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-00641**
v.	§	
	§	**JURY DEMANDED**
ACER INC.	§	
	§	
Defendant.	§	

PLAINTIFF'S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff SVV Technology Innovations Inc. ("SVVTI" or "Plaintiff") files this Complaint for patent infringement against Acer Inc. ("Acer" or "Defendant"). Plaintiff alleges infringement of United States Patent Numbers 10,269,999 ("'999 Patent"); 10,439,088 ("'088 Patent"); 10,613,306 ("'306 Patent"); and 11,276,795 ("'795 Patent"); collectively, the "Asserted Patents."

PARTIES

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

2. 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

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.

COUNT I

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

38. 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

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 http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=10269999 or https://patents.google.com/patent/US10269999B2.

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, 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).

40. The Edge-lit 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 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 rounded ridges 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 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 II

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 10,439,088

41. On October 8, 2019, United States Patent No. 10,439,088 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 '088 patent is incorporated by reference herein and may be accessed at http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=10439088 or https://patents.google.com/patent/US10439088B2.

42. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claims 1-3, 5, 7-13, 16, 18-24, 25, and 26 of the '088 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).

43. The Edge-lit 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 of the display screen 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 preselected spectral range (the LEDs emit light in blue color when powered on). The LCD/backlighting assembly contains a planar lenticular lens array (an array of linear cylindrical lenses on a planar plastic substrate). The lens array is disposed in energy receiving relationship with respect to the light source (e.g., LEDs are shining light into an edge of the lens array) and is used to distribute light emitted by the LEDs. The LCD/backlighting assembly contains a microstructured surface (e.g., a surface having structures on a microscopic scale) including a plurality of linear grooves. For example, the LCD/backlighting assembly contains a composite prism sheet, also called brightness enhancement film (BEF). The front surface of the prism sheet has a regular prismatic pattern formed by microscopic linear grooves disposed side by side. The LCD/backlighting assembly contains a reflective surface (back reflector) on a back side of the lens array. The backlight contains a generally planar photoresponsive 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 red and green colors). The photoresponsive layer comprises a semiconductor material in the form of quantum dots. For example, QDEF incorporates quantum dots2 which are nano-sized crystals made of semiconductor materials. The quantum dots are embedded into an optically transmissive material. For example, the quantum dots are embedded into the active layer of QDEF which is formed from a material that transmits light. The thickness of the photoresponsive layer is less than a minimum thickness

sufficient for absorbing substantially all received light in a single pass at normal incidence. For example, QDEF transmits at least some light without absorption in a single pass.

COUNT III

DEFENDANT'S INFRINGEMENT OF U.S. PATENT NO. 10,613,306

44. On April 7, 2020, United States Patent No. 10,613,306 entitled "Light Distribution System Employing Planar Microstructured 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 '306 patent is incorporated by reference herein and may be accessed at http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=10613306 or https://patents.google.com/patent/US10613306B2.

45. Defendant has directly infringed, and continues to directly infringe, literally or under the doctrine of equivalents, at least claims 1, 2, 4, 5, 7, 12, 13, 15, 17-19, 20, 21, 23, 24, 26, 27-31, 33, 34, 38-40, and 42 of the '306 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).

46. The QDEF Accused Products use a light distribution optical 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. The light distribution optical system (display screen) incorporates a flexible

optically transmissive sheet having a first broad-area surface and an opposing second broad-area surface. For example, the backlighting/LCD panel assembly contains a light guiding plate (LGP) formed by a thin, optically transmissive plastic sheet. The display screen also incorporates an artificial light source illuminating the optically transmissive sheet (LGP). For example, as explained above, the backlighting/LCD panel assembly of the display screen contains LEDs that are used as a light source. The LEDs illuminate the optically transmissive sheet (LGP) from an edge. The display screen also contains a plurality of rounded ridges formed in the first broad-area surface (front surface of LGP) and aligned parallel to an edge of the optically transmissive sheet (LGP). For example, the rounded ridges are incorporated into a linear array and aligned parallel to the bottom and top edges of LGP. The display screen incorporates a plurality of discrete cavities formed in the second broad-area surface (back surface of LGP) and distributed over an area of the 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 microscopic cavities which are discrete (e.g., individually separate and distinct) and which are formed directly in the back surface. The two-dimensional pattern is predetermined (e.g., specifically designed to uniformly extract light from the LGP). Each of the plurality of discrete cavities is disposed in optical communication with respect to at least one of the plurality of rounded ridges. For example, each cavity receives light from one or more rounded ridges as the light is reflected from the rounded ridges while being guided within LGP. In addition, each cavity redirects at least a portion of light that enters the cavity towards one or more rounded ridges while extracting light from LGP. The display screen incorporates a planar reflective surface extending parallel to the optically transmissive sheet (LGP) and disposed in an energy receiving relationship with respect to the optically transmissive sheet (LGP). For

example, the backlight includes a planar reflector on the back of LGP. The back reflector extends parallel to LGP and is used to receive and reflect light emerging from the LGP. A light receiving aperture of each of the plurality of discrete cavities is less than a spacing distance between adjacent ones of the plurality of discrete cavities. Furthermore, a cumulative area of the cavities is less than areas of each of the first and second broad-area surfaces (front and back surfaces of LGP). For example, each cavity within the respective two-dimensional pattern has a size which is less than the spacing distances between adjacent cavities. A thickness of the optically transmissive sheet (LGP) is between a fraction of a millimeter and several millimeters. For example, measurements made using a digital caliper indicate that the LGP has a thickness of about 3 mm. A width and/or length of the optically transmissive sheet (LGP) is 100 millimeters or more. For example, the LGP has a length and width in excess of 100 mm. The plurality of rounded ridges defines a lenticular lens array. For example, each rounded ridge forms a lenticular lens. A large number of such lenticular lenses are disposed side by side, forming a lenticular lens array. The plurality of discrete cavities is disposed in a proximity to the focal plane. For example, the cavities, which are formed in the back surface of LGP, are very close to the focal plane of the lenticular lens, within a distance of the order of only several hundred micrometers.

COUNT IV

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

47. On March 15, 2022, United States Patent No. 11,276,795 entitled "Light Converting Systems Employing Thin Light Absorbing and Light Trapping Structures with Lens Arrays" 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 '795 patent is incorporated by reference herein and may be accessed at http://patft1.uspto.gov/netacgi/nph-Parser?patentnumber=11276795 or https://patents.google.com/patent/US11276795B2.

48. 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, and 20 of the '795 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, tablets, and handheld devices, in the United States, in violation of 35 U.S.C. § 271(a).

49. The Edge-lit 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 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 a composite prism sheet, also called brightness enhancement film (BEF). The front surface of the prism sheet has a regular prismatic pattern formed by microscopic linear grooves disposed side by side. As mentioned above and illustrated below, 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. As mentioned above and as illustrated below, each of the linear grooves have 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 prism sheet. For example, each linear groove of the prism sheet has a pair of facets inclined at a 45°. Each facet reflects light that arrives from a perpendicular direction using total internal reflection[4] and refracts light that strikes the prism sheet at slanted angle. 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 surface. For example, the LCD/backlighting assembly contains a reflective surface (back reflector) which is made of a thin sheet of reflective material and which is coextensive with and oriented parallel to the composite prism sheet, containing the microstructured broad-area front surface. The LCD/backlighting assembly of the display screen 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 linear cylindrical lenses on a planar plastic substrate). The lens array is aligned parallel to the front (composite prism sheet) and back (back reflector) surfaces. Further, the lens array is disposed in energy receiving relationship with respect to the light source (e.g., LEDs are shining light into an edge of the lens array) and is used to distribute light emitted by the LEDs. 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 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 spectral band) which is different than the first bandgap. 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 quantum dots. The first and second optically transmissive protective layers (as illustrated above) 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[1] emitted from the LEDs) are at least partially

absorbed and photons with a lower energy are transmitted without appreciable absorption. 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, QDEF transmits at least some light without absorption in a single pass. The front (microstructured front surface) and back (reflector) surfaces form a light trapping structure configured to provide for multiple transverse light passage through the photoabsorptive film layer (active layer of QDEF).

FURTHER ASSERTIONS INVOLVING ALL CLAIMS

50. The Asserted Patents are valid and enforceable.

51. 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, with the exception of the '795 patent, and identifying several of Acer's products utilizing claims of such patents which were also identified in SVVTI's letter. On information and belief, Defendant has had knowledge of the '795 patent since at least the date that it issued, at least because the '795 patent shares common priority with the other Asserted Patents.

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

53. 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.

54. 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.

55. 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 relied as the Court deems just and equitable.

DATED: June 21, 2022

Respectfully submitted,

/s/*Robert D. Katz*
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