and belief, CSOT is an alter ego of TCL and has contributed to, and continues to contribute to, infringement in the same ways as TCL. Acts by CSOT that contribute to the infringement of others include, but are not limited to, the use and/or importation of the Accused Products. Such products are especially made or adapted for use to infringe at least said claims of the '199 patent and are at least a material part of those claims. The Accused Products, including the functionality contributing to infringement of the '199 patent, are not suitable for substantial noninfringing use. CSOT had actual notice of the '199 patent and that the '199 patent is valid at least as of March 10, 2021. CSOT continues to engage in its above-described contributory infringement activities.
- 48. By way of at least SEL's notice to Defendants on March 10, 2021 (as well as this Complaint), Defendants know of the '199 patent and perform acts that they know, or should know, induce, and/or contribute to the direct infringement of the '199 patent.

- 49. Defendants undertook and continue their infringing actions despite an objectively high likelihood that such activities infringed the '199 patent, which is presumed valid. For example, Defendants have been aware of an objectively high likelihood that their actions constituted, and continue to constitute, infringement of the '199 patent and that the '199 patent is valid since at least March 10, 2021, when SEL sent CSOT and TCL letters providing specific notice of each of the Asserted Patents, and identifying their relevance to the Accused Products. Defendants could not reasonably subjectively believe that their actions do not constitute infringement of the '199 patent, nor could they reasonably subjectively believe that the '199 patent is invalid. Despite that knowledge, subjective belief, and the objectively high likelihood that its actions constitute infringement, Defendants have continued their infringing activities. On information and belief, Defendants have not attempted to redesign or offered a redesign of the Accused Products to try to avoid infringement of the '199 patent. As such, Defendants willfully infringe the '199 patent.
- 50. SEL has been irreparably harmed by Defendants' infringement of the '199 patent and will continue to be harmed unless and until Defendants' infringement is enjoined by this Court.
- 51. By its actions, Defendants have injured SEL and are liable to SEL for infringement of the '199 patent pursuant to 35 U.S.C. § 271. SEL is entitled to damages as set forth in at least 35 U.S.C. § 284 and 285.

COUNT II

(Infringement of U.S. Patent No. 9,208,717)

52. SEL incorporates by reference the allegations in the preceding paragraphs of its Complaint.

53. The U.S. Patent Office duly and properly issued the '717 patent, entitled "Semiconductor device and driving method thereof." SEL is the assignee of all rights, title, and interest in and to the '717 patent and possesses the exclusive

right of recovery for past, present, and future infringement. Each and every claim of the '717 patent is valid and enforceable. A true and correct copy of the '717 patent is attached to this Complaint as Exhibit D.

- 54. On information and belief, Defendants have directly infringed at least claims 1, 7, 13, 19, 25, 31, 37, and 43 of the '717 patent by making, using, selling, offering for sale, and/or importing into the United States the Accused Products in violation of 35 U.S.C. § 271(a). Charts providing exemplary evidence of infringement of the '717 patent are attached to this Complaint as Exhibits E and F.
- 55. On information and belief, CSOT has infringed at least claims 1, 7, 13, 19, 25, 31, 37, and 43 of the '717 patent by inducing others, including TCL and Motorola, to infringe at least said claims of the '717 patent in violation of 35 U.S.C. § 271(b). In addition, on information and belief, CSOT is an alter ego of TCL and has induced, and continues to induce, infringement in the same ways as TCL.
- 56. In addition, on information and belief, CSOT takes active steps to induce infringement of at least claims 1, 7, 13, 19, 25, 31, 37, and 43 of the '717 patent by others, including TCL and Motorola, by, among other things, actively and knowingly aiding and abetting others who make, use, test, sell, license, offer to sell within the United States and import into the United States infringing products (including TCL and Motorola, authorized dealers and repair service providers, retailers, consumers, and end users), and CSOT takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. For example, on information and belief, CSOT induces TCL to maintain and/or provide content for web sites (*see, e.g.*, https://support.tcl.com/us-mobile-devices), that offer technical, promotional, and support information regarding CSOT's products accused of infringement in this case. On information and belief, CSOT knows or should know that such activities induce others to directly infringe at least said claims of the '717

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patent. CSOT had actual notice of the '717 patent and that the '717 patent is valid at least as of March 10, 2021. CSOT induces the infringing acts while it knows or is willfully blind to the fact that its actions would induce actual infringement of the '717 patent. On information and belief, following the filing and notice of the Complaint, CSOT will continue to engage in its above-described inducement activities.

- 57. On information and belief, CSOT contributes to the infringement of at least claims 1, 7, 13, 19, 25, 31, 37, and 43 of the '717 patent by others, including TCL and Motorola, in violation of 35 U.S.C. § 271(c). In addition, on information and belief, CSOT is an alter ego of TCL and has contributed to, and continues to contribute to, infringement in the same ways as TCL. Acts by CSOT that contribute to the infringement of others include, but are not limited to, the use and/or importation of the Accused Products. Such products are especially made or adapted for use to infringe at least said claims of the '717 patent and are at least a material part of those claims. The Accused Products, including the functionality contributing to infringement of the '717 patent, are not suitable for substantial noninfringing use. CSOT had actual notice of the '717 patent and that the '717 patent is valid at least as of March 10, 2021. CSOT continues to engage in its above-described contributory infringement activities.
- 58. By way of at least SEL's negotiations with CSOT since at least January 28, 2021, and SEL's notice to Defendants on March 10, 2021 (as well as this Complaint), Defendants know of the '717 patent and perform acts that they know, or should know, induce, and/or contribute to the direct infringement of the '717 patent.
- 59. Defendants undertook and continue their infringing actions despite an objectively high likelihood that such activities infringed the '717 patent, which is presumed valid. For example, Defendants have been aware of an objectively high likelihood that their actions constituted, and continue to constitute, infringement of

the '717 patent and that the '717 patent is valid since at least March 10, 2021, when SEL sent CSOT and TCL letters providing specific notice of each of the Asserted Patents, and identifying their relevance to the Accused Products, and since the parties met on January 28, 2021. Defendants could not reasonably subjectively believe that their actions do not constitute infringement of the '717 patent, nor could they reasonably subjectively believe that the '717 patent is invalid. Despite that knowledge, subjective belief, and the objectively high likelihood that its actions constitute infringement, Defendants have continued their infringing activities. On information and belief, Defendants have not attempted to redesign or offered a redesign of the Accused Products to try to avoid infringement of the '717 patent. As such, Defendants willfully infringe the '717 patent.

- 60. SEL has been irreparably harmed by Defendants' infringement of the '717 patent and will continue to be harmed unless and until Defendants' infringement is enjoined by this Court.
- 61. By its actions, Defendants have injured SEL and are liable to SEL for infringement of the '717 patent pursuant to 35 U.S.C. § 271. SEL is entitled to damages as set forth in at least 35 U.S.C. §§ 284 and 285.

COUNT III

(Infringement of U.S. Patent No. 10,680,049)

- 62. SEL incorporates by reference the allegations in the preceding paragraphs of its Complaint.
- 63. The U.S. Patent Office duly and properly issued the '049 patent, entitled "Light emitting device." SEL is the assignee of all rights, title, and interest in and to the '049 patent and possesses the exclusive right of recovery for past, present, and future infringement. Each and every claim of the '049 patent is valid and enforceable. A true and correct copy of the '049 patent is attached to this Complaint as Exhibit G.

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- 64. On information and belief, Defendants have directly infringed at least claims 1 and 4 of the '049 patent by making, using, selling, offering for sale, and/or importing into the United States the Accused Products in violation of 35 U.S.C. § 271(a). Charts providing exemplary evidence of infringement of the '049 patent are attached to this Complaint as Exhibits H and I.
- 65. On information and belief, CSOT has infringed at least claims 1 and 4 of the '049 patent by inducing others, including TCL and Motorola, to infringe at least said claims of the '049 patent in violation of 35 U.S.C. § 271(b). In addition, on information and belief, CSOT is an alter ego of TCL and has induced, and continues to induce, infringement in the same ways as TCL.
- 66. In addition, on information and belief, CSOT takes active steps to induce infringement of at least claims 1 and 4 of the '049 patent by others, including TCL and Motorola, by, among other things, actively and knowingly aiding and abetting others who make, use, test, sell, license, offer to sell within the United States and import into the United States infringing products (including TCL and Motorola, authorized dealers and repair service providers, retailers, consumers, and end users), and CSOT takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. For example, on information and belief, CSOT induces TCL to maintain and/or provide content for web sites (see, e.g., https://www.tcl.com/us/en/products/mobile/tcl-10-pro/t799b; https://support.tcl.com/us-mobile-devices), that offer technical, promotional, and support information regarding CSOT's products accused of infringement in this case. On information and belief, CSOT knows or should know that such activities induce others to directly infringe at least said claims of the '049 patent. CSOT had actual notice of the '049 patent and that the '049 patent is valid at least as of March 10, 2021. CSOT induces the infringing acts while it knows or is willfully blind to the fact that its actions would induce actual infringement of the '049 patent. On

continue to engage in its above-described inducement activities.

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67. On information and belief, CSOT contributes to the infringement of at

information and belief, following the filing and notice of the Complaint, CSOT will

- least claims 1 and 4 of the '049 patent by others, including TCL and Motorola, in violation of 35 U.S.C. § 271(c). In addition, on information and belief, CSOT is an alter ego of TCL and has contributed to, and continues to contribute to, infringement in the same ways as TCL. Acts by CSOT that contribute to the infringement of others include, but are not limited to, the use and/or importation of the Accused Products. Such products are especially made or adapted for use to infringe at least said claims of the '049 patent and are at least a material part of those claims. The Accused Products, including the functionality contributing to infringement of the '049 patent, are not suitable for substantial noninfringing use. CSOT had actual notice of the '049 patent and that the '049 patent is valid at least as of March 10, 2021. CSOT continues to engage in its above-described contributory infringement activities.
- 68. By way of at least SEL's notice to Defendants on March 10, 2021 (as well as this Complaint), Defendants know of the '049 patent and perform acts that they know, or should know, induce, and/or contribute to the direct infringement of the '049 patent.
- 69. Defendants undertook and continue their infringing actions despite an objectively high likelihood that such activities infringed the '049 patent, which is presumed valid. For example, Defendants have been aware of an objectively high likelihood that their actions constituted, and continue to constitute, infringement of the '049 patent and that the '049 patent is valid since at least March 10, 2021, when SEL sent CSOT and TCL letters providing specific notice of each of the Asserted Patents, and identifying their relevance to the Accused Products. Defendants could not reasonably subjectively believe that their actions do not constitute infringement

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of the '049 patent, nor could they reasonably subjectively believe that the '049 patent is invalid. Despite that knowledge, subjective belief, and the objectively high likelihood that its actions constitute infringement, Defendants have continued their infringing activities. On information and belief, Defendants have not attempted to redesign or offered a redesign of the Accused Products to try to avoid infringement of the '049 patent. As such, Defendants willfully infringe the '049 patent.

- 70. SEL has been irreparably harmed by Defendants' infringement of the '049 patent and will continue to be harmed unless and until Defendants' infringement is enjoined by this Court.
- 71. By its actions, Defendants have injured SEL and are liable to SEL for infringement of the '049 patent pursuant to 35 U.S.C. § 271. SEL is entitled to damages as set forth in at least 35 U.S.C. §§ 284 and 285.

COUNT IV

(Infringement of U.S. Patent No. 10,777,290)

- 72. SEL incorporates by reference the allegations in the preceding paragraphs of its Complaint.
- 73. The U.S. Patent Office duly and properly issued the '290 patent, entitled "Semiconductor device." SEL is the assignee of all rights, title, and interest in and to the '290 patent and possesses the exclusive right of recovery for past, present, and future infringement. Each and every claim of the '290 patent is valid and enforceable. A true and correct copy of the '290 patent is attached to this Complaint as Exhibit J.
- 74. On information and belief, Defendants have directly infringed at least claims 1, 2, and 3 of the '290 patent by making, using, selling, offering for sale, and/or importing into the United States the Accused Products in violation of 35 U.S.C. § 271(a). Charts providing exemplary evidence of infringement of the '290 patent are attached to this Complaint as Exhibits K and L.

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- 75. On information and belief, CSOT has infringed at least claims 1, 2, and 3 of the '290 patent by inducing others, including TCL and Motorola, to infringe at least said claims of the '290 patent in violation of 35 U.S.C. § 271(b). In addition, on information and belief, CSOT is an alter ego of TCL and has induced, and continues to induce, infringement in the same ways as TCL.
- In addition, on information and belief, CSOT takes active steps to 76. induce infringement of at least claims 1, 2, and 3 of the '290 patent by others, including TCL and Motorola, by, among other things, actively and knowingly aiding and abetting others who make, use, test, sell, license, offer to sell within the United States and import into the United States infringing products (including TCL and Motorola, authorized dealers and repair service providers, retailers, consumers, and end users), and CSOT takes such active steps knowing that those steps will induce, encourage and facilitate direct infringement by others. For example, CSOT induces TCL to maintain and/or provide content for web sites (see, e.g., https://www.tcl.com/us/en/products/mobile/tcl-10-pro/t799b; https://support.tcl.com/us-mobile-devices), that offer technical, promotional, and support information regarding CSOT's products accused of infringement in this case. On information and belief, CSOT knows or should know that such activities induce others to directly infringe at least said claims of the '290 patent. CSOT had actual notice of the '290 patent and that the '290 patent is valid at least as of March 10, 2021. CSOT induces the infringing acts while it knows or is willfully blind to the fact that its actions would induce actual infringement of the '290 patent. On information and belief, following the filing and notice of the Complaint, CSOT will continue to engage in its above-described inducement activities.
- 77. On information and belief, CSOT contributes to the infringement of at least claims 1, 2, and 3 of the '290 patent by others, including TCL and Motorola, in violation of 35 U.S.C. § 271(c). In addition, on information and belief, CSOT is an

alter ego of TCL and has contributed to, and continues to contribute to, infringement in the same ways as TCL. Acts by CSOT that contribute to the infringement of others include, but are not limited to, the use and/or importation of the Accused Products. Such products are especially made or adapted for use to infringe at least said claims of the '290 patent and are at least a material part of those claims. The Accused Products, including the functionality contributing to infringement of the '290 patent, are not suitable for substantial noninfringing use. CSOT had actual notice of the '290 patent and that the '290 patent is valid at least as of March 10, 2021. CSOT continues to engage in its above-described contributory infringement activities.

- 78. By way of at least SEL's notice to Defendants on March 10, 2021 (as well as this Complaint), Defendants know of the '290 patent and perform acts that they know, or should know, induce, and/or contribute to the direct infringement of the '290 patent.
- 79. Defendants undertook and continue their infringing actions despite an objectively high likelihood that such activities infringed the '290 patent, which is presumed valid. For example, Defendants have been aware of an objectively high likelihood that their actions constituted, and continue to constitute, infringement of the '290 patent and that the '290 patent is valid since at least March 10, 2021, when SEL sent CSOT and TCL letters providing specific notice of each of the Asserted Patents, and identifying their relevance to the Accused Products. Defendants could not reasonably subjectively believe that their actions do not constitute infringement of the '290 patent, nor could they reasonably subjectively believe that the '290 patent is invalid. Despite that knowledge, subjective belief, and the objectively high likelihood that its actions constitute infringement, Defendants have continued their infringing activities. On information and belief, Defendants have not attempted to

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redesign or offered a redesign of the Accused Products to try to avoid infringement of the '290 patent. As such, Defendants willfully infringe the '290 patent.

- 80. SEL has been irreparably harmed by Defendants' infringement of the '290 patent and will continue to be harmed unless and until Defendants' infringement is enjoined by this Court.
- By its actions, Defendants have injured SEL and are liable to SEL for 81. infringement of the '290 patent pursuant to 35 U.S.C. § 271. SEL is entitled to damages as set forth in at least 35 U.S.C. §§ 284 and 285.

PRAYER FOR RELIEF

WHEREFORE, SEL respectfully requests that this Court enter judgment against Defendants:

- Finding that Defendants directly infringe the Asserted Patents; a)
- That Defendants have induced infringement of the Asserted Patents; b)
- That Defendants have contributed to infringement of the Asserted c) Patents;
 - That Defendants have willfully infringed the Asserted Patents; d)
- e) Awarding damages adequate to compensate SEL for the patent infringement that has occurred, in accordance with 35 U.S.C. § 284, including an assessment of pre-judgment and post-judgment interest and costs, and an accounting as appropriate for infringing activity not captured within any applicable jury verdict and/or up to the judgment and an award by the Court of additional damages for any such acts of infringement;
- Awarding SEL an ongoing royalty for Defendants' post-verdict f) infringement, payable on each product offered by Defendants that is found to infringe one or more of the Asserted Patents, and on all future products that are not colorably different from those found to infringe, or in the alternative, permanently enjoining Defendants from further infringement;

- g) Providing an award of all other damages permitted by 35 U.S.C. § 284, including increased damages up to three times the amount of compensatory damages found;
- h) Finding that this is an exceptional case and an award to SEL of its costs, expenses, and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285; and
- i) Providing such other relief, including other monetary and equitable relief, as this Court deems just and proper.

DEMAND FOR JURY TRIAL

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, SEL demands a trial by jury on all issues on which trial by jury is available under applicable law.

1	Dated: May 20, 2022	FISH & RICHARDSON P.C.
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