

EXHIBIT E
Exemplary Infringement Claim Chart for U.S. Patent No. 10,984,911

Counterclaimants Masimo Corporation and Cercacor Laboratories, Inc. (collectively, “Masimo”) hereby provide exemplary evidence of Counterdefendant Apple Inc.’s (“Apple”) infringement of the claims of U.S. Patent No. 10,984,911 (“the ’911 Patent”). The below infringement chart demonstrates infringement of the claims of the ’911 Patent by an exemplary accused product—Apple Watch Series 7. As explained in Masimo’s Initial Infringement Contentions, the accused Apple Watch products (Apple Watch Series 6, 7, 8 and Apple Watch Ultra) are materially identical with respect to the claims of the ’911 Patent, and evidence pertaining to features of one accused Apple Watch product demonstrates corresponding features of the remaining accused Apple Watch products. The following chart shows how the Accused Products infringe, and Apple actively induces and contributes to the infringement of, the claims of the ’911 Patent, literally and/or under the doctrine of equivalents.

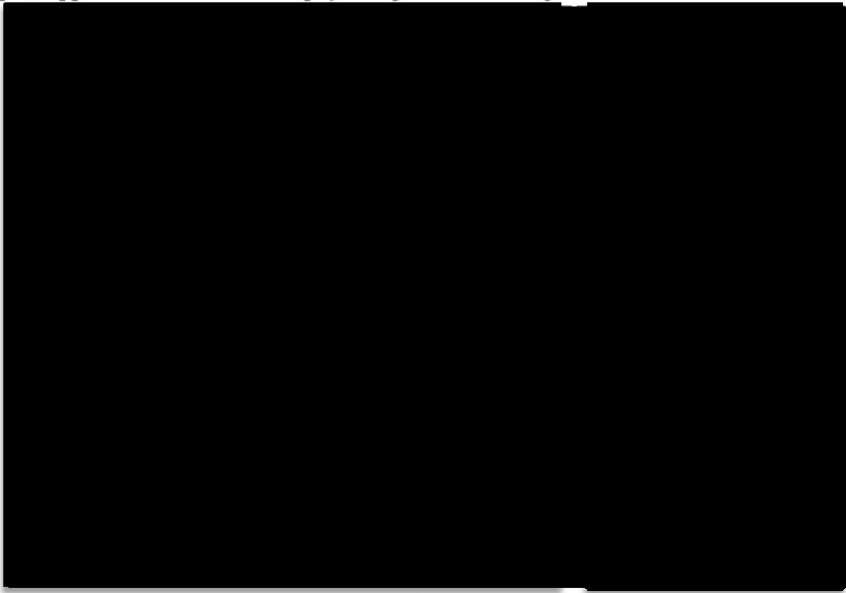
Apple directly infringes Claims 1-5, 8, 10-14, and 17 of the ’911 Patent when Apple makes, uses, offers to sell, sells, and/or imports into the United States the Accused Products. Apple also actively induces and contributes to the infringement of Claims 19-25 and 28 of the ’911 Patent [REDACTED]

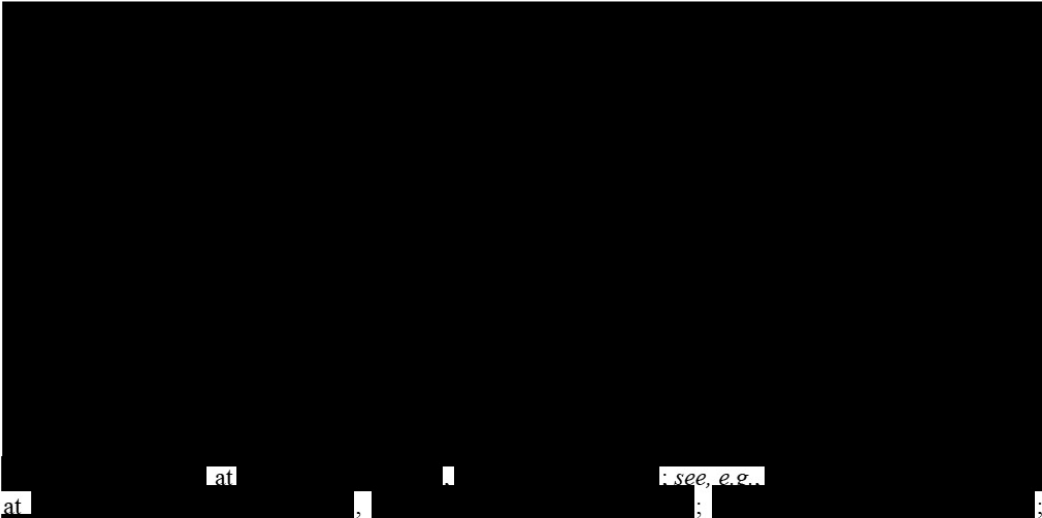
[REDACTED] Apple intends to cause, and has taken affirmative steps to induce infringement of Claims 19-25 and 28 by end users at least by providing instructions and/or advertising materials that direct end users of the Accused Products to wear the Accused Products on their wrist and use the Accused Products to take an oxygen saturation measurement. Apple has also contributed to the infringement of Claims 19-25 and 28 by offering to sell and/or selling within the United States and/or importing into the United States the Accused Products, which constitute material parts of the claimed inventions, are not staple articles or commodities of commerce suitable for substantial noninfringing use, and that Apple knows to be especially made or adapted for use in an infringement of these claims. Apple’s infringement of the ’911 Patent is willful, deliberate, and intentional because Apple continued its infringing acts after becoming aware of the ’911 Patent and Apple’s infringement thereof, thus acting in reckless disregard of Masimo’s patent rights.

The following chart is exemplary and demonstrates infringement of the identified claims regardless of whether the Accused Products are used with other modes, other firmware, and/or other software. The evidence cited herein is exemplary and intended to provide notice of where each element of the asserted claims is found in the Accused Products and how the Accused Products infringe the asserted claims. Evidence cited for one limitation in this chart may also be used with regard to other similar limitations. Masimo expressly reserves the right to amend, supplement, or otherwise modify this chart in view of further discovery, information, analysis, positions or contentions asserted by Apple, and/or claim constructions issued by the Court, including by, but not limited to, identifying additional accused products, asserted claims, and/or evidence of infringement.

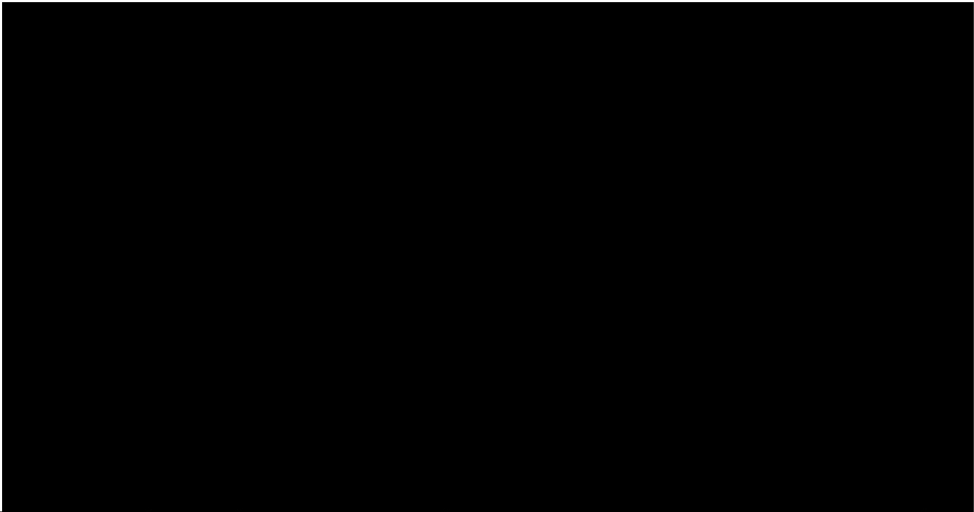
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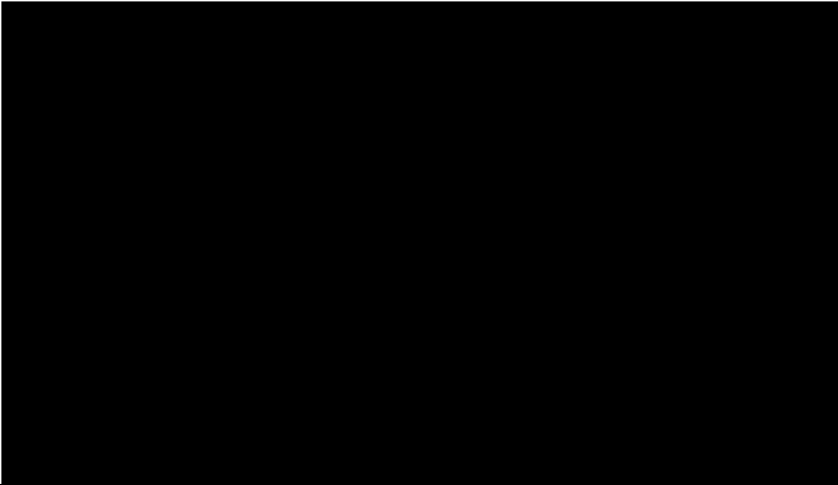
[REDACTED]

U.S. Patent No. 10,984,911	Apple Watch Series 7
[1 Preamble] 1. A physiological monitoring device comprising:	In the ITC Investigation (Inv. No. 337-TA-1276, the “ITC Investigation”), the ALJ correctly determined, and Apple did not dispute, that each of the accused products, including Apple Watch Series 6, Apple Watch Series 7, and subsequent Apple Watches with the same blood oxygen sensor, is a physiological monitoring device. <i>See, e.g., Certain Light-Based Physiological Measurement Devices and Components Thereof</i>, Inv. No. 337-TA-1276, Final Initial Determination, Doc. ID 787653, at 180 (Jan. 10, 2023). For example, Apple Watch Series 7 is a physiological monitoring device.  (left): [redacted] (right): <i>see, e.g.,</i> [redacted]; at [redacted]; [redacted].

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[1A] at least three LEDs recessed into a cavity, the at least three LEDs configured to emit light of at least three different wavelengths;	In the ITC Investigation, the ALJ correctly determined, and Apple did not dispute, that each of the accused products, including Apple Watch Series 6, Apple Watch Series 7 and subsequent Apple Watches with the same blood oxygen sensor, “contains four sets of LEDs, with each set containing three LEDs emitting light at different wavelengths,” each set of LEDs including “green (525 nm), red (660 nm), and infrared (850 nm) LEDs.” <i>See, e.g., Certain Light-Based Physiological Measurement Devices and Components Thereof</i>, Inv. No. 337-TA-1276, Final Initial Determination, Doc. ID 787653, at 192, 44 (Jan. 10, 2023). The Apple Watch Series 7 includes at least three LEDs recessed into a cavity that are configured to emit light of at least three different wavelengths (e.g., green, red, and infrared (“IR”)). Specifically, the Apple Watch Series 7 includes four green LEDs, four red LEDs, and four infrared LEDs, for a total of 12 LEDs that are recessed into a cavity and configured to emit light of at least three different wavelengths. 

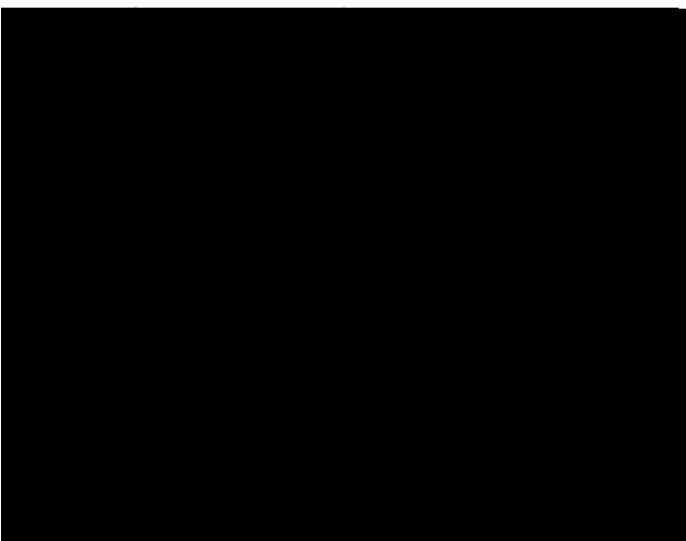
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U.S. Patent No. 10,984,911	Apple Watch Series 7
	Specifically, the Apple Watch Series 7 includes four green LEDs, four red LEDs, and four infrared LEDs, for a total of 12 LEDs that are recessed into a cavity and configured to emit light of at least three different wavelengths.  at : see e.g. at at .

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[1B] at least one detector configured to detect at least a portion of the light emitted from the at least three LEDs after at least a portion of the light has been attenuated by tissue, the at least one detector configured to output at least one signal responsive to the detected light;	In the ITC Investigation, the ALJ correctly determined, and Apple did not dispute, that each of the accused products, including Apple Watch Series 6, Apple Watch Series 7 and subsequent Apple Watches with the same blood oxygen sensor, include “a plurality of photodiodes configured to detect at least a portion of the light after the at least the portion of the light passes through the tissue, the plurality of photodiodes further configured to output at least one signal responsive to the detected light.” <i>See, e.g., Certain Light-Based Physiological Measurement Devices and Components Thereof</i>, Inv. No. 337-TA-1276, Final Initial Determination, Doc. ID 787653, at 192 (Jan. 10, 2023). The Apple Watch Series 7 includes at least one detector (a photodiode). The at least one detector (photodiode) of Apple Watch Series 7 is configured to (1) detect at least a portion of the light emitted from the at least three LEDs after at least a portion of the light has been attenuated by tissue and (2) output at least one signal responsive to the detected light. 

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[1C] a light block surrounding the at least one detector, the light block comprising a shoebox structure configured to recess the at least one detector into the shoebox structure, wherein the shoebox structure is at least partially formed of a black material, wherein a top of the shoebox structure includes only one opening through which light is configured to pass, the opening comprising an area smaller than a detection surface area of the at least one detector; and	In the ITC Investigation, the ALJ correctly determined, and Apple did not dispute, that each of the accused products, including Apple Watch Series 6, Apple Watch Series 7 and subsequent Apple Watches with the same blood oxygen sensor, include “a light block configured to prevent at least a portion of the light emitted from the plurality of light-emitting diodes from reaching the plurality of photodiodes without first reaching the tissue.” <i>See, e.g., Certain Light-Based Physiological Measurement Devices and Components Thereof</i>, Inv. No. 337-TA-1276, Final Initial Determination, Doc. ID 787653, at 193 (Jan. 10, 2023). Apple Watch Series 7 includes a light block surrounding the at least one detector, the light block comprising a shoebox structure configured to recess the at least one detector into the shoebox structure, and the shoebox structure is at least partially formed of a black material. A top of the shoebox structure includes only one opening through which light is configured to pass, and the opening comprises an area smaller than a detection surface area of the detector. 

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	<i>See, e.g.,</i> at .

U.S. Patent No. 10,984,911	Apple Watch Series 7
	<i>See, e.g.,</i> [REDACTED] at [REDACTED].

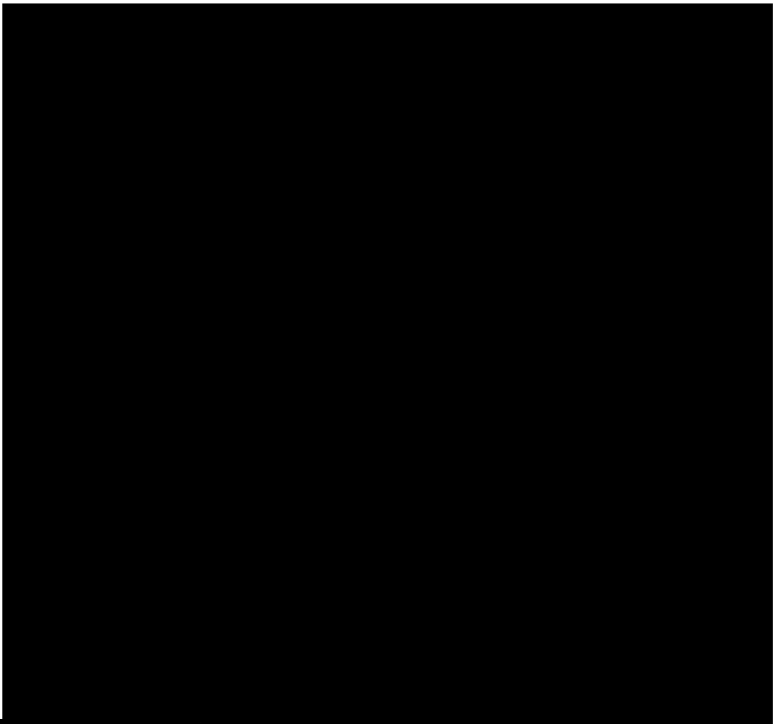
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8. The device of claim 1, wherein the opening provides an optical path from the tissue to the at least one detector.	In the ITC Investigation, the ALJ correctly determined, and Apple did not dispute, that each of the accused products, including Apple Watch Series 6, Apple Watch Series 7 and subsequent Apple Watches with the same blood oxygen sensor, include “sapphire material within the openings [that] is transparent and allows for light to reach the photodiodes.” <i>See, e.g., Certain Light-Based Physiological Measurement Devices and Components Thereof</i>, Inv. No. 337-TA-1276, Final Initial Determination, Doc. ID 787653, at 38 (Jan. 10, 2023). The “opening” of Apple Watch Series 7 includes a transparent sapphire lens that provides an optical path from the tissue to the at least one detector. <i>See</i> ’911 Patent Claim Limitation [1C].

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U.S. Patent No. 10,984,911	Apple Watch Series 7
[10 Preamble] 10. A physiological monitoring device comprising:	See '911 Patent Claim Limitation [1 Preamble].
[10A] at least three LEDs recessed into a cavity, the at least three LEDs configured to emit light of at least three different wavelengths;	See '911 Patent Claim Limitation [1A].
[10B] at least one detector configured to detect at least a portion of the light emitted from the at least three LEDs after at least a portion of the light has been attenuated by tissue, the at least one detector configured to output at least one signal responsive to the detected light;	See '911 Patent Claim Limitation [1B].

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[10C] an electromagnetic interference shield positioned between the at least three LEDs and the at least one detector;	Apple Watch Series 7 includes an electromagnetic interference shield positioned between the at least three LEDs and the at least one detector.  See, e.g., [redacted] at [redacted].

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	<i>See, e.g.,</i> [redacted] at [redacted]; [redacted] at [redacted] [redacted] at [redacted] of [redacted] at [redacted].

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U.S. Patent No. 10,984,911	Apple Watch Series 7
[10D] a light block surrounding the at least one detector, the light block at least partially formed of black materials, the light block comprising a base, four side walls and a top forming an enclosure, wherein the light block comprises a window, the window having an area smaller than a detection surface area of the at least one detector; and	Apple Watch Series 7 includes a light block surrounding the at least one detector, the light block at least partially formed of black materials. <i>See</i> '911 Patent Claim Limitation [1C]. The light block “opening” of Apple Watch Series 7 identified for '911 Patent Claim Limitation [1C] is a light block window and has an area smaller than a detection surface area of the at least one detector. <i>See id.</i> The light block comprises a base and four side walls.  at see, e.g. at

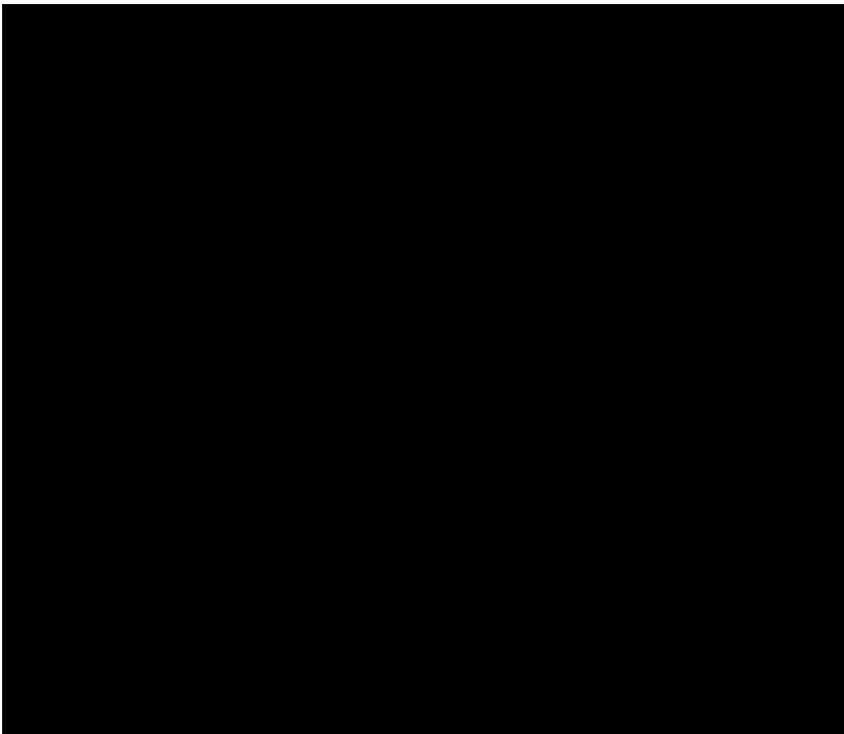
U.S. Patent No. 10,984,911	Apple Watch Series 7
	The light block also comprises a top, and the base, four side walls, and top of the light block form an enclosure. <i>See, e.g.,</i> [redacted] at [redacted].

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U.S. Patent No. 10,984,911	Apple Watch Series 7
[10E] a processor configured to receive and process one or more signals responsive to the outputted at least one signal and determine a physiological parameter of a user responsive to the one or more signals.	<i>See</i> '911 Patent Claim Limitation [1E].
11. The device of claim 10, wherein the at least three LEDs comprises at least eight LEDs.	<i>See</i> '911 Patent Claim Limitation [1A].
12. The device of claim 11, wherein the at least eight LEDs comprises at least two LEDs of the same wavelength.	<i>See</i> '911 Patent Claim Limitation [1A].
13. The device of claim 10, wherein the at least three LEDs comprises at least twelve LEDs.	<i>See</i> '911 Patent Claim Limitation [1A].
14. The device of claim 10, wherein at least two LEDs of the at least three LEDs are configured for concurrent activation.	<i>See</i> '911 Patent Claim 5.

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U.S. Patent No. 10,984,911	Apple Watch Series 7
17. The device of claim 10, wherein the window provides an optical path from the tissue to the at least one detector.	<i>See</i> '911 Patent Claim 8.
[19 Preamble] 19. A method for determining a physiological parameter of a living patient, the method comprising:	Apple Watch Series 7 is configured for use and is used on the wrist of a living patient to measure a physiological parameter (e.g., SpO ₂ (or “blood oxygen” or “oxygen saturation”), pulse rate). Using Apple Watch Series 7 to measure a living patient’s oxygen saturation practices this method. <i>See</i> '911 Patent Claim Limitation [1 Preamble].
[19A] positioning a sensor with respect to body tissue of a living patient, the sensor comprising at least three LEDs, at least one detector, and a light block at least partially surrounding the at least one detector, wherein a top of the light block comprises only one opening through which light is configured to pass;	The blood oxygen sensor of Apple Watch Series 7 comprises at least three LEDs. <i>See</i> '911 Patent Claim Limitation [1A]. The blood oxygen sensor of Apple Watch Series 7 comprises at least one detector. <i>See</i> '911 Patent Claim Limitation [1B]. The blood oxygen sensor of Apple Watch Series 7 comprises a light block at least partially surrounding the at least one detector, wherein a top of the light block comprises only one opening through which light is configured to pass. <i>See</i> '911 Patent Claim Limitation [1C].

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	Measuring the oxygen saturation of a living patient using Apple Watch Series 7 involves positioning the blood oxygen sensor of the Watch on the body tissue of the user. Apple induces infringement by marketing, instructing, and intending users of Apple Watch Series 7 to position the Watch's blood oxygen sensor with respect to their body tissue by securing the Watch to their wrist using the included strap.  See, e.g., [redacted] at [redacted].

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	<i>See, e.g.,</i> https://support.apple.com/en-us/HT211027 (last visited Dec. 5, 2022) (Apple’s instructions on “How to take a blood oxygen measurement” using the accused products): [REDACTED] at [REDACTED]; [REDACTED] ([REDACTED]); [REDACTED] at [REDACTED] ([REDACTED]); [REDACTED]). Further, Apple Watch Series 7 is a material component of the claimed subject matter, is especially made and adapted for use in the claimed method of determining a physiological parameter, and is not a staple article of commerce suitable for substantial noninfringing use.

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[19B] activating the at least three LEDs such that at least three wavelengths of light are emitted from the at least three LEDs;	Apple Watch Series 7 includes at least three LEDs configured to emit at least three wavelengths of light [REDACTED]. See '911 Patent Claim Limitation [1A]. [REDACTED] at [REDACTED] See, e.g., [REDACTED] [REDACTED] Apple Watch Series 7 takes either or [REDACTED] oxygen saturation measurements. Id. at [REDACTED] Id. [REDACTED] that are [REDACTED] Id. Apple induces infringement by marketing, instructing, and intending users of Apple Watch Series 7 to take on-demand oxygen saturation measurements with the Watch.

U.S. Patent No. 10,984,911	Apple Watch Series 7
	<i>See, e.g.</i>, https://support.apple.com/en-us/HT211027 (last visited Dec. 5, 2022) (Apple’s instructions on “How to take a blood oxygen measurement” using the accused products): [REDACTED] at [REDACTED]; [REDACTED] at [REDACTED]; [REDACTED] at [REDACTED] (marketing that the [REDACTED]). Further, Apple Watch Series 7 is a material component of the claimed subject matter, is especially made and adapted for use in the claimed method of determining a physiological parameter, and is not a staple article of commerce suitable for substantial noninfringing use.

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[19C] detecting, at the at least one detector, at least a portion of the light emitted from the at least three LEDs after at least a portion of the light has been attenuated by the body tissue and passed through the opening of the top of the light block, wherein the at least one detector outputs at least one signal responsive to the detected light; and	The Apple Watch Series 7 includes at least one detector configured to detect at least a portion of the light emitted from the at least three LEDs after at least a portion of the light has been attenuated by tissue. <i>See</i> '911 Patent Claim Limitation [1B]. In use, any attenuated light that is detected by the at least one detector of Apple Watch Series 7 first passes through the opening of the top of the light block, as the opening of the top of the light block provides an optical path from the tissue to the at least one detector. <i>See</i> '911 Patent Claim 8. The at least one detector of Apple Watch Series 7 outputs at least one signal responsive to the detected light. <i>See</i> '911 Patent Claim Limitation [1B]. After activating the at least three LEDs, measuring the user's oxygen saturation with Apple Watch Series 7 involves detecting, at the at least one detector, at least a portion of the light emitted from the at least three LEDs after at least a portion of the light has been attenuated by the body tissue and passed through the opening of the top of the light block, and the at least one detector outputs at least one signal responsive to the detected light. <i>See, e.g.,</i> [REDACTED] at [REDACTED], [REDACTED], [REDACTED]; [REDACTED] at [REDACTED].
[19D] determining a physiological parameter of the living patient responsive to the outputted at least one signal.	[REDACTED]. <i>See</i> '911 Patent Claim Limitation [1D].
20. The method of claim 19, wherein an area of the opening is smaller than a detection surface area of the at least one detector.	<i>See</i> '911 Patent Claim Limitation [1C].

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21. The method of claim 19, wherein the light block is formed of black materials and further comprises a base, side walls, and a top forming an enclosure, and wherein the at least one detector is positioned in the enclosure.	<i>See</i> '911 Patent Claim Limitation [10D].
22. The method of claim 19, wherein said activating the at least three LEDs comprises concurrently activating at least two LEDs of the at least three LEDs.	<i>See</i> '911 Patent Claim 5.
23. The method of claim 19, wherein the at least three LEDs comprises at least eight LEDs.	<i>See</i> '911 Patent Claim Limitation [1A].
24. The method of claim 23, wherein the at least eight LEDs comprises at least two LEDs of the same wavelength.	<i>See</i> '911 Patent Claim Limitation [1A].

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25. The method of claim 19, wherein the at least three LEDs comprises at least twelve LEDs.	<i>See</i> '911 Patent Claim Limitation [1A].
28. The method of claim 19, wherein the at least a portion of the light passes through the opening after it interacts with the body tissue.	<i>See</i> '911 Patent Claim 8.