

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF MASSACHUSETTS**

SIONYX, LLC,

Plaintiff,

vs.

APPLE, INC.

Defendant.

Civil Action No. \_\_\_\_\_

**JURY TRIAL DEMANDED**

**COMPLAINT**

Plaintiff SiOnyx, LLC (“SiOnyx”) brings this action against Defendant Apple, Inc. (“Apple” or “Defendant”) and alleges as follows:

**I. INTRODUCTION**

1. This is an action for patent infringement under the patent laws of the United States, 35 U.S.C. §§ 271, *et seq.*, to obtain damages resulting from Apple’s unauthorized and ongoing actions of making, having made, using, selling, having sold, offering to sell, importing, and/or having imported into the United States products that infringe or enable the infringement of one or more claims of United States Patent No. 9,064,764 (the “764 Patent”), United States Patent No. 10,224,359 (the “359 Patent”), and United States Patent No. 11,721,714 (the “714 Patent”) (collectively, the “Asserted Patents”), including, without limitation, digital imaging sensors and mobile phones and tablet computers that contain those sensors (the “Accused Products”).

**II. THE PARTIES**

2. SiOnyx is a Delaware limited liability corporation with its principal place of business at 100 Cummings Center, Suite 243F, Beverly, MA 01915. SiOnyx is the owner of the Asserted Patents.

3. Upon information and belief, Apple is a California corporation located at 20705 Valley Green Drive, Cupertino, CA 95014. Apple has a registered agent within the Commonwealth of Massachusetts: CT Corporation System, located at 155 Federal Street, Suite 700, Boston, MA 02110.

### III. JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, Title 35 of the United States code.

5. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338.

6. This Court has personal jurisdiction over Apple in this action because Apple regularly transacts business within this district, derives revenue from this district, and/or has committed acts of patent infringement within this district giving rise to this action. Apple is registered to do business in the Commonwealth of Massachusetts. Apple has a corporate office located in Waltham, Massachusetts. Apple is currently advertising 93 available jobs in its Waltham office, demonstrating the size of its operations there.<sup>1</sup> Apple further offers its products and services, including the products accused of infringement in this Complaint, to customers and potential customers located in the District of Massachusetts. For instance, Apple operates Apple Retail Stores in Boston, Braintree, Burlington, Cambridge, Chestnut Hill, Dedham, Hingham, Holyoke, Lynnfield, Marlborough, and Natick, each of which sells the devices accused of infringement.

7. For the same reasons as the preceding paragraph, venue is proper in this district pursuant to 28 U.S.C. §§ 1391 and 1400(b). Apple is subject to personal jurisdiction in this

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<sup>1</sup> <https://jobs.apple.com/en-us/search?location=waltham-WMH&page=2>.

district, has regularly conducted business in this district, derives revenue from this district, and has committed acts of patent infringement within this district.

#### IV. BACKGROUND

8. SiOnyx was co-founded in 2006 by Prof. Eric Mazur and Dr. James Carey to pursue commercialization of improved image sensors and other photonic devices. Since its founding, SiOnyx has continued Prof. Mazur and Dr. Carey's work, employing world-class scientists to help develop and manufacture proprietary ultra-low-light complimentary metal-oxide-semiconductor ("CMOS") image sensors and high-performance night vision camera systems. The significant advantages of silicon-based photonics allow for smaller, lower cost, higher performance photonic devices, which can be used in a variety of applications, including, in the consumer, industrial, medical, and defense industries. All these applications depend on the high-performance infrared imaging found in SiOnyx's image sensors.

9. SiOnyx has sought to commercialize and protect its numerous inventions through patents in the United States and abroad. SiOnyx's engineers disclosed and then assigned the inventions to SiOnyx pursuant to their employment agreements and then SiOnyx filed a number of patents including the Asserted Patents, which are entitled "Pixel Isolation Elements, Devices, and Associated Methods." The Asserted Patents teach photosensitive devices that are designed for improved performance.

10. SiOnyx designs and sells image sensors and devices that use those image sensors. Because of the innovative designs, SiOnyx's image sensors are capable of detecting full-color night vision images. SiOnyx provides its sensors to the United States Government and various contractors of the United States Government. SiOnyx further sells consumer products that use its image sensors, including the Nightwave, Opsin, and Aurora cameras, shown below:



11. SiOnyx complied with 35 U.S.C. § 287(a) by marking and/or virtually marking substantially all of its image sensors and consumer products with an internet address, accessible to the public without charge, that associates the patented article with the numbers of the patents-in-suit.<sup>2</sup>

**V. COUNT I  
(Infringement of U.S. Patent No. 9,064,764)**

12. SiOnyx incorporates by reference the foregoing paragraphs as if fully set forth herein.

13. SiOnyx owns by assignment, all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 9,064,764, titled “Pixel Isolation Elements, Devices, and Associated Methods.” The 764 Patent was duly and

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<sup>2</sup> SiOnyx.com/patents.

legally issued by the United States Patent and Trademark Office on June 23, 2015. A true and correct copy of the 764 Patent is attached as Exhibit A.

14. Upon information and belief, Apple has directly infringed and continues to directly infringe one or more claims of the 764 Patent in the Commonwealth of Massachusetts, in this judicial district, and elsewhere in the United States by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the 764 Patent, including but not limited to the Accused Products, including Apple iPhone 15 smartphones, as well as similar products, in violation of 35 U.S.C. § 271(a). By way of example, the Apple iPhone 15 smartphones include at least one image sensor made by Sony.

15. Apple has constructive notice of the 764 Patent through SiOnyx's marking and has actual notice of the 764 Patent and the infringing nature of its products since at least the date of filing of this Complaint. Since having notice, Apple has indirectly infringed and continues to indirectly infringe the 764 Patent in violation of 35 U.S.C. § 271(b). Apple has actively induced product makers, distributors, partners, agents, affiliates, service providers, importers, resellers, customers, retailers, and/or end users to directly infringe the 764 Patent by, among other things, disseminating, manufacturing, distributing, importing, and maintaining the Accused Products with knowledge and specific intent to cause that infringement.

16. In addition, Apple has indirectly infringed and continues to indirectly infringe the 764 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Products with knowledge of the 764 Patent. The Accused Products are not a staple article of commerce suitable for substantial non-infringing use.

17. The Accused Products satisfy all claim limitations of one or more claims of the 764 Patent, including exemplary claim 8 as shown in the claim chart attached as Exhibit B.

18. On information and belief, Apple's infringement of the 764 Patent is and has been willful.

**VI. COUNT II  
(Infringement of U.S. Patent No. 10,224,359)**

19. SiOnyx incorporates by reference the foregoing paragraphs as if fully set forth herein.

20. SiOnyx owns by assignment, all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 10,224,359, titled "Pixel Isolation Elements, Devices, and Associated Methods." The 359 Patent was duly and legally issued by the United States Patent and Trademark Office on March 5, 2019. A true and correct copy of the 359 Patent is attached as Exhibit C.

21. Upon information and belief, Apple has directly infringed and continues to directly infringe one or more claims of the 359 Patent in the Commonwealth of Massachusetts, in this judicial district, and elsewhere in the United States by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the 359 Patent, including but not limited to the Accused Products, including Apple iPhone 15 smartphones, as well as similar products, in violation of 35 U.S.C. § 271(a). By way of example, the Apple iPhone 15 smartphones include at least one image sensor made by Sony.

22. Apple has constructive notice of the 359 Patent through SiOnyx's marking and has actual notice of the 359 Patent and the infringing nature of its products since at least the date of filing of this Complaint. Since having notice, Apple has indirectly infringed and continues to

indirectly infringe the 359 Patent in violation of 35 U.S.C. § 371(b). Apple has actively induced product makers, distributors, partners, agents, affiliates, service providers, importers, resellers, customers, retailers, and/or end users to directly infringe the 359 Patent by, among other things, disseminating, manufacturing, distributing, importing, and maintaining the Accused Products with knowledge and specific intent to cause that infringement.

23. In addition, Apple has indirectly infringed and continues to indirectly infringe the 359 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Products with knowledge of the 359 Patent. The Accused Products are not a staple article of commerce suitable for substantial non-infringing use.

24. The Accused Products satisfy all claim limitations of one or more claims of the 359 Patent, including exemplary claims 1 and 18, as shown in the claim chart attached as Exhibit D.

25. On information and belief, Apple's infringement of the 359 Patent is and has been willful.

**VII. COUNT III  
(Infringement of U.S. Patent No. 11,721,714)**

26. SiOnyx incorporates by reference the foregoing paragraphs as if fully set forth herein.

27. SiOnyx owns by assignment, all rights, title, and interest, including the right to recover damages for past, present, and future infringement, in U.S. Patent No. 11,721,714, titled "Pixel Isolation Elements, Devices, and Associated Methods." The 714 Patent was duly and legally issued by the United States Patent and Trademark Office on August 8, 2023. A true and correct copy of the 714 Patent is attached as Exhibit E.

28. Upon information and belief, Apple has directly infringed and continues to directly infringe one or more claims of the 714 Patent in the Commonwealth of Massachusetts, in this judicial district, and elsewhere in the United States by, among other things, making, using, selling, offering for sale, and/or importing into the United States products that embody one or more of the inventions claimed in the 714 Patent, including but not limited to the Accused Products, including Apple iPhone 15 smartphones, as well as similar products, in violation of 35 U.S.C. § 271(a). By way of example, the Apple iPhone 15 smartphones include at least one image sensor made by Sony.

29. Apple has constructive notice of the 714 Patent through SiOnyx's marking and has actual notice of the 714 Patent and the infringing nature of its products since at least the date of filing of this Complaint. Since having notice, Apple has indirectly infringed and continues to indirectly infringe the 714 Patent in violation of 35 U.S.C. § 371(b). Apple has actively induced product makers, distributors, partners, agents, affiliates, service providers, importers, resellers, customers, retailers, and/or end users to directly infringe the 714 Patent by, among other things, disseminating, manufacturing, distributing, importing and maintaining the Accused Products with knowledge and specific intent to cause that infringement.

30. In addition, Apple has indirectly infringed and continues to indirectly infringe the 714 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the Accused Products with knowledge of the 714 Patent. The Accused Products are not a staple article of commerce suitable for substantial non-infringing use.

31. The Accused Products satisfy all claim limitations of one or more claims of the 714 Patent, including exemplary claim 1 as shown in the claim chart attached as Exhibit F.



32. On information and belief, Apple's infringement of the 714 Patent is and has been willful.

**PRAYER FOR RELIEF**

**WHEREFORE**, SiOnyx respectfully requests that the Court:

- A. Enter a judgment that Apple has infringed and continues to infringe one or more claims of each of the Asserted Patents;
- B. Order an award of damages to SiOnyx in an amount no less than a reasonable royalty, including damages under 35 U.S.C. § 287, such damages to be determined by a jury, together with pre-judgment and post-judgment interest and costs;
- C. Order and award trebling damages to SiOnyx for willful infringement under 35 U.S.C. § 284;
- D. Order an accounting to determine the damages to be awarded to SiOnyx as a result of Apple's infringement, including an accounting for infringing sales not presented at trial and award additional damages for any such infringing sales;
- E. Enter a judgment awarding expenses, costs, and disbursements in this action against Apple, including pre-judgment and post-judgment interest;
- F. Find that this case is exceptional and award SiOnyx its costs, expenses, and reasonable attorneys' fees under 35 U.S.C. § 285; and
- G. Grant such other and further relief as the Court may deem proper and just.

**DEMAND FOR JURY TRIAL**

33. Plaintiff hereby demands a jury in accordance with Rule 38 of the Federal Rules of Civil Procedure.

Date: September 12, 2024

Respectfully submitted,

*/s/ Gwendolyn E Tawresey*

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