

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

POLARIS POWERLED TECHNOLOGIES, §  
LLC, §

Plaintiff, §

v. §

SAMSUNG ELECTRONICS AMERICA, §  
INC., SAMSUNG ELECTRONICS CO., §  
LTD., and SAMSUNG DISPLAY CO., §  
LTD., §

Defendants. §

Civil Action No. 2:19-cv-00229

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff Polaris PowerLED Technologies, LLC (“Polaris PowerLED”) brings this patent infringement action against Defendants Samsung Electronics America, Inc. (“SEA”), Samsung Electronics Co., Ltd. (“SEC”), and Samsung Display Co., Ltd. (“SDC”) (collectively “Samsung” or “Defendants”) as follows:

**NATURE OF THE ACTION**

1. This is a civil action for infringement of U.S. Patent No. 7,239,087 (“087 Patent” or “patent-in-suit”) under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*
2. Polaris PowerLED brings this patent infringement action to protect its valuable patented technology relating to a novel manner of arranging and controlling light sources that was a significant advance in improving display quality in electronics products such as televisions and monitors.

**THE PARTIES**

3. Polaris PowerLED is a Delaware limited liability company having its address at 32932 Pacific Coast Highway #14-498, Dana Point, California.

4. Defendant SEA is a New York corporation with its principal place of business located at 85 Challenger Road, Ridgefield Park, New Jersey 07660. SEA's registered agent, The Corporation Trust Company, is located at Corporation Trust Center, 111 Eighth Avenue, New York, New York, 10011.

5. Defendant SEC is a corporation organized and existing under the laws of the Republic of Korea with its principal place of business at 129 Samsung-ro, Maetan-3dong, Yeongton-gu, Suwon-si, Gyeonggi-do, 443-742, Republic of Korea. SEC may be served via its domestic entities or by process under the Hague convention.

6. Defendant SDC is a corporation organized and existing under the laws of the Republic of Korea with its principal place of business at 181, Samsung-ro, Tangjeong-Myeon, Asan-city, Chungcheongnam-Do, 336-741, Republic of Korea. SDC may be served via its domestic entities or by process under the Hague convention.

7. The claims of the patent-in-suit are infringed by various Samsung electronics products, including most, if not all, of its televisions made and offered for sale in the United States, including for example, 4K UHD televisions (e.g., the UN49MU8000 TV and UN55NU8000 TV), 4K SUHD televisions (e.g., 2016 4K SUHD Smart televisions (KS8 Series) such as UN65KS8500FXZA), QLED televisions (e.g., 2017 4K QLED TVs (Q6F Series) such as QN55Q6FAMFXZA), Full HD televisions (e.g., M530x Series such as UN32M5300FXZA), and all other Samsung televisions, monitors and displays that include a local or zone dimming feature that dims the backlight behind parts of the screen that are displaying black. Defendants SEA,

SEC and SDC are related entities that work in concert to design, manufacture, import, distribute and/or sell these infringing devices.

**JURISDICTION AND VENUE**

8. This action arises under the patent laws of the United States, Title 35 of the United States Code. Accordingly, this Court has subject matter jurisdiction under 28 U.S.C. §§1331 and 1338(a) and the patent laws of the United States, 35 U.S.C. § 1, *et seq.*

9. The Court has personal jurisdiction over Defendants consistent with the Texas Long Arm Statute. This Court has personal jurisdiction over Defendants in this action because, among other reasons, Defendants have committed infringing acts within the Eastern District of Texas giving rise to this action and have established minimum contacts with the forum state of Texas. Defendants conduct business in this District and maintain a regular and established places of business within this District.

10. This Court has personal jurisdiction over Defendants because Defendants have committed and continue to commit acts of infringement in violation of 35 U.S.C. § 271 and places infringing products into the stream of commerce, with the knowledge or understanding that such products are sold in the State of Texas, including in this District. Samsung has purposefully availed itself of the privileges of conducting business in the State of Texas; Samsung regularly conducts business within the State of Texas, including at least by virtue of Samsung's infringing methods and apparatuses, which are, or were at least made, used sold and/or offered for sale in, the State of Texas. Further, this Court has general jurisdiction over Samsung, including due to its continuous and systematic contacts with the State of Texas. Further, on information and belief, Samsung is subject to the Court's jurisdiction, including because Samsung has committed patent infringement in the State of Texas.

11. On information and belief, Samsung's business operations concerning televisions are conducted at its facilities located in Richardson, Texas. Additionally, Samsung has committed infringing activities by marketing, selling, distributing, and servicing certain Samsung-branded televisions which Plaintiff accuses of infringement in this Action.

12. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391(b), (c) and 1400(b). Defendant SEA maintains regular and established places of business, and a permanent and continuous physical presence within the District, including an office located at 1301 East Lookout Drive, Richardson, Texas 75080, which is located in Collin County and within this district, and 1000 Klein Rd., Plano, Texas 75074.

13. Defendants also employ full-time personnel, such as engineers and senior managers in this district, including in Richardson, Texas. On information and belief, Samsung's business operations relating to televisions are conducted primarily at its facilities located in Richardson, Texas.

14. Defendant SEA has also committed acts of infringement in this district by commercializing, marketing, selling, distributing, and servicing certain Samsung-branded devices, including but not limited to televisions, which are devices Plaintiff accuses of infringement in this Action.

15. Venue is proper against Defendants' SEC and SDC, including pursuant to § 1391(c)(3), including because Defendants' SEC and SDC are foreign corporations which are not a resident in the United States or any judicial district therein, including this District. Defendants' SEC and SDC manufacture, import and/or sell televisions in the United States.

16. Further, on information and belief, Samsung is subject to the venue in this District, including because Samsung has committed patent infringement in this District.

Pursuant to 35 U.S.C. § 271, Samsung infringes the patent-in-suit by the infringing acts described herein in this District. Further, Samsung solicits and induces customers/users in this District, including via its website at [www.samsung.com](http://www.samsung.com) and its YouTube channel at <https://www.youtube.com/user/samsungpstv>. On information and belief, Samsung has customers/users who are residents of this District and who purchase, acquire, and/or use Samsung infringing products in this District.

### **PATENT-IN-SUIT**

17. Polaris PowerLED owns the entire right, title, and interest in U.S. Patent No. 7,239,087 entitled “Method and Apparatus to Drive LED Arrays Using Time Sharing Technique” (the ’087 Patent). The ’087 Patent issued on July 3, 2007 to inventor Newton E. Ball from the U.S. Patent Application No. 11/011,752, filed on Dec. 14, 2004. A true and correct copy of the ’087 Patent is attached as Exhibit A to this Complaint.

### **COUNT I**

(INFRINGEMENT OF U.S. PATENT NO. 7,239,087)

18. Polaris PowerLED incorporates by reference paragraphs 1-17 above.

19. Mr. Newton E. Ball invented a novel manner of arranging and controlling light sources that was a significant advance in improving display quality in electronics products such as televisions. Mr. Ball patented these innovations in the ’087 patent.

20. Samsung has directly infringed and continues to directly infringe the ’087 patent by making, using, offering for sale, selling and/or importing into the United States television products, including, for example, 4K UHD televisions (e.g., the UN49MU8000 TV and UN55NU8000 TV), 4K SUHD televisions (e.g., 2016 4K SUHD Smart televisions (KS8 Series) such as UN65KS8500FXZA), QLED televisions (e.g., 2017 4K QLED TVs (Q6F Series) such as QN55Q6FAMFXZA), Full HD televisions (e.g., M530x Series such as UN32M5300FXZA), and

all other Samsung televisions, monitors and displays that include a local dimming feature that dims the backlight behind parts of the screen that are displaying black (collectively examples of “Accused Products”).

21. Claim 1 of the '087 Patent, for example, reads as follows:

1. A multi-load time sharing driver comprising:

a current source configured to provide a regulated current;

a network of semiconductor switches coupled in series; and

a plurality of light sources in a backlight system, each light source associated with a semiconductor switch, wherein the semiconductor switch selectively opens to allow the associated light source to conduct the regulated current.

22. Samsung has directly infringed, and continues to directly infringe, one or more claims of the '087 Patent, including at least claims 1, 3, 4, 7 and 9 of the '087 Patent, literally and/or under the doctrine of equivalents, by or through making, using, offering for sale, selling within the United States and/or importing the Accused Products.

23. The Accused Products have “a multi-load time sharing driver comprising: a current source configured to provide a regulated current.” For example, the Samsung UN49MU8000 TVs are LED backlist televisions including multiple loads (*i.e.*, LEDs) that are driven by a multi-load time sharing driver. The Accused Products include a local or UHD dimming feature that dims the backlight behind parts of the screen that are displaying black. This makes the blacks appear deeper and darker on those parts of the screen.



UN49MU8000FXZA

**49" Class MU8000 Premium 4K UHD TV**

★★★★★ 4.3 (149) [Write a review](#)

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**Features**

**Smart Hub** ?

Yes (incl. Sports, Music and TV Plus)

**Digital Clean View**

Yes

**Auto Motion Plus**

Yes

**Ultra Clear Panel** ?

Yes

**ConnectShare™** ?

Yes

**Processor**

Quad-Core

**Auto Channel Search**

Yes

**Smart View 2.0** ?

Yes

**Dimming Technology**

UHD Dimming

**Embedded POP**

Yes

**Apps Platform** ?

Smart TV with Apps and Full Web Browser

**Voice Interaction** ?

US English, Spanish, French

**Smart View**

Yes

**Precision Black (Local Dimming)**

Precision Black

**RVU**

Yes

**Source:** <https://www.samsung.com/us/televisions-home-theater/tvs/4k-uhd-tvs/49--class-mu8000-4k-uhd-tv-un49mu8000fxza/>

24. The Samsung UN49MU8000 TVs include a microcontroller (PIC16F1503), LED Drivers/Multiplexer (SLM4173 (2) and SLM4172) and switches (AOD8N25) for controlling and driving the LED backlighting.

25. The Accused Products include a current source configured to provide a regulated current. For example, the Samsung UN49MU8000 TVs include a current source configured to provide a regulated current via a regulated power supply source.

26. The Accused Products have “a network of semiconductor switches coupled in series.” For instance, the Samsung UN49MU8000 TVs include network of semiconductor switches (e.g., AOD8N5 N-channel MOSFET switches) coupled in series with both a regulated power supply source and SLM4173 LED drivers.

27. The Accused Products include a plurality of light sources in a backlight system, each light source associated with a semiconductor switch, wherein the semiconductor switch selectively opens to allow the associated light source to conduct the regulated current. For instance, the Samsung UN49MU8000 TVs include a plurality of LED light sources in a backlight system. Each light source (i.e., LED string) is associated with a semiconductor switch (e.g., one of the AOD8N25 MOSFETs), which selectively opens to allow the associated light source to conduct the regulated current.

28. Samsung has infringed, and continues to infringe the claims of the '087 patent in the United States, by making, using, offering for sale, selling and/or importing the Accused Products in violation of 35 U.S.C. § 271(a).

29. Samsung also has infringed, and continues to infringe the claims of the '087 patent by actively inducing others to use the Accused Products. Samsung's users, customers, agents or other third parties who use the Accused Products in accordance with the Samsung's



instructions infringe the claims of the '087 patent, in violation of 35 U.S.C. § 271(a). Samsung intentionally instructs its customers to infringe through support information, the Samsung automated Virtual Assistant, demonstrations, brochures, videos, and user guides, such as those located at: <https://www.samsung.com/us/support/>; <https://www.samsung.com/us/televisions-home-theater/tvs/>; <https://www.samsung.com/us/support/remoteservice/>; <https://www.youtube.com/user/samsungspstv>; [https://www.youtube.com/watch?v=qG5\\_RMQP6XI](https://www.youtube.com/watch?v=qG5_RMQP6XI); <https://www.youtube.com/channel/UCnEdfCdbxJJ9ouWKL SRCRRw>; and [https://www.youtube.com/channel/UCWwgaK7x0\\_FR1goeSRazfsQ](https://www.youtube.com/channel/UCWwgaK7x0_FR1goeSRazfsQ). Samsung is thereby liable for infringement of the '087 patent under 35 U.S.C. § 271 (b).

30. As a result of Samsung's infringement of the '087 Patent, Polaris PowerLED has suffered monetary damages and is entitled to no less than a reasonable royalty for Samsung's use of the claimed inventions of the '087 Patent, together with interest and costs as determined by the Court. Polaris PowerLED will continue to suffer damages in the future unless Samsung's infringing activities are enjoined by this Court.

31. By at least March 2010, Samsung had actual knowledge or should have known of the '087 Patent and/or the patent application that issued as the '087 Patent, and that at least some of Samsung's activities were infringing the '087 Patent. Upon information and belief, said infringement has been or will continue to be deliberate and willful.

32. Samsung had actual knowledge of the '087 patent, well before the date this lawsuit was filed, and early as at least March 2010.

33. Samsung, for example, became aware of the '087 patent in March 2010 in connection with Samsung's own patent filings in the United States Patent Office, including for

example, during prosecution of SDC's U.S. Patent App. Pub. No. US2008/0198299A1 (the "'299 Application") entitled "Light source unit, liquid crystal display having the same, and method thereof." During prosecution of the '299 Application, the U.S. Patent Office examiner cited the '087 patent in an Office Action on or about March 19, 2010.

34. Samsung's infringement has caused and is continuing to cause damage and irreparable injury to Polaris PowerLED. Polaris PowerLED will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court, as a remedy at law alone would be inadequate.

35. Polaris PowerLED is entitled to injunctive relief and damages in accordance with 35 U.S.C. §§ 271, 281, 283, and 284.

36. In addition, at least as of the time Samsung is served with this Complaint, Samsung will have actual notice of the '087 Patent and its infringement of that patent. On information and belief, at least after service of this Complaint, Samsung's infringement will be willful, at a minimum, if Samsung does not discontinue infringing use, offers to sell, sales and/or importations and remove the infringing products from its product offerings. Such willful infringement would entitle Polaris PowerLED to enhanced damages under 35 U.S.C. § 284 and a finding that this case is exceptional, entitle Polaris PowerLED to an award of its reasonable attorneys' fees under 35 U.S.C. § 285.

37. Polaris PowerLED will be irreparably harmed unless a permanent injunction is issued enjoining Samsung and their agents, employees, representatives, affiliates, and others acting in concert with Samsung from infringing the '087 Patent.

**PRAYER FOR RELIEF**

WHEREFORE, Polaris PowerLED requests the following relief from this Court:

(A) A judgment that each defendant is liable for infringement of one or more claims of the '087 Patent;

(B) Compensatory damages in an amount according to proof, and in any event no less than a reasonable royalty, including all pre-judgment and post-judgment interest at the maximum rate allowed by law;

(C) Treble damages for willful infringement pursuant to 35 U.S.C. § 284;

(D) Pre-judgment interest;

(E) Post-judgment interest;

(F) An order and judgment permanently enjoining Samsung and its officers, directors, agents, servants, employees, affiliates, attorneys, and all others acting in privity or in concert with them, and their parents, subsidiaries, divisions, successors and assigns from further acts of infringement of the '087 Patent;

(G) A judgment that this is an exceptional case and awarding Polaris PowerLED its costs and reasonable attorneys' fees incurred in this action as provided by 35 U.S.C. § 285; and

(H) A judgment granting Polaris PowerLED such further relief as the Court may deem just and proper.

**DEMAND FOR JURY TRIAL**

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Polaris PowerLED demands a trial by jury for all issues so triable.

Dated: June 15, 2019

By: /s/ Deron R. Dacus

Deron R. Dacus

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**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing document was filed electronically in compliance with Local Rule CV-5(a). Therefore, this document was served on all counsel who are deemed to have consented to electronic service. Local Rule CV-5(a)(3)(A). Pursuant to Fed. R. Civ. P. 5(d) and Local Rule CV-5(d) and (e), all other counsel of record not deemed to have consented to electronic service were served with a true and correct copy of the foregoing by email on this 15th day of June 2019.

By: /s/ Deron R. Dacus

Deron R. Dacus