

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAVANT TECHNOLOGIES LLC d/b/a GE LIGHTING,
and LEDVANCE LLC

Petitioners,

v.

FEIT ELECTRIC COMPANY, INC.,
Patent Owner.

IPR2024-01357
Patent 8,604,678

SAVANT TECHNOLOGIES LLC d/b/a GE LIGHTING,
ELONG INTERNATIONAL USA INC., and
XIAMEN LONGSTAR LIGHTING CO. LTD.

Petitioners,

v.

FEIT ELECTRIC COMPANY, INC.,
Patent Owner.

IPR2025-00260
Patent 8,604,678

**PETITIONERS' SUR-REPLY IN OPPOSITION TO
PO'S MOTION TO TERMINATE RE RPI**

PO's reply establishes, with great vigor, only what has always been undisputed—that MLS indirectly owns LEDVANCE LLC. It never reaches the only question that matters—whether MLS controlled, or could have controlled, this proceeding. *See* Paper 73 at 10.

PO identifies no evidence that MLS had the ability to control this proceeding, instead treating MLS's indirect ownership of LEDVANCE LLC as sufficient. An RPI is one with the ability to control the proceeding, *Sun Pharm. Indus., Inc. v. Biofrontera Inc.*, PGR2026-00021, Paper 12 at 2-3 (Dir. May 26, 2026), not one with the theoretical power any parent holds over a wholly-owned subsidiary. *Corning Optical Commc'ns RF, LLC v. PPC Broadband, Inc.*, IPR2014-00440, Paper 68 at 22 (PTAB Aug. 18, 2015) (ownership is “not sufficient evidence, by itself,” of control); *see* Paper 73 at 9-10.

The record affirmatively shows MLS had no ability to control this proceeding. In response to the question “[i]s it your testimony that MLS has no ability to control LEDVANCE LLC,” Mr. Martin testified, “[c]orrect.” Ex. 2117, 44:17-20. He further confirmed that MLS cannot “tell LEDVANCE LLC what products to sell” or “what components to use in its products.” *Id.*, 44:21-45:4. LEDVANCE LLC evaluated and filed this IPR through its own legal function and retained counsel to defend against Feit's infringement suit, and even LEDVANCE GmbH did not direct it. *Id.* at 46:4-7; Ex. 2064 ¶¶ 13, 22, 31. No employee, officer,

director, or representative of LEDVANCE GmbH or MLS authorized, directed, or requested the filing, *id.* at 48:2-7; and Mr. Martin did not tell anyone at MLS before filing, *id.* at 50:5-7. Any benefit to MLS is “indirect and solely by virtue of corporate ownership, not because MLS authorized, funded, directed, or controlled this proceeding.” Ex. 2064 ¶ 35. Nor is there any evidence that MLS stands to benefit from cancellation of claims in the ’678 patent for any reason unrelated to LEDVANCE LLC. LEDVANCE LLC paid for the Petition from its own accounts. Ex. 2064 ¶¶ 28-29.

LEDVANCE LLC’s written discovery responses further confirm lack of control. MLS does not select or nominate LEDVANCE LLC’s board members, did not reorganize that board upon purchasing LEDVANCE GmbH, or urge board members to resign. LEDVANCE LLC has no indemnification or cooperation agreement with MLS over the ’678 patent, and no shared counsel in any ’678 proceeding. Ex. 1095 at 3.

PO’s reply evidence never connects the supposed unnamed RPI, MLS, to control of this proceeding. At most, it shows common ownership and the ordinary business ties within a corporate family. An entity is not an RPI “merely through association with another party in an endeavor unrelated to the IPR proceeding.” Paper 73 at 7 (quoting *Corning*, Paper 68 at 14); *see also Par Pharm., Inc. v. Jazz Pharm., Inc.*, No. IPR2015-00546, Paper 25 at 10-19 (P.T.A.B. July 28, 2015).

LEDVANCE LLC is solely “responsible for the design, purchase, importation, marketing and sale of LEDVANCE’s white-filament LED bulbs.” Ex. 2117, 27:19-28:3; 30:10-17. None of LEDVANCE’s white-filament LED bulbs are made by MLS. *Id.* 32:17-19. PO has not sued MLS.

PO’s leadership-overlap evidence does not reach Petitioner LEDVANCE LLC. PO points to officers and directors “with leadership roles at both MLS and various LEDVANCE entities,” and to Mr. Sun’s title as “Global Chief Executive Officer” of LEDVANCE. Paper 77 at 4. But that overlap is between the German parent LEDVANCE GmbH and MLS, not LEDVANCE LLC. LEDVANCE LLC’s chief executive is Mr. Lubeck, *id.* at 143:12-16. Mr. Sun’s title is public, and the declaration disclosed his actual role—a managing director of LEDVANCE GmbH who “does not hold any position at LEDVANCE LLC.” Ex. 2064 ¶¶ 7, 15.

The MLS corporate filings PO relies on do not fill the gap. They concern the spin-off and MLS’s acquisition of LEDVANCE GmbH—ownership materials the Board found not useful to the control question, Paper 73 at 9-10. (Petitioners lodged objections to PO’s reply exhibits as Paper 80, and to the extent necessary, Petitioners seek authorization to file a motion to exclude and/or strike.) The documents do not even say what the Reply claims. PO asserts MLS would “reorganize and replace LEDVANCE’s board.” Paper 77 at 4. The cited passage says no such thing: it concerns the “Subject Company,” which PO’s own exhibits

define as Mingxin Optoelectronics, not LEDVANCE; PO's excerpt mistranslated that term as "the target company," conflating it with the separately defined "Target Company," LEDVANCE GmbH—the German parent, not Petitioner LEDVANCE LLC. Ex. 2113 at 6; accord Ex. 2111 at 8. The cited excerpt itself says "LEDVANCE [GmbH] will continue to operate with its existing management structure and personnel." Ex. 2070 at 15. And the filing PO quotes for "controls LEDVANCE" in fact says MLS is "indirectly controlling Ledvance [GmbH]." Ex. 2103 at 21; *see* Paper 80 at 8-9.

Nor do the supply-chain ties PO emphasizes establish control. Paper 77 at 2-3. Mr. Martin agreed MLS integrated LEDVANCE "in many areas" but disputed business integration. Ex. 2117, 71:7-15, 188:14-189:1. PO's "mandate" that LEDVANCE use MLS components is unsupported—it cite a partnership statement and a projected transition with no evidence it occurred. *Id.* at 84:5-10, 119:17-120:11. Mr. Martin testified that the bulbs are built by contract manufacturers that may include MLS subsidiaries. *Id.* at 31:1-9, 32:17-33:2. That some accused bulbs may be built by an MLS affiliate shows, at most, that the group's lighting business is integrated—not that MLS controls LEDVANCE LLC's conduct of this proceeding.

PO's argument that "MLS replaced LEDVANCE's factories with its own" is unsupported and contrary to the evidence. Nearly all of factories operated by

LEDVANCE's legacy parent closed long before the MLS acquisition and the last two occurred in 2018 or 2019. Ex. 2117, 150:16-151:18. There is no evidence that MLS directed LEDVANCE LLC or even its parent to close these two factories.

PO says LEDVANCE LLC's U.S. litigation is "material to MLS" because MLS's filings describe it and Mr. Martin reports it to MLS's auditors. Paper 77 at 4-5. But neither shows control: a parent's description of a subsidiary's litigation in its own filings is disclosure, not control, and Mr. Martin reported the litigation not to MLS but to an outside auditor MLS engaged, "as part of an audit." Ex. 2117, 192:7-14. That a proceeding matters to a parent does not give the parent the ability to control it.

PO again presses MLS's alleged ties to the Chinese government, including that an alleged municipal entity "now owns part of MLS." Paper 77 at 5. But the Board has explained that the question is whether MLS controlled or could have controlled this proceeding, and that "Patent Owner's motion contends that the unnamed RPI is MLS, not some owner of MLS." Paper 73 at 10.

Petitioner LEDVANCE LLC has met its burden to show it correctly named all RPIs. In contrast, PO has failed meet its burden to show that the listing of RPIs is inaccurate. *See, e.g., Worlds Inc. v. Bungie, Inc.*, 903 F.3d 1237, 1246-47 (Fed. Cir. 2018) (remanding on RPI issue given Board's reliance on unsubstantiated attorney argument). The motion should be denied.

Date: June 18, 2026

/s/ Andrew S. Brown

Andrew S. Brown

Reg. No. 74,177

APPENDIX A – EXHIBIT LIST

Exhibit	Description
EX1001	U.S. Patent No. 8,604,678
EX1002	Declaration of William A. Doolittle, Ph.D.
EX1003	Curriculum Vitae of William A. Doolittle, Ph.D.
EX1004	File History for U.S. Pat. Appl. No. 13/273,212 (excl. references)
EX1005	U.S. Pat. Pub. No. 2009/0057699 (“Basin-2007”)
EX1006	U.S. Pat. Pub. No. 2007/0045761 (“Basin-2005”)
EX1007	U.S. Pat. Pub. No. 2008/0079015 (“Krummacher”)
EX1008	U.S. Patent No. 6,791,259 (“Stokes”)
EX1009	U.S. Patent No. 5,998,925 (“Shimizu-APA”)
EX1010	U.S. Patent No. 6,069,440 (“Shimizu”)
EX1011	U.S. Pat. Pub. No. US2010/0124243 (“Hussell”)
EX1012	DuPont: Polymers, Light and the Science of TiO ₂ (2007)
EX1013	DuPont: Titanium Dioxide for Coatings (2007)
EX1014	Erik S. Thiele and Roger H. French, “ <i>Computation of Light Scattering by Anisotropic Spheres of Rutile Titania</i> ”, Adv. Mater. 1998, 10, No. 15
EX1015	Erik S. Thiele and Roger H. French, “ <i>Light-Scattering Properties of Representative, Morphological Rutile Titania Particles Studied Using a Finite-Element Method</i> ”, J. Am. Ceram. Soc., 81 [3] 469–79 (1998)
EX1016	Robert W. Johnson, Erik S. Thiele, And Roger H. French, “ <i>Light-scattering efficiency of white pigments: an analysis of model core - shell pigments vs. optimized rutile TiO₂</i> ”, TAPPI JOURNAL, November 1997, Vol. 80(11)
EX1017	William D. Ross, “ <i>Theoretical Light-Scattering Power of TiO₂ and Microvoids</i> ”, Ind. Eng. Chem., Prod. Res. Develop., Vol. 13, No. 1, 1974
EX1018	Feit Electric’s Initial Infringement Contentions - Claim Charts (May 28, 2024)
EX1019	U.S. Patent No. 8,547,010 (“Jagt”)
EX1020	Int’l Pat. Pub. No. WO 2008/044171 A2 (“Van Woudenberg”)
EX1021	Declaration of Etai Lahav
EX1022	Declaration of William A. Doolittle, Ph.D. regarding claims 11-14 of the ’678 patent

Exhibit	Description
EX1023	Sudhakar Madhusoodhanan and Devdatt S. Nagvekar, “UV Curable High Opacity Ink Jettable White Ink”, RadTech e 5 2006 Technical Proceedings (2006)
EX1024	U.S. Pat. Pub. No. 2011/0001151 (“Toquin”)
EX1025	<i>Feit Elec. Co. v. Savant Techs. LLC d/b/a GE Lighting</i> , No. 1:24-cv-473 (N.D. Ohio), December 12, 2024 docket entry
EX1026	Kentucky Eastern, U.S. District Court – Judicial Caseload Profile (September 30, 2024), available at https://perma.cc/C3LU-9ET5
EX1027	U.S. District Courts – Median Time from Filings to Trial for Civil Cases (March 31, 2024), available at https://perma.cc/6FA3-3G89
EX1028	Civil Docket for No. 3:20-cv-3126 (N.D. Tex.)
EX1029	<i>Feit v. LEDVANCE</i> , Scheduling Order, No. 5:24-cv-31 (E.D. Ky.), Dkt. 33
EX1030	<i>Feit v. Savant</i> , Joint Motion for Leave to Amend the Case Management Order, National Science Foundation, Semiannual Report to Congress, dated September 2010. (so ordered January 7, 2025 setting claim construction hearing for May 27, 2025).
EX1031	<i>Feit v. Elong</i> , Scheduling Order, No. 3:24-cv-1089 (N.D. Tex.), Dkt. 37.
EX1032	<i>Feit v. Savant</i> , Case Management Order, No. 1:24-cv-473 (N.D. Ohio), Dkt. 19.
EX1033	Stipulations re District Court Litigations.
EX1034	<i>Feit v. LEDVANCE</i> , Plaintiff’s Preliminary Claim Constructions, No. 5:24-cv-31 (E.D. Ky.), served Nov. 6, 2024.
EX1035	<i>Feit v. Savant</i> , Plaintiff’s Final Claim Constructions, No. 1:24-cv-473 (N.D. Ohio), served Dec. 10, 2024.
EX1036	<i>Feit v. Elong</i> , Joint Claim Construction and Prehearing Statement, No. 3:24-cv-1089 (N.D. Tex.), Dkt. 45.
EX1037	<i>Feit v. LEDVANCE</i> , Plaintiff’s Disclosure of Initial Infringement Contentions, No. 5:24-cv-31 (E.d. Ky.), served Aug. 30, 2024.
EX1038	<i>Feit v. Savant</i> , Supplemental Initial Infringement Contentions, No. 1:24-cv-473 (N.D. Ohio), served Oct. 8, 2024.

Exhibit	Description
EX1039	<i>Feit v. Elong</i> , Plaintiff's Disclosure of Asserted Claims and Preliminary Infringement Contentions, No. 3:24-cv-1089 (N.D. Tex.), served Oct. 23, 2024.
EX1040	<i>Feit v. Elong</i> , Memorandum and Opinion Order, dated May 5, 2025, No. 3:24-cv-1089 (N.D. Tex.), Dkt. 60.
EX1041	National Science Foundation, Closeout Memorandum, Case Number: I-09080045.
EX1042	National Science Foundation, Semiannual Report to Congress, dated September 2010.
EX1043	National Science Foundation, 2011 FOIA Logs.
EX1044	<i>Feit v. Elong</i> , Memorandum and Opinion Order, dated July 2, 2025, No. 3:24-cv-1089 (N.D. Tex.), Dkt. 81.
EX1045	S. Ye, et al., <i>Phosphors in phosphor-converted white light-emitting diodes: Recent advances in materials, techniques and properties</i> , Materials Science and Engineering R 71 (2010) 1–34
EX1046	U.S. Department of Energy, <i>Life-Cycle Assessment of Energy and Environmental Impacts of LED Lighting Products</i> , Part 2: LED Manufacturing and Performance, dated May 2012.
EX1047	Philippe F. Smet, et al., <i>Selecting Conversion Phosphors for White Light-Emitting Diodes</i> , 2011 J. Electrochem. Soc. 158 R37
EX1048	Deposition Transcript of E. Fred Schubert, Ph.D. M.S., dated September 12, 2025.
EX1049	U.S. Patent No. 3,175,117 (“Kardos”).
EX1050	Intematix Introduces ChromaLit XT Remote Phosphor for High-Intensity LED Lighting, dated April 16, 2012.
EX1051	Intematix, ChromaLit XT 2012 Datasheet, dated November 5, 2012.
EX1052	Home Depot, Feit Electric 60-Watt Equivalent A15 Dimmable White Filament CEC Clear Glass E26 LED Ceiling Fan Light Bulb, True White 3500K (2-Pack).
EX1053	<i>Intentionally Omitted</i>
EX1054	Comparison of POPR-1357 and POR-1357
EX1055	Comparison of Schubert POPR-1357 and POR-1357 declarations

Exhibit	Description
EX1056	U.S. Patent No. 8,104,908 (“Harbers”).
EX1057	U.S. Patent No. 5,813,753 (“Vriens”).
EX1058	Jeong Rok Oh, et al., <i>Full down-conversion of amber-emitting phosphor-converted light-emitting diodes with powder phosphors and a long-wave pass filter</i> , Optics Express Vol. 18, Issue 11, pp. 11063-11072 (2010)
EX1059	U.S. Pat. Pub. No. 2007/0139949 (“Tanda”)
EX1060	U.S. Patent No. 9,310,030 (“Tong”).
EX1061	<i>Tinnus Enterprises, LLC v. Telebrands Corp.</i> , Brief for Intervenor, dated August 29, 2017, No. 17-1726 (Fed. Cir. 2017), Dkt. 39.
EX1062	<i>Tinnus Enterprises, LLC v. Telebrands Corp.</i> , Motion of Intervenor to Withdraw from Appeal, dated March 29, 2018, No. 17-1726 (Fed. Cir. 2017), Dkt. 72.
EX1063	Memorandum to Patent Trial and Appeal Board, dated January 6, 2021.
EX1064	US Provisional Patent Application Ser. No. 61/386,437 (“Tong”)
EX1065	Declaration of William A. Doolittle, Ph.D. Regarding Claims 11-14 Of The ‘678 Patent, dated October 3, 2025.
EX1066	<i>Feit Electric Co., Inc. v. LEDVANCE LLC</i> , No. 5:24-cv-31 (E.D. Ky. Feb. 2, 2024). Stayed April 2, 2025. <i>Id.</i> , Dkt. 63
EX1067	<i>Feit Electric Co., Inc. v. Savant Technologies LLC d/b/a GE Lighting</i> , No. 1:24-cv-473 (N.D. Ohio Mar. 13, 2024). Stayed April 1, 2025. <i>Id.</i> , text order
EX1068	<i>Feit Electric Co. Inc v. Elong International USA Inc., et al.</i> , No. 3:24-cv-1089 (N.D. Tex. May 6, 2024). Claim construction order issued July 2, 2025. (EX1044). Stayed November 21, 2025. <i>Id.</i> , Dkt. 164
EX1069	Website link to Ledvance Power Through Light Who We Aare and What this Means for Our Shareholders, available at https://perma.cc/VJ7U-XYE7 .
EX1070	Website Link to Salem State University, Archives and Special collections - Hygrade-Sylvania showing 1901 Massachusetts founding, available at https://perma.cc/NH6X-LF97 , dated April 4, 2023.

Exhibit	Description
EX1071	Ledvance Names Jonahtan Lubeck CEO of US Region. available at https://perma.cc/Y22R-6QL7 , dated November 9, 2022.
EX1072	<i>Feit Electric Co. v. LEDVANCE LLC</i> , No. 5:24-cv-00031 (E.D. Ky.), Dkt. 1, Complaint.
EX1073	Wikipedia page for Ledvance, available at https://perma.cc/3EP9-SP8H .
EX1074	Homepage for Ledvance.com, available at https://perma.cc/SNW9-33SE
EX1075	English-language Impressum listing Managing Directors and Munich Commercial Register HRB 220074, available at https://perma.cc/ET7N-MRNF
EX1076	MLS Co. Ltd. publicly traded on the Shenzhen Stock Exchange (ticker: 002745), available at https://perma.cc/7JEV-ETSD
EX1077	Mr. Qinghuan Sun biography, available at https://perma.cc/T62X-TY5K .
EX1078	Feit's Electric's LinkedIn, available at https://perma.cc/L76J-6V2S .
EX1079	Osram completes LEDvance sale to Chinese Consortium for €500 million (Updated), available at https://perma.cc/AS5C-BH6N .
EX1080	CFIUS Filing Clearance: Chinese Consortium and LEDvance, available at https://perma.cc/8DYL-8NVG , dated February 21, 2017.
EX1081	[News] MLS Plans to Acquire 18.77% Stake in BridgeLux from Epistar, available at https://perma.cc/LX9J-6M8E , dated July 14, 2025.
EX1082	Kaistar website, available at https://perma.cc/VNS3-8CGU .
EX1083	USPTO Assignment Records, Reel 060078, Frame 0465 (recorded June 2, 2022)
EX1084	Department of state: Division of Corporations – LEDvance LLC
EX1085	<i>Feit Electric Co., Inc. v. LEDVANCE LLC</i> , No. 5:24-cv-31 (E.D. Ky.), Dkt. 67, Defendant's Stipulation regarding claim construction and indefiniteness dated March 3, 2026.
EX1086	<i>Feit Electric Co., Inc. v. Savant Technologies LLC d/b/a GE Lighting</i> , No. 1:24-cv-473 (N.D. Ohio), Dkt. 50, Defendant's

Exhibit	Description
	Stipulation regarding claim construction and indefiniteness, dated March 3, 2026.
EX1087	<i>Feit Electric Co. Inc v. Elong International USA Inc., et al.</i> , No. 3:24-cv-1089 (N.D. Tex), Dkt. 168, Order of Dismissal, dated January 30, 2026.
EX1088	Correspondence between Counsel for Patent Owner and Petitioner, dated December 2-4, 2025.
EX1089	Correspondence between Counsel for Patent Owner and Petitioner, dated December 8, 2025 through January 26, 2026.
EX1090	Correspondence between Counsel for Patent Owner and Petitioner, dated February 27, 2026 through March 20, 2026.
EX1091	FILED UNDER SEAL – Ledvance – Legal Structure Shareholding as of January 31, 2026
EX1092	MLS 2025 Semi-Annual Report
EX1093	<i>Intentionally Omitted</i>
EX1094	<i>Cao Lighting, Inc. v. OSRAM Sylvania Inc., and LEDVANCE LLC</i> , Case No. 20-690 (MN) (DED), Defendant Ledvance LLC’s Rule 7.1 Statement, dated Aug. 18, 2020.
EX1095	<i>Savant Technologies LLC d/b/a GE Lighting, and LEDVANCE LLC v. Feit Electric Company, Inc.</i> , IPR2024-01357 – Petitioner’s LEDVANCE LLC’s Responses to PO’s Amended First Request for Discovery, served on May 14, 2026.
EX1096	<i>Savant Technologies LLC d/b/a GE Lighting, and LEDVANCE LLC v. Feit Electric Company, Inc.</i> , IPR2024-01357 – Feit Electric Company, Inc.’s First Request for Discovery to Petitioner Ledvance LLC, served on May 1, 2026.
EX1097	<i>Savant Technologies LLC d/b/a GE Lighting, and LEDVANCE LLC v. Feit Electric Company, Inc.</i> , IPR2024-01357 – Feit Electric Company, Inc.’s First Request for Discovery to Petitioner Ledvance LLC, served on May 4, 2026.
EX1098	Email from counsel for Patent Owner to counsel for Petitioner dated May 4, 2026.

CERTIFICATE OF SERVICE

The undersigned certifies that on June 18, 2026, the foregoing was served on counsel at the following electronic service addresses:

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