

3. 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).

4. 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.

5. 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.

6. 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.

7. 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.

8. 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.

9. 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.

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

11. 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.

12. 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.

13. 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.

14. 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 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.

15. 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

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

17. 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 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.

18. 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.

19. 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.

20. 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.

21. 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.

22. 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.

23. On or about, January 29, 2021, Acer received a letter from SVVTI, introducing SVVTI, notifying Acer of several of the patents identified below, and identifying several of Acer's products that utilize SVVTI's intellectual property.

24. Defendant has been aware of the Asserted Patents since, at least, January 29, 2021 when Acer received SVVTI's letter disclosing and attaching each of these patents, and identifying several of Acer's products utilizing claims of such patents which were also identified in SVVTI's letter.

TECHNOLOGY BACKGROUND

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

26. Several of the products accused of infringement below are QLED monitors. QLED stands for quantum dot LED.

27. Acer sells monitors that use QLED technology and heavily markets them to the gaming community. Notable products include the Acer X27, X35, XB3, and EI1 monitor lines.

28. 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 TVs. 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.

30. The QDEF layer is able to replace a diffuser used in traditional LCD backlight units.

31. 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.

THE ACCUSED PRODUCTS

32. The Accused Products are products which utilize LED-backlit LCD display panels.

33. The Accused Products are distinguishable into two categories. Products which utilize display panels containing one or more QDEF layers (“QDEF Accused Products”) and products which utilize display panels that do not contain QDEF layers (“Non-QDEF Accused Products”). The QDEF Accused Products are further distinguishable into two subcategories. QDEF Accused Products which are direct-lit, in that they use an LED array on the back side of the panel (“Direct-lit QDEF Accused Products”) and QDEF Accused Products which are edge-lit, in that they use LEDs around one or more edges of the panel (“Edge-lit QDEF Accused Products”).

34. The Edge-lit QDEF Accused Products include, but are not limited to, the Acer X27, X35, XB3, and EI1 monitor lines.

35. The QDEF Accused Products include the Edge-lit QDEF Accused Products.

36. The Non-QDEF Accused Products include, but are not limited to, the following monitor lines: Z35, X25, X28, XB1, Z1, XB2, XB0, XN3, CG7, and X38.

37. The Non-QDEF Accused Products also include, but are not limited to, the following laptop computer lines: Helios 300, Triton 300 (excluding OLED models), Triton 500 SE, Helios 500, Helios 700, Triton 300, Triton 500, Triton 700, and Triton 900.

38. The Accused Products also include, but are not limited to, the products identified in Plaintiff's infringement contentions which have been served in this case.

COUNT I

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 8,290,318

39. On October 16, 2012, United States Patent No. 8,290,318 entitled "Light Trapping Optical Cover" 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 '318 patent is incorporated by reference herein and may be accessed at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=8290318> or <https://patents.google.com/patent/US8290318B2>.

40. Defendant has directly infringed, and is continuing to directly infringe, literally or under the doctrine of equivalents, at least claims 1, 2, 3, 5, 6, 8, 11, 13, 14, and 15 of the '318 patent by importing into the United States, making, using, selling, and/or offering for sale, at least, the Edge-lit QDEF Accused Products and other products containing LED-illuminated LCD displays, including computer monitors and laptops in the United States, in violation of 35 U.S.C. § 271(a).

41. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the 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. 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 Products directly to its 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.

42. 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 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 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 Accused Products, creating established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

43. The Edge-lit QDEF Accused Products use an optical cover, specifically, a backlight including various light-management optical sheets (including, for example, a light guiding plate (LGP)) covering light harvesting device (plastic sheet incorporating quantum dot materials) within a backlighting/LCD panel assembly. The quantum dot materials are used to absorb blue light emitted from the backlight and re-emit the absorbed energy in other spectral bands¹ of light (e.g., red and/or green colors). The LCD/backlighting panel assembly includes a layer of optically transparent material (LGP). The LGP is formed by a plastic sheet made from a highly transparent material (such as optical-grade acrylic). The LGP includes two opposing broad-area surfaces extending parallel to each other. The LGP (layer of optically transparent material) contains a large number of light-deflecting elements (microstructures). These light deflecting elements are formed in the back surface of the LGP and distributed along the prevailing plane of the LGP. Both the front and back surfaces of the LGP receive light and therefore are input surfaces. Furthermore, both of the surfaces are characterized by a stepped drop in refractive index outwardly from the respective layer (LGP) and by a critical angle of a Total Internal Reflection (the LGP guides light emitted by the LEDs using Total Internal Reflection). Each of the light deflecting elements (microstructures) receive light that propagate

between the opposing front and back surfaces (e.g., the light that is recycled within the LCD/backlighting panel assembly and passed through the LGP.

COUNT II

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

44. 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 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 <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=9880342> or <https://patents.google.com/patent/US9880342B2>.

45. 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 Non-QDEF and Edge-lit QDEF Accused Products and other products containing LED-illuminated LCD displays, including computer monitors and laptops in the United States, in violation of 35 U.S.C. § 271(a).

46. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the 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. 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 Products directly to its 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.

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 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 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 Accused Products, creating established distribution channels for the Accused Products into and within the United States,

manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

48. The Non-QDEF and Edge-lit QDEF Accused Products use an illumination apparatus, specifically, a display screen. The display screen 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 screen 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 (rounded ridges extending between opposing edges of the LGP). Each of the rounded ridges of the front surface has the shape of a section of a cylinder and represents linear cylindrical lenses. The cylindrical lenses (rounded ridges) 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 (rounded ridge) 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 (rounded ridges) 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 III

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

49. 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 royalties, damages, and income. A true copy of the '089 patent is incorporated by reference herein and may be accessed at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=10439089> or <https://patents.google.com/patent/US10439089B2>.

50. 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 QDEF Accused Products and other products containing LED-illuminated LCD displays, including computer monitors, tablets, and handheld devices, 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 QDEF Accused Products and other products containing LED-illuminated LCD displays, including computer monitors, tablets, and handheld devices, in violation of 35 U.S.C. § 271(g).

51. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the 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. 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 Products directly to its 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.

52. 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 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 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 Accused Products, creating

established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

53. The QDEF Accused Products use a light converting optical system, specifically, a display screen. The display screen 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 front¹ 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 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. 10,627,562

54. On April 21, 2020, United States Patent No. 10,627,562 entitled "Illumination System Using Edge-Lit Waveguide and Microstructured Surfaces" 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 '562 patent is incorporated by reference herein and may be accessed at <http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=10627562> or <https://patents.google.com/patent/US10627562B2>.

55. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claims 1, 2, 4-8, 10, 13, 14-18, and 19-20 of the '562 patent by importing into the United States, making, using, selling, and/or offering for sale, at

least, the QDEF Accused Products and other products containing LED-illuminated LCD displays, including computer monitors, tablets, and handheld devices, in the United States, in violation of 35 U.S.C. § 271(a).

56. Alternatively, and in addition, Defendant directly infringes as described in the preceding paragraph, by making and selling the 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. 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 Products directly to its 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.

57. 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 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 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 Accused Products, creating established distribution channels for the Accused Products into and within the United States, manufacturing the Accused Products in conformity with U.S. laws and regulations, distributing or making available instructions or manuals for these products to purchasers and prospective buyers, and/or providing technical support, replacement parts, or services for these products to these purchasers in the United States.

58. The QDEF Accused Products use an edge-lit waveguide illumination system, specifically, a display screen. The display screen incorporates a liquid crystal display (LCD) which is backlit using a backlighting panel 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. Light emitted by the LEDs is redistributed within the backlight using an optical waveguide. The display screen incorporates a thin planar body of an optically transmissive material having edges disposed between a first broad-area surface and an opposing second broad-area surface. For example, the backlight of the display screen contains a large-area light guiding plate (LGP) which is 3 mm in thickness and which transmits light. The LGP has edges disposed between its front surface and opposing back surface. Both the front and back surfaces have broad areas (e.g., extending along approximately the entire length and width of the

visible portion of the display screen). The display screen also incorporates a plurality of light emitting diodes (LEDs) optically coupled to an edge of said optically transmissive material (LGP). For example, multiple LEDs are positioned along and oriented towards a light input edge of LGP such that the edge is illuminated when LEDs are turned on. The display screen incorporates a plurality of linear lenses formed in said first broad-area surface (front surface of LGP). For example, the front surface of LGP has a large number of long and narrow lenses which extend along straight lines between opposite edges of LGP. The display screen incorporates a plurality of surface relief features formed in said second broad-area surface (back surface of LGP) according to a predetermined two-dimensional pattern. For example, the back surface of LGP has a two-dimensional pattern of microstructures which are distributed over both length and width dimensions of the surface and are used to extract light from LGP. The two-dimensional pattern is predetermined (e.g., designed to make LGP to uniformly emit light from its surface). The optically transmissive material (LGP) is configured to receive light on said edge and propagate the received light towards an opposing edge in response to optical transmission and total internal reflection. For example, LGP receives light from LEDs on its light input edge and propagates it towards the opposite edge using optical transmission and total internal reflection (TIR)³ from its front and back surfaces. The plurality of surface relief features (microstructures) is configured to extract light from said optically transmissive material (LGP) such that the extracted light is distributed from a surface of said plurality of linear lenses. For example, as explained above, the microstructures are used to extract light from LGP. The extracted light is distributed through the front surface of LGP, in which the linear lenses are formed, towards the front side of the display screen. Thus, the extracted light is distributed from the surface of linear lenses.

FURTHER ASSERTIONS INVOLVING ALL CLAIMS

59. The Asserted Patents are valid and enforceable.

60. Defendant has had knowledge of the Asserted Patents since, at least, January 29, 2021, when Acer received SVVTI's letter disclosing each of these patents, and identifying several of Acer's products utilizing claims of such patents which were also identified in SVVTI's letter.

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

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

63. 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.

64. 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:

1. 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;
8. 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 relief as the Court deems just and equitable.

DATED: June 26, 2023

Respectfully submitted,

/s/Robert D. Katz

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.