IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF TEXAS WACO DIVISION

SVV TECHNOLOGY INNOVATIONS	§	
INC.	§	
	§	
Plaintiff,	§	
	§	Civil Action No. 6:22-cv-538
V.	§	
	§	JURY DEMANDED
ACER INC.	§	
	§	
Defendant.	§	
	8	

PLAINTIFF'S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff SVV Technology Innovations Inc. ("SVVTI" or "Plaintiff") files this First Amended Complaint for patent infringement against Acer Inc. ("Acer" or "Defendant"). Plaintiff alleges infringement of United States Patent Numbers 9,880,342 ("342 Patent"); 10,269,999 ("999 Patent"); 10,439,089 ("089 Patent"); 10,797,191 ("191 Patent"); and 11,276,795 ("795 Patent"); collectively, the "Asserted Patents."

RELATEDNESS TO OTHER CASES

1. This action is related to other actions considered by the District Court for the Western District of Texas, Waco Division, under Judge Alan D. Albright. Specifically, SVVTI asserted the '342 Patent, '999 Patent, '089 Patent, '191 Patent and '795 Patent in other actions that it had previously filed in in the Waco Division, and the Waco Division Court had construed claims of those patents. The Waco Division Court had also considered numerous motions, including discovery motions and dispositive motions, and resolved disputes between parties relating to the technology at issue in these patents.

The following is a list of SVVTI actions involving the '342 Patent considered by the Waco

Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-311-ADA (**through jury trial**, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-639-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-511-ADA (through claim construction)

The following is a list of SVVTI actions involving the '999 Patent considered by the Waco

Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-313-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-641-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-513-ADA (through claim construction)

The following is a list of SVVTI actions involving the '089 Patent considered by the Waco

Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-311-ADA (through jury trial, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-639-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-511-ADA (through claim construction)

The following is a list of SVVTI actions involving the '191 Patent considered by the Waco

Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-312-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-640-ADA (through jury trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-512-ADA (through claim construction)

The following is a list of SVVTI actions involving the '795 Patent considered by the Waco

Division Court:

- *SVV Technology Innovations, Inc. v. ASUSTeK Computer Inc.*, No. 6:22-cv-313-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-641-ADA (through pre-trial, currently pending)
- *SVV Technology Innovations, Inc. v. Micro-Star International Co., Ltd.*, No. 6:22-cv-513-ADA (through claim construction)

PARTIES

2. Plaintiff SVVTI is a California corporation with a place of business 1832 Tribute Road, Suite C, Sacramento, California 95815.

3. On information and belief, Acer Inc. is a corporation organized and existing under the laws of Taiwan with a principal place of business at 8F., No.88, Sec. 1, Xintai 5th Rd., Xizhi Dist., New Taipei City 221, Taiwan, R.O.C.

JURISDICTION AND VENUE

4. This is an action for patent infringement arising under the patent laws of the United States, Title 35, United States Code. Jurisdiction as to these claims is conferred on this Court by 35 U.S.C. §§1331 and 1338(a).

5. This Court has personal jurisdiction over Acer because, directly or through intermediaries, each has committed acts within the Western District of Texas giving rise to this action and/or has established minimum contacts with the Western District of Texas such that the exercise of jurisdiction would not offend traditional notions of fair play and substantial justice.

6. Acer has placed or contributed to placing infringing products into the stream of commerce via an established distribution channel knowing or understanding that such products would be sold and used in the United States, including in the Western District of Texas.

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 4 of 36

7. This Court has specific personal jurisdiction over Acer at least in part because Acer conducts business in this Judicial District. SVVTI's causes of action arise, at least in part, from Defendant's contacts with and activities in the State of Texas and this Judicial District. The exercise of jurisdiction over Acer would not offend traditional notions of fair play and substantial justice. Defendant Acer, directly and/or through subsidiaries or intermediaries (including distributors, retailers, and others), has committed and continues to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the patents-in-suit, including the accused devices as alleged herein.

8. On information and belief, Acer also has derived substantial revenues from infringing acts in this Judicial District, including from the sale and use of infringing products including, but not limited to, the products accused of infringement below.

9. On information and belief, Acer maintains authorized sellers and sales representatives that offer and sell products pertinent to this Complaint throughout the State of Texas, including this District and to consumers throughout this District.

10. Defendant has established minimum contacts with this forum such that the exercise of jurisdiction over Defendant would not offend traditional notions of fair play and substantial justice.

11. Venue in this Judicial District is proper as to Acer under 28 U.S.C. § 1391(c)(3) because it is a foreign corporation. Defendant has committed acts within this judicial district giving rise to this action, and Defendant continues to conduct business in this judicial district, including one or more acts of selling, using, importing and/or offering for sale infringing products or providing service and support to Defendant's customers in this District. This district

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 5 of 36

is familiar with the technology of the Patents-in-Suit having presided over another lawsuit involving the Patents-in-Suit.

12. In addition, Defendant has knowingly induced and continues to knowingly induce 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.

13. Personal jurisdiction also exists specifically over Defendant because Defendant, directly or through affiliates, subsidiaries, agents, or intermediaries, transacts business in this State or purposefully directed at this State (including, without limitation, retail stores including Best Buy and Walmart) 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.

14. In addition, Defendant, directly or through affiliates, subsidiaries, agents, or intermediaries, places infringing products into the stream of commerce knowing they will be sold and used in Texas, and economically benefits from the retail sale of infringing products in this State. For example, Defendant's products have been sold and are available for sale in this District at Best Buy and Walmart retail stores and are also available for sale and offered for sale in this District through online retailers such as Best Buy, Walmart, and Amazon.

15. Via Defendant's agents, intermediaries, distributors, importers, customers, and/or consumers maintaining a business presence, operating in, and/or residing in the U.S., Defendant's products, including products and processes accused of infringing the patents-in-suit, are or have been widely distributed and sold in retail stores, both brick and mortar and online, in

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 6 of 36

Texas including within this judicial 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 end users in the U.S. may constitute an offer to sell under § 271(a)). For example, Defendant's products are sold to end users by online stores and at retail stores located throughout the Western District of Texas.

16. In the alternative, the Court has personal jurisdiction over Defendant under Fed.R. Civ. P. 4(k)(2), because the claims for patent infringement in this action arise under federal law, Defendant is not subject to the jurisdiction of the courts of general jurisdiction of any state, and exercising jurisdiction over Defendant is consistent with the U.S. Constitution.

FACTUAL BACKGROUND

17. SVVTI was founded in 2000 by Dr. Sergiy Vasylyev, a scientist and prolific inventor.

18. Dr. Sergiy Vasylyev has an academic background and more than 20 years of research experience in physical sciences. He received an M.S. equivalent in Physics and Astronomy from the Kharkiv State University, Ukraine in 1992 and a Ph.D. in Physics and Mathematics from the Main Astronomical Observatory of National Academy of Sciences of Ukraine in 1996. From 1996 to 1999, he worked with several major academic research institutions and was involved in diverse research projects in the areas of space physics and solar energy. After immigrating to the U.S., in 2000, Dr. Vasylyev founded SVV Technology Innovations, Inc. to develop and commercialize his ideas in several technical fields ranging from optics and

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 7 of 36

information technology to solar energy and lighting. Dr. Vasylyev is the author of approximately eighty patents and dozens of patent applications, has had numerous talks and presentations at the national and international conferences related to space physics, solar energy and lighting and has authored/co-authored over 30 scientific and technical publications. Dr. Vasylyev's broad technical expertise areas include IT/IOT, optics, photonics, lightguide-based illumination systems, solar energy, daylighting, and solid-state lighting.

19. Since its inception, SVVTI has been a vehicle for developing and commercializing Dr. Vasylyev's inventions, particularly being dedicated to creating impactful technology solutions that find utility in energy efficiency, renewable energy and certain types consumer products. One technology focus is optical advances that enhance solar energy harvesting and save energy in illumination systems.

20. SVVTI has invented and validated several ground-breaking technology solutions and has accumulated an extensive knowledge and built a diverse IP portfolio in optics, photonics, solar energy, daylighting and solid-state lighting fields. SVVTI has received innovation awards from TechConnect, Cleantech Open, and Illuminating Engineering Society.

21. SVVTI has developed and demonstrated several novel types of optical collectors for solar energy applications, significantly improving over the traditional technologies in terms of material intensity, concentration ratio, beam uniformity and solar-to-electric conversion efficiency.

22. Another notable technology developed by SVVTI is a unique daylight redirecting film material (Daylighting Fabric®) which is applied to windows of a building façade to redirect natural daylight deep into the interior space for improving natural illumination and saving energy used for lighting.

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 8 of 36

23. SVVTI has also developed and demonstrated various types of innovative wide-area illumination panels and backlights employing light guides and light emitting diodes (LEDs). These panels can be tailored for specific applications and improving various characteristics of illumination systems, including, for example, light beam diffusion, emission directionality, material efficiency, luminous efficacy, glare control, design options and aesthetics.

24. On or about, January 29, 2021, Acer received a letter from SVVTI, dated January 22, 2021, introducing SVVTI, and notifying Acer of several of the patents identified below, and identifying several of Acer's products that utilize SVVTI's intellectual property. In particular, the January 22, 2021 letter identified United States Patent Nos. 8,290,318; 8,740,397; 9,678,321; 9,097,826; 9,256,007; 9,880,342; 10,269,999; 10,439,088; 10,439,089; 10,613,306; 10,627,562; 10,797,191; 10,838,135; and 10,868,205.

25. Defendant has been aware of the Asserted Patents since, at least, June 21, 2021 when SVVTI filed three patent infringement lawsuits against Acer, styled *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-639-ADA (W.D. Tex.), *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-640-ADA (W.D. Tex.), and *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-640-ADA (W.D. Tex.), and *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-641-ADA (W.D. Tex.). Those cases collectively accused Acer of infringement of the Asserted Patents.

26. Defendant has been aware of the Asserted Patents since, at least, the filing and/or service of the original complaint in this case.

TECHNOLOGY BACKGROUND

27. Several of the products accused of infringement below are products that contain displays using LED-illuminated LCD technology. A LED-illuminated LCD (liquid-crystal display) is a flat-panel display that uses LED (light-emitting diode) illumination. The

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 9 of 36

illumination may come from LEDs along one or more sides of the display (edge-lit) or from fullarray backlighting (direct-lit). As explained below, some displays use a quantum dot enhancement film ("QDEF").

28. Some of the monitors sold by Acer are QLED monitors. QLED stands for quantum dot LED. Acer sells monitors that use QLED technology and heavily markets them to the gaming community. Generally, quantum dots are small, semiconductor particles that have unique optical and electronic properties, including the ability to produce pure monochromatic red, green, and/or blue light.

29. A widespread commercial application is using a quantum dot enhancement film ("QDEF") layer to improve the LED backlighting in LCD displays. In this application, light from a blue LED backlight is converted by quantum dots to relatively pure red and green. This combination of blue, green and red light incurs less blue-green crosstalk and light absorption in the color filters after the LCD screen, thereby increasing useful light throughput and providing a better color gamut. The QDEF layer is able to replace a diffuser used in traditional LCD backlight units.

30. The use of quantum dots to produce monochromatic red, green and blue light is an improvement over traditional LCD backlight units which fed a blue LED through a yellow filter to create white light which was then passed through red, green and blue color filters.

<u>COUNT I</u>

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 9,880,342

31. On January 30, 2018, United States Patent No. 9,880,342 entitled "Collimating Illumination Systems Employing Planar Waveguide" was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 10 of 36

assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '342 patent is incorporated by reference herein and may be accessed at https://patents.google.com/patent/US9880342B2.

32. The following products are accused of infringing the '342 Patent (the "'342 Accused Products"):

Acer EK240Q bi, Acer EK241Y, Acer QG271 bi, Acer ED270 Xbmiipx, Acer ED270U P2bmiipx, Acer Iconia Tab P10 Model 22001, Acer B247Y Ebmiprx, Acer SB272 bi,

Acer QG271 Ebii, Acer SB272 Ebi, Acer VG252Q Xbmmiipx, Acer SH242Y Ebmihx. In addition, the '342 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order.

33. Defendant has directly infringed, and is continuing to directly infringe, literally or under the doctrine of equivalents, at least claims 1-7, 9-11, 13-16, 18-25, 28-31, and 33 of the '342 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the '342 Accused Products, including computer monitors and laptops in the United States, in violation of 35 U.S.C. § 271(a).

34. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '342 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the Accused Products outside of the United States it does 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. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex.

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 11 of 36

2013). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '342 Accused Products directly to is distributors or subsidiaries and importing the '342 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

35. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '342 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '342 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '342 Accused Products, creating established distribution channels for the '342 Accused Products into and within the United States, manufacturing the '342 Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 12 of 36

prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

36. The '342 Accused Products use an illumination apparatus, specifically, an LCD display. The LCD display incorporates a liquid crystal display (LCD) which is backlit using a backlighting assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are placed along an edge of the visible area of the display and provide a light source. The display incorporates a planar waveguide formed by a thin layer of an optically transmissive material. For example, light from the backlighting LEDs is distributed and transmitted through the LCD using a planar waveguide (LGP). The planar waveguide (LGP) has four edges along its perimeter. The edges exist within the thickness of the waveguide, i.e., between the front surface (three-dimensionally textured surface) and the back surface (planar surface). One of those four edges is lit by LEDs. This edge (the light input edge) is transparent and allows light to freely enter the waveguide. The light source (the LEDs) is adjacent to the light input edge of the waveguide (LGP). The LEDs are optically coupled to (i.e., illuminate directly into the edge of) the LGP. The planar waveguide (LGP) receives light from the LEDs on its light input edge and propagates the received light through the planar waveguide in response to the optical transmission of the light from the LEDs. The back surface (planar surface) of the waveguide (LGP) contains a large number of light-deflecting elements (microstructures) that can be seen with magnifying optics (e.g., macro lens or microscope). These light-deflecting elements span along the entire length and width of the LGP, and do not follow a fixed geometric positioning pattern (e.g., an ordered grid pattern). The front surface (three-dimensionally textured surface) of the waveguide (LGP) contains a planar array of elongated cylindrical lenses extending between opposing edges of the LGP. Each of the cylindrical lenses of the front surface has the

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 13 of 36

shape of a section of a cylinder. The cylindrical lenses are formed directly in the front surface of the planar waveguide (LGP) such that the array of cylindrical lenses and the planar waveguide (LGP) collectively constitute a single monolithic structure which transmits light. At least one of the light-deflecting elements (microstructures) residing on the back surface of the waveguide (LGP) has a curved surface. For example, the sidewalls of each microstructure have curved surfaces that are sloped with respect to the overall plane constituting the back surface of the waveguide. At least one of the light-deflecting elements (microstructures) formed in the back surface of the waveguide is in a predetermined alignment (e.g., in relative orientation and/or positions) with the elongated cylindrical lenses residing on the front surface (three-dimensionally textured surface) of the planar waveguide (LGP). The area of each light deflecting element (microstructure) is less than one square millimeter. The light receiving aperture (light receiving area) of each elongated cylindrical lens is at least of the order of several tens of square millimeters. Each of the light deflecting elements (microstructures) formed in the back surface of the waveguide redirects light propagating in the waveguide (LGP) towards the elongated cylindrical lenses residing on the front surface of the waveguide. At least a substantial portion of the light entering the planar waveguide (LGP) on the light input edge is emitted through the elongated cylindrical lenses residing on the front surface (three-dimensionally textured surface) of the planar waveguide and towards an LCD located in front of the backlighting assembly.

COUNT II

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 10,269,999

37. On April 23, 2019, United States Patent No. 10,269,999 entitled "Light Trapping Optical Structures Employing Light Converting and Light Guiding Layers" was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 14 of 36

the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '999 patent is incorporated by reference herein and may be accessed at https://patents.google.com/patent/US10269999B2.

38. The following products are accused of infringing the '999 Patent (the "'999 Accused Products"):

Acer XV273K Pbmiipprzx.

In addition, the '999 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order.

39. Defendant has directly infringed, and is continuing to directly infringe, literally or under the doctrine of equivalents, at least claims 1-11, and 13 of the '999 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, '999 Accused Products including computer monitors and laptops in the United States, in violation of 35 U.S.C. § 271(a).

40. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '999 Accused Products outside of the United States, delivering those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '999 Accused Products outside of the United States it does 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. *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). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the Accused

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 15 of 36

Products directly to is distributors or subsidiaries and importing the Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

41. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '999 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '999 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '999 Accused Products, creating established distribution channels for the '999 Accused Products into and within the United States, manufacturing the '999 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, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 16 of 36

42. The '999 Accused Products use a light converting optical system, specifically, an LCD display. The LCD display incorporates a liquid crystal display (LCD) which is backlit using a backlighting assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are placed along an edge of the visible area of the display and provide a light source. The LEDs emit blue light, a portion of which is absorbed and converted to other wavelengths within the backlight. The LEDs are a monochromatic light source (e.g., emitting light only in one color) which is configured to emit light in a preselected spectral range (the LEDs emit light in blue color when powered on). The LCD/backlighting assembly incorporates a plurality of linear cylindrical microlenses arranged into a planar lenticular lens array. For example, the front surface1 of LGP has a planar lenticular array of linear cylindrical microlenses (microscopic lenses having a cylindrical cross-section) which are oriented parallel to each other and longitudinally extend between opposing terminal edges of the array. The LGP includes a planar light guiding layer which is formed from an optically transmissive material. For example, the body of the LGP is used to transmit and distribute light emitted by the LEDs. The lens array and the light guiding layer are positioned in energy receiving relationship with respect to the monochromatic light source (LEDs). For example, the LEDs are adjacent to an edge of the LGP and illuminate directly into the edge such that both the lens array and the light guiding layer receive light from the LEDs. The back surface of LGP contains a large number of light deflecting elements that can be seen with magnifying optics (e.g., a macro lens or microscope). These light-deflecting elements are three-dimensional microstructures formed directly in the back surface of LGP. The backlight contains a broad-area reflective surface that is spaced by a distance from the lens array and longitudinally and laterally extends parallel to the lens array. The backlight contains a generally planar photoresponsive layer. The photoresponsive layer is

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 17 of 36

located between the lens array and the broad-area reflective surface and is disposed in energy receiving relationship with respect to the lens array. A light input surface of the photoresponsive layer facing the planar lens array is configured for a generally unimpeded light passage from the planar lens array to the body of the photoresponsive layer. For example, the surface of the photoresponsive (active) layer of QDEF facing the lens array is smooth and highly transparent. Accordingly, substantially all light received on the surface enters the body of the layer. The photoresponsive layer comprises a plurality of quantum dots embedded into an optically transmissive material and is configured to absorb and convert light in the preselected spectral range (e.g., the spectral range of blue light emitted by the LEDs). The photoresponsive layer is configured at a sufficiently low thickness to transmit at least a portion of incident light without absorption in a single pass. For example, QDEF transmits at least some light without absorption in a single pass. The broad-area reflective surface is configured to receive unabsorbed light exiting from the photoresponsive layer and direct the unabsorbed light back towards the photoresponsive layer. For example, the composite prism sheet disposed in front of the QDEF receives unabsorbed light exiting from the QDEF and directs (reflects) that light back towards the QDEF.

COUNT III

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 10,439,089

43. On October 8, 2019, United States Patent No. 10,439,089 entitled "Light Converting System Employing Planar Light Trapping and Light Absorbing Structures" was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 18 of 36

royalties, damages, and income. A true copy of the '089 patent is incorporated by reference herein and may be accessed at https://patents.google.com/patent/US10439089B2.

44. The following products are accused of infringing the '089 Patent (the "'089 Accused Products"):

Acer X35.

In addition, the '089 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order.

45. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claims 14-19 of the '089 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the '089 Accused Products in the United States, in violation of 35 U.S.C. § 271(a). Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least independent claim 20 of the '089 patent by importing into the United States, at least, the '089 Accused Products, in violation of 35 U.S.C. § 271(g).

46. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '089 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '089 Accused Products outside of the United States it does 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. *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). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '089

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 19 of 36

Accused Products directly to is distributors or subsidiaries and importing the '089 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

47. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '089 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '089 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '089 Accused Products, creating established distribution channels for the '089 Accused Products into and within the United States, manufacturing the '089 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, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 20 of 36

48. The '089 Accused Products use a light converting optical system, specifically, an LCD display. The LCD display incorporates a liquid crystal display (LCD) which is backlit using a backlighting assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are placed along an edge of the visible area of the display and provide a light source. The LEDs emit blue light, a portion of which is absorbed and converted to other wavelengths within the backlight. The LCD/backlighting assembly contains a broad-area optically transmissive surface. For example, the LCD/backlighting assembly includes a composite prism sheet, sometimes also called brightness enhancement film (BEF) or optical enhancement film, having a front surface which transmits light (e.g., towards the front side of the display). The LCD/backlighting assembly contains a broad-area reflective surface (back reflector) on a back side of the assembly. The back reflector extends parallel to the optically transmissive surface (front surface of composite prism sheet) and is configured for scattering light (e.g., has a diffuse reflective coating). The LCD/backlighting assembly contains a first photoresponsive layer disposed between the optically transmissive surface and the reflective surface. For example, the backlight contains a Quantum Dot Enhancement Film (QDEF) which is disposed between the front surface of the composite prism sheet and the back reflector. The LCD/backlighting assembly contains a second photoresponsive layer disposed between the optically transmissive surface (front surface of composite prism sheet) and the reflective surface (back reflector). For example, the backlight includes a phosphor layer formed on the back reflector, which is used to convert blue light into other wavelengths to create a perception of white light (e.g., when illuminated by the LEDs). The LCD/backlighting assembly contains a planar lens array (an array of cylindrical lenses arranged on a planar plastic substrate) extending parallel to the optically transmissive and reflective surfaces (front surface of composite prism

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 21 of 36

sheet and back reflector, respectively). The first photoresponsive layer (QDEF) incorporates quantum dots. The quantum dots are distributed within an optically transmissive material. The thickness of the first photoresponsive layer is less than a minimum thickness sufficient for absorbing substantially all incident light in a single pass. For example, QDEF transmits at least some light without absorption in a single pass.

COUNT IV

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 10,797,191

49. On October 6, 2020, United States Patent No. 10,797,191 entitled "Light Trapping Optical Structure" was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages, and income. A true copy of the '191 patent is incorporated by reference herein and may be accessed at https://patents.google.com/patent/US10797191B2.

50. The following products are accused of infringing the '191 Patent (the "'191 Accused Products"):

Acer XV273K Pbmiipprzx.

In addition, the '191 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order.

51. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claims 1, 3, 5, 7, 8, and 10-19 of the '191 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the '191 Accused Products, in the United States, in violation of 35 U.S.C. § 271(a).

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 22 of 36

52. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '191 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '191 Accused Products outside of the United States it does 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. 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). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '191 Accused Products directly to is distributors or subsidiaries and importing the '191 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

53. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '191 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '191 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 23 of 36

constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers (including inducement to import in violation of § 271(g)), customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '191 Accused Products, creating established distribution channels for the '191 Accused Products into and within the United States, manufacturing the '191 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, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

54. The '191 Accused Products use an optical article for redistributing light, specifically, an LCD display. The LCD display includes a backlighting/LCD (Liquid Crystal Display) panel assembly that covers the front side of the monitor and is used to redistribute light emitted by a series of light emitting diode (LED) sources disposed along an edge of the monitor. The LCD/backlighting panel assembly includes a rectangular optically transmissive sheet configured to guide light using total internal reflection. For example, LCD/backlighting panel assembly includes a light guide plate (LGP) that guides light using total internal reflection (TIR). The LGP has a first broad-area surface (front surface) and a second broad-area surface (back surface) which is parallel to the first broad-area surface. The thickness of the LGP is between a fraction of a millimeter and several millimeters. For example, the thickness of the LGP is 3 mm. Also, the length and width dimensions of the LGP is 100 millimeters or more. The backlighting/LCD panel assembly includes a strip of light emitting diodes (LEDs) coupled to an edge of the LGP. The LEDs act as artificial light source and the light emitted by the LEDs illuminates the LGP. The backlighting/LCD panel assembly includes a strip of light emitting diodes (LEDs) coupled to an edge of the LGP. The backlighting/LCD panel assembly includes a strip of light emitting diodes (LEDs) coupled to an edge of the LGP. The backlighting/LCD panel assembly includes a strip of light emitting diodes (LEDs) coupled to an edge of the LGP. The backlighting/LCD panel assembly includes a strip of light emitting diodes (LEDs) coupled to an edge of the LGP. The backlighting/LCD panel assembly includes a plurality of cylindrical

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 24 of 36

lenses formed in the first broad-area surface and extending along parallel straight lines between two opposing edges of the optically transmissive sheet. For example, the LGP includes a plurality of cylindrical lenses formed in the first broad-area surface (front surface) and that extends along the parallel straight lines between two opposing edges of the LGP. The backlighting/LCD panel assembly includes a two-dimensional pattern of discrete cavities formed in the second broad-area surface of the LGP. For example, the LGP has a large number of microstructures formed in its back surface. The microstructures include cavities. The backlighting/LCD panel assembly includes a light converting layer extending parallel to the optically transmissive sheet (LGP) and disposed in an energy receiving relationship with respect to the optically transmissive sheet. For example, the backlighting/LCD panel assembly includes a Quantum Dot Enhancement Film (QDEF) which acts as a light converting layer. The QDEF includes a first transparent wall, a second transparent wall, and a partially transmissive layer sandwiched between the first and second transparent walls. For example, the QDEF includes an active layer, which is partially transmissive layer, and which is sandwiched between two transparent walls. The backlighting/LCD panel assembly includes a reflective back cover which is approximately coextensive with the optically transmissive sheet (LGP) and the light converting layer (QDEF). For example, the backlighting/LCD panel assembly includes a back reflector which is coextensive with the LGP and the QDEF. The backlighting/LCD panel assembly includes a total internal reflection surface located at a distance from the optically transmissive sheet and configured to reflect light using total internal reflection. For example, the backlighting/LCD panel assembly includes a composite prism sheet which is located at a distance from the LGP. The composite prism sheet includes linear grooves that are configured to deflect light using total internal reflection, depending on the propagation angles of light rays

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 25 of 36

passing through the prism sheet. At least one of the cylindrical lenses has an arcuate crosssectional profile. For example, the cylindrical lenses have a convex arcuate profile in a transverse cross-section and a focal distance. The focal distance can be determined, for example, using a formula based on the radius of curvature of the cylindrical lenses. The area occupied by each of the discrete cavities is less than an area occupied by each of the cylindrical lenses. For example, each microstructure containing the discrete cavity has a radius of less than 35 mm (micrometers). On the other hand, each cylindrical lens has a radius of more than 170 mm and length of several hundred thousand micrometers, yielding an area of at least several tens of millions square micrometers. The partially transmissive layer (active layer of QDEF) comprises light absorbing elements distributed within an optically transmissive material and configured for absorbing and converting light emitted by the artificial light source. Specifically, the active layer of QDEF includes a plurality of quantum dots embedded into an optically transmissive material. The quantum dots are used to absorb blue light emitted by the LEDs and to re-emit the absorbed light as light in other colors⁶ (e.g., red and/or green colors). A quantum dot only emits one color, which is determined by its size.

COUNT V

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 11,276,795

55. On March 15, 2022, United States Patent No. 11,276,795 entitled "Light Converting Systems Employing Thin Light Trapping Structures with Lens Array" was duly and legally issued after full and fair examination. SVVTI is the owner of all right, title, and interest in and to the patent by assignment, with full right to bring suit to enforce the patent, including the right to recover for past infringement damages and the right to recover future royalties, damages,

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 26 of 36

and income. A true copy of the '795 patent is incorporated by reference herein and may be accessed at https://patents.google.com/patent/US11276795B2.

56. The following products are accused of infringing the '795 Patent (the "'795 Accused Products"):

Acer XV273K Pbmiipprzx.

In addition, the '795 Accused Products shall include those products identified in SVVTI's infringement contentions, to be served in accordance with the case scheduling order.

57. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claims 1, 9-13, 15, 16, 17, 20 of the '795 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the '795 Accused Products, in the United States, in violation of 35 U.S.C. § 271(a).

58. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the '795 Accused Products outside of the United States, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or in the case that it delivers the '795 Accused Products outside of the United States it does 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. *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). Furthermore, Defendant directly infringes through its direct involvement in the activities of its distributors or subsidiaries, including by selling and offering for sale the '795 Accused Products into the United States. Upon information and belief, Defendant conducts activities that constitutes direct infringement. Defendant is vicariously liable for this infringing conduct of its

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 27 of 36

distributors and subsidiaries under both the alter ego and agency theories because, as an example and on information and belief, Defendant has the right and ability to control its distributors' and subsidiaries' infringing acts and receives a direct financial benefit from their infringement.

59. In addition, upon information and belief, since at the least the date when Defendant was on notice of its infringement, Defendant has actively induced, under U.S.C. § 271(b), distributors, customers, subsidiaries, importers, and/or consumers that import, purchase, or sell the '795 Accused Products that include or are made using all of the limitations of one or more claims of the asserted patents, at least as described in the preceding paragraph, to directly infringe one or more claims of the patents by using, offering for sale, selling, and/or importing the '795 Accused Products. Since at least the notice provided on the above-mentioned date, Defendant does so with knowledge, or with willful blindness of the fact, that the induced acts constitute infringement. Upon information and belief, Defendant intends to cause, and has taken affirmative steps to induce infringement by distributors, importers, customers, subsidiaries, and/or consumers by, *inter alia*, creating advertisements that promote the infringing use of the '795 Accused Products, creating established distribution channels for the '795 Accused Products into and within the United States, manufacturing the '795 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, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

60. The '795 Accused Products use a light converting optical system, specifically, a LCD display. The LCD display incorporates a liquid crystal display (LCD) which is backlit using a backlighting assembly (backlight). The backlight uses multiple light-emitting diodes (LEDs) which are placed along an edge of the visible area of the display and provide a light

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 28 of 36

source. The LEDs emit blue light, a portion of which is absorbed and converted to other wavelengths within the backlight. The LCD/backlighting assembly contains a microstructured broad-area front surface (e.g., a surface having structures on a microscopic scale) configured for transmitting light rays having first incidence angles with respect to a surface normal and totally internally reflecting light rays having second incidence angles. For example, the LCD/backlighting assembly contains brightness enhancement films (BEFs). The front surface of the BEF has a regular pattern formed by microscopic linear grooves disposed side by side. The linear grooves are configured to reflect light using total internal reflection and deflect light using refraction, depending on the propagation angles of light rays passing through the BEF. For example, each linear groove of the BEF has a pair of facets inclined at a 45°. Each facet reflects light that arrives from a perpendicular direction using total internal reflection and refracts light that strikes the BEF at slanted angles. Therefore, the light that strikes at slanted angles (first incidence angles) is transmitted, while the light that arrives at perpendicular direction (second incidence angles) is reflected. The front surface of the microstructured surface includes an array of linear grooves disposed side by side and extending along a straight line and parallel to one another between two edges of the front surface. Each of the linear grooves has triangular cross section and is configured to reflect light using a total internal reflection and deflect light using refraction, depending on the propagation angles of light rays passing through the BEF. For example, each linear groove of the BEF has a pair of facets inclined at a 45°. Each facet reflects light that arrives from a perpendicular direction using total internal reflection and refracts light that strikes the BEF at slanted angles. The LCD/backlighting assembly contains a reflective broad-area back surface which is formed by a thin sheet of material configured for reflectively scattering light and which is approximately coextensive with and oriented parallel to the front

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 29 of 36

surface. For example, the LCD/backlighting assembly contains a reflective surface (reflector sheet) which is made of a thin sheet of reflective material and which is coextensive with and oriented parallel to the BEF, containing the microstructured broad-area front surface. The LCD/backlighting assembly of the display contains LEDs that are used as a light source. The LEDs are a monochromatic (e.g., emitting light only in one color) light source which is configured to emit light in a visible spectrum (the LEDs emit light in blue color when powered on). The LCD/backlighting assembly contains an area-distributed lens array (an array of cylindrical non-imaging lenses). The lens array is aligned parallel to the front (BEF) and back (reflector sheet) surfaces. Further, the lens array is disposed in energy receiving relationship with respect to the light source (e.g., LEDs are shining light directly into the lenses of the lens array) and is used to distribute light emitted by the LEDs. The lens array includes cylindrical nonimaging lenses. The lenses are aligned parallel to each other. In the LCD/backlighting assembly, the lenses are facing towards the front side of the display. The LCD/backlighting assembly contains a continuous broad-area photoabsorptive film layer. For example, the backlight contains a Quantum Dot Enhancement Film (QDEF) which is retained in a planar form within the backlight and contains an active layer which is responsive to blue light emitted by the LEDs (e.g., by absorbing that light and converting it to light of other colors, such as red and green colors). The photoabsorptive layer is located between the microstructured front surface and the reflective surface (back surface). For example, QDEF is located between the BEF and the reflector sheet. The photoabsorptive film layer (active layer of QDEF) includes a first light converting semiconductor material having a first bandgap (e.g., "red" quantum dots that convert blue light into light in red spectral band) and a second light converting semiconductor material having a second bandgap (e.g., "green" quantum dots that convert blue light into light in green

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 30 of 36

spectral band) which is different than the first bandgap. For example, QDEF includes an active (core) layer that includes a semiconductor material in the form of quantum dots. Quantum dots are nano-sized crystals made of semiconductor materials. The quantum dots are configured to absorb and convert light in the preselected spectral range (e.g., in the spectral range of blue light emitted by the LEDs). For example, the quantum dots are used to absorb blue light emitted by the LEDs and re-emit the absorbed light energy in other spectral bands of light (e.g., red and/or green colors). Further, quantum dots have bandgaps that are tunable across a wide range of energy levels by changing their size. As mentioned above, QDEF incorporated into the LCD/backlighting assembly includes two groups of quantum dots: "green" and "red" which emit light in green and red colors, respectively, based on the size of quantum dot. The "green" and "red" quantum dots have different sizes and hence different band gaps. The backlight incorporates a first optically transmissive protective layer disposed in contact with and bonded to a front surface of the photoabsorptive film layer. For example, the active (photoabsorptive) layer of QDEF is laminated between two (e.g., first and second) optically transmissive protective layers. Each of the protective layers is disposed in contact with the respective surface of the active layer. The backlight incorporates a second optically transmissive protective layer disposed in contact with and bonded to an opposing back surface of the photoabsorptive film layer. For example, the active (photoabsorptive) layer of QDEF is laminated between two (e.g., first and second) transmissive protective layers which are disposed in contact with respective opposite surfaces of the active layer. The photoabsorptive film layer (active layer of QDEF) is formed from an optically transmissive material. As mentioned earlier, the active layer of QDEF includes quantum dots distributed in uniform concentration, specifically "green" and "red" quantum dots which emit light in green and red colors, respectively, based on the size of

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 31 of 36

quantum dots. The first and second optically transmissive protective layers are configured for protecting the photoabsorptive film layer (active layer of QDEF) from ambient air and/or moisture. Each of the first (e.g. "red" quantum dots) and second (e.g. "green" quantum dots) light converting semiconductor materials is configured to absorb light selectively such that photons with a higher energy (e.g., blue light emitted from the LEDs) are at least partially absorbed and photons with a lower energy are transmitted without appreciable absorption. For example, the second light semiconductor material (e.g., "green" quantum dots) are configured to absorb a first portion of light with a higher energy (e.g., a portion of blue light propagating through QDEF) and transmit at least a second portion of the light towards the first light converting semiconductor materials (e.g. "red" quantum dots). The light absorbed by the green quantum dots is converted and transmitted as green light (photons with lower energy). Similarly, the first light converting element (e.g., "red" quantum dots") is configured to absorb and convert at least a part of the second portion of the light. For example, "red" quantum dots absorb and convert (into red light) a part of the remaining blue light which has not been absorbed/converted by "green" quantum dots. Unabsorbed blue light is transmitted through the QDEF in a single pass. The thickness of the photoabsorptive film layer is less than a minimum thickness sufficient for absorbing substantially all light in the visible spectrum traversing through the photoabsorptive film layer. For example, as illustrated below, QDEF transmits at least some light without absorption in a single pass. The front (microstructured front surface) and back (reflector sheet) surfaces form a light trapping structure configured to provide for multiple transverse light passage through the photoabsorptive film layer (active layer of QDEF). For example, both the BEF (front surface) and the reflector sheet (back surface) have reflective surfaces. QDEF (which includes the photoabsorptive film layer) is positioned between the BEF and the reflector sheet,

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 32 of 36

forming a light trapping optical structure. For example, at least some of the light emitted by the LEDs is prevented from escaping from the structure flanked by the reflective surface of BEF on the front side and the reflective surface of the reflector sheet on the other (back) side, causing the light to bounce back and forth multiple times and also causing additional portions of the light to be absorbed by the active layer (photoabsorptive film layer) of QDEF.

FURTHER ASSERTIONS INVOLVING ALL CLAIMS

61. The Asserted Patents are valid and enforceable.

62. Defendant has been aware of the '342 Patent, '999 Patent, '089 Patent, and '191 Patent since, at least, January 29, 2021, when Acer received a letter from SVVTI, dated January 22, 2021, introducing SVVTI, and notifying Acer of those patents, and identifying several of Acer's products that utilize SVVTI's intellectual property. In particular, the January 22, 2021 letter identified United States Patent Nos. 8,290,318; 8,740,397; 9,678,321; 9,097,826; 9,256,007; 9,880,342; 10,269,999; 10,439,088; 10,439,089; 10,613,306; 10,627,562; 10,797,191; 10,838,135; and 10,868,205.

63. Defendant has been aware of the Asserted Patents since, at least, June 21, 2021 when SVVTI filed three patent infringement lawsuits against Acer, styled *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-639-ADA (W.D. Tex.), *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-640-ADA (W.D. Tex.), and *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-640-ADA (W.D. Tex.), and *SVV Technology Innovations, Inc. v. Acer Inc.*, No. 6:22-cv-641-ADA (W.D. Tex.). Those cases collectively accused Acer of infringement involving the Asserted Patents.

64. Alternatively, Defendant has had knowledge of the Asserted Patents since, at least, the filing date of the original complaint in this action.

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 33 of 36

65. Defendant's affirmative acts of selling the Accused Products, causing the Accused Products to be sold, advertised, offered for sale, and/or distributed, and providing instruction manuals for the Accused Products have induced and continue to induce Defendant's customers, and/or end-users to use the Accused Products in their normal and customary way to infringe the Asserted Patents. For example, it can be reasonably inferred that end-users will use the infringing products, which will cause the end-users to use the elements that are the subject of the claimed invention. Defendant specifically intended and was aware that these normal and customary activities would infringe the Asserted Patents. In addition, Defendant provides marketing and/or instructional materials, such as user guides, that specifically teach end-users to use the Accused Products in an infringing manner. By providing such instructions, Defendant knows (and has known), or was willfully blind to the probability that its actions have, and continue to, actively induce infringement. By way of example only, Defendant has induced infringement and continue to induce infringement of, in addition to other claims, at least the specific claims identified above of the Asserted Patents by selling in the United States, without SVVTI's authority, infringing products and providing instructional materials. These actions have induced and continue to induce the direct infringement of the Asserted Patents by endusers. Defendant performed acts that constitute induced infringement, and would induce actual infringement, with the knowledge of the Asserted Patents and with the knowledge, or willful blindness to the probability, that the induced acts would constitute infringement. Upon information and belief, Defendant specifically intended (and intends) that its actions would result in infringement of at least the specific claims identified above of the Asserted Patents, or subjectively believed that its actions would result in infringement of the Asserted Patents but took deliberate actions to avoid learning of those facts, as set forth above. Upon information and

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 34 of 36

belief, Defendant knew of the Asserted Patents and knew of its infringement, including by way of this lawsuit as described above.

66. Defendant's infringement has been and continues to be willful and deliberate. Upon information and belief, Defendant deliberately infringed the Asserted Patents and acted recklessly and in disregard to the Asserted Patents by making, having made, using, importing, and offering for sale products that infringe the Asserted Patents. Upon information and belief, the risks of infringement were known to Defendant and/or were so obvious under the circumstances that the infringement risks should have been known. Upon information and belief, Defendant has no reasonable non-infringement theories. Upon information and belief, Defendant has not attempted any design/sourcing change to avoid infringement. Defendant has acted despite an objectively high likelihood that its actions constituted infringement of the Asserted Patents. In addition, this objectively-defined risk was known or should have been known to Defendant. Upon information and belief, Defendant has willfully infringed and/or continues to willfully infringe the Asserted Patents. Defendant exhibited egregious behavior beyond typical infringement in that, despite being aware of its infringement, defendant did not develop any non-infringement theories, did not attempt any design or sourcing change, and did not otherwise cease its infringement.

67. To the extent any marking or notice was required by 35 U.S.C. § 287, Plaintiff has complied with the applicable marking and/or notice requirements of 35 U.S.C. § 287.

DEMAND FOR JURY TRIAL

Plaintiff hereby demands a jury for all issues so triable.

PRAYER

WHEREFORE, Plaintiff prays for judgment that:

Case 6:24-cv-00538-ADA Document 1 Filed 10/10/24 Page 35 of 36

 Defendant has infringed and continues to infringe, one or more claims of the Asserted Patents;

2. Defendant be ordered to pay damages caused to Plaintiff by Defendant's unlawful acts of infringement;

3. Defendant's acts of infringement have been, and are, willful;

4. Plaintiff recover actual damages under 35 U.S.C. § 284;

5. Plaintiff be awarded supplemental damages for any continuing post-verdict infringement up until final judgment;

6. Plaintiff be awarded a compulsory ongoing royalty;

7. Plaintiff be awarded an accounting of damages;

Plaintiff be awarded enhanced damages for willful infringement as permitted under the law;

9. A judgment and order requiring Defendant to pay to Plaintiff pre-judgment and post-judgment interest on the damages awarded, including an award of pre-judgment interest, pursuant to 35 U.S.C. § 284, from the date of each act of infringement by Defendant to the day a damages judgment is entered, and a further award of post-judgment interest, pursuant to 28 U.S.C. § 1961, continuing until such judgment is paid, at the maximum rate allowed by law;
10. An award to Plaintiff of the costs of this action and its reasonable attorneys' fees pursuant

to 35 U.S.C. §285; and

11. Such other and further relied as the Court deems just and equitable.

DATED: October 10, 2024

Respectfully submitted,

<u>/s/Robert D. Katz</u> Robert D. Katz Texas Bar No. 24057936 KATZ PLLC 6060 N. Central Expressway, Suite 560 Dallas, TX 75206 214-865-8000 888-231-5775 (fax) rkatz@katzfirm.com

ATTORNEY FOR PLAINTIFF SVV TECHNOLOGY INNOVATIONS INC.