

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.

Case IPR2024-01357
U.S. Patent No. 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.

Case IPR2025-00260
U.S. Patent No. 8,604,678

**PATENT OWNER'S REPLY IN SUPPORT OF ITS
REVISED CONTINGENT MOTION TO AMEND**

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PATENT OWNER’S EXHIBIT LIST

Exhibit	Description
2001	Declaration of E. Fred Schubert, Ph.D.
2002	<i>Curriculum vitae</i> for E. Fred Schubert, Ph.D.
2003	U.S. Patent Publication 2002/0180351 (“McNulty”)
2004	U.S. Patent Publication 2001/0000622 (“Reeh”)
2005	Scheduling Order (Dkt. 37), <i>Feit Electric Co., Inc. v. Elong International USA Inc.</i> , No. 3:24-cv-1089 (N.D. Tex.)
2006	June 2024 United States District Courts — Federal Court Management Statistics for N.D. Tex., E.D. Ky., and N.D. Ohio (https://www.uscourts.gov/statistics-reports/federal-courtmanagement-statistics-june-2024)
2007	Case Management Order (Dkt. 19), <i>Feit Electric Co., Inc. v. Savant Technologies LLC d/b/a GE Lighting</i> , No. 1:24-cv-473 (N.D. Ohio)
2008	Scheduling Order (Dkt. 33), <i>Feit Electric Co., Inc. v. Ledvance, LLC</i> , No. 5:24-cv-31 (E.D. Ky.)
2009	Savant’s Initial Invalidity and Unenforceability Contentions, <i>Feit Electric Co., Inc. v. Savant Technologies LLC d/b/a GE Lighting</i> , No. 1:24-cv-473 (N.D. Ohio), served on September 5, 2024
2010	Ledvance’s Initial Invalidity and Unenforceability Contentions, <i>Feit Electric Co., Inc. v. Ledvance, LLC</i> , No. 5:24-cv-31 (E.D. Ky.), served on September 24, 2024
2011	Elong’s Initial Invalidity and Unenforceability Contentions, <i>Feit Electric Co., Inc. v. Elong International USA Inc.</i> , No. 3:24-cv-1089 (N.D. Tex.), served on December 9, 2024
2012	Comparison of Petition and Expert Testimony Analysis
2013	Mike Krames, <i>Light-Emitting Diode Technology for Solid-State Lighting</i> , in <i>Frontiers of Engineering: Reports on Leading-Edge Engineering from the 2009 Symposium</i> , 67 (2009)
2014	E. Fred Schubert, <i>Light-Emitting Diodes</i> (2nd ed. 2006)
2015	Matthew G. Bevan & Bruce M. Romenesko, <i>Modern Electronic Packaging Technology</i> , 20 JOHNS HOPKINS APL TECH. DIGEST 22 (1999)
2016	X. A. Cao & S. D. Arthur, <i>High-power and reliable operation of vertical light-emitting diodes on bulk GaN</i> , 85 Applied Physics Letters 3971 (2004).

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Exhibit	Description
2017	Michael R. Krames et al., <i>Status and Future of High-Power Light-Emitting Diodes for Solid-State Lighting</i> , 3 J. Display Tech. 160 (2007)
2018	Mehmet Arik et al., <i>Thermal Management of LEDs: Package to System</i> , 5187 Proc. SPIE 64 (2004)
2019	U.S. Dep’t Energy, <i>Critical Materials Strategy</i> (Dec. 2010)
2020	Zongyuan Liu et al., <i>Measurement and numerical studies of optical properties of YAG:Ce phosphor for white light-emitting diode packaging</i> , 49 Applied Optics 247 (2010)
2021	March 2024 United States District Courts — Federal Court Management Statistics for N.D. Tex., E.D. Ky., and N.D. Ohio (https://www.uscourts.gov/data-news/reports/statisticalreports/federal-court-management-statistics/federal-courtmanagement-statistics-march-2024)
2022	September 2024 United States District Courts — Federal Court Management Statistics for N.D. Tex., E.D. Ky., and N.D. Ohio (https://www.uscourts.gov/data-news/reports/statisticalreports/federal-court-management-statistics/federal-courtmanagement-statistics-september-2024)
2023	Declaration of William A. Doolittle, Ph.D., dated November 6, 2024, <i>Feit Electric Company, Inc. v. Savant Technologies, d/b/a GE Lighting</i> , Case No. 24-cv-00473
2024	Rebuttal Declaration of William A. Doolittle, Ph.D., dated November 20, 2024, <i>Feit Electric Company, Inc. v. Savant Technologies, d/b/a GE Lighting</i> , Case No. 24-cv-00473
2025	Deposition Transcript of William A. Doolittle, Ph.D., dated June 10, 2025
2026	Declaration of E. Fred Schubert, Ph.D., dated June 25, 2025
2027	U.S. Provisional App. No. 61/427,411, filed on December 21, 2010
2028	U.S. Provisional App. No. 61/390,091, filed on October 5, 2010
2029	Home Depot - Feit Electric White Filament LED Light Bulbs listing
2030	Candle Power Forums article: Feit LED filament bulb with white filaments
2031	The Home Depot Announces 2024 Innovation Award Winners

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Exhibit	Description
2032	Feit Electric Lighting Instagram consumer comments regarding filaments
2033	Feit Electric Lighting Instagram consumer comments regarding yellow filaments
2034	Feit Electric Lighting Instagram consumer comments: Regular Yellow Filament vs. White Filament
2035	Home Depot White Filament price point of \$29.97
2036	Home Depot Yellow Filament price point of \$21.97
2037	Reddit: Do white filament LED edison bulbs exist?
2038	Deposition Transcript of William A. Doolittle, Ph.D., dated July 17, 2025
2039	Declaration of E. Fred Schubert, Ph.D., dated July 25, 2025

I. INTRODUCTION

Petitioners present superficial arguments, which at times conflict with one another, but they ultimately boil down to four categories: (1) the 450 nm to 470 nm feature recited in limitations 30[e], 40[b][4], and 45[f] allegedly lacks written description support, despite verbatim disclosure in the patent application specification; (2) the reduction in wavelength conversion material recited in limitation 30[f] is allegedly obvious, despite Petitioners' reliance on conclusory testimony and hindsight bias; (3) the reduction of between 20% to 40% recited in claim 31 allegedly lacks written description support, is indefinite, and is obvious, despite the fact that the claimed range *is* disclosed in the specification and *is not* disclosed in any of Petitioners' prior art references; and (4) the relative scattering feature recited in limitations 40[b][5] and 45[g] allegedly is obvious based on a purported finding by the Board that Stokes does not teach away from Basin-2007 or Krummacher, even though the Board has made no such finding.

Furthermore, Petitioners attempt to expand the Board's Guidance to say things that it clearly does not. For instance, Petitioners suggest that the Preliminary Guidance requires Patent Owner to explain each and every citation to the specification in support of its written description argument (Paper 49 at 4-5), but the Board imposed no such requirement. The Board was clear that Patent

Owner's Original Motion to Amend did "not set forth the support in the '212 application, the original disclosure of the '678 patent that was filed October 13, 2011, as is required, but instead set forth disclosure in the patent as issued in December 2013. [Furthermore, a] motion to amend must also identify written description support for 'each proposed substitute claim as a whole, and not just the features added by the amendment.'" Paper 42 at 8. Patent Owner corrected these two critiques in its Revised Motion (*see* Paper 46 at 5-11), and nothing in the Board's Preliminary Guidance requires Patent Owner to provide any further explanation of its citations to the written description.

Petitioners also assert that Patent Owner was required to submit additional evidence in support of its Revised Motion to Amend, but the portion of the Preliminary Guidance that Petitioners cite imposes no such requirement (*i.e.*, Patent Owner's revised motion to amend "may" be accompanied by new evidence). *See* Paper 49 at 2-3 (citing Paper 42 at 33, 37 C.F.R. § 42.121(e)(3)). Rather than submit entirely new claim amendments, Patent Owner carefully reviewed the Board's Preliminary Guidance and narrowed the disputed issues by addressing the Board's feedback. Petitioners' suggestion that Patent Owner merely "shuffled" its arguments is nonsense. *See* Paper 49 at 3 ("PO chose instead to shuffle its arguments and hope for a different outcome.").

As the following sections explain in detail, Petitioners have not met their burden of proving that the proposed amended claims are unpatentable for any reason.

II. ARGUMENT

A. The original specification expressly supports the 450 nm to 470 nm feature recited in limitations 30[e], 40[b][4], and 45[f]

Claim 1, as originally issued, recites “the wavelength conversion component is configured such that in operation a portion of excitation light comprising blue light having a wavelength of greater than or equal to 440 nm generated by the light emitting device is emitted through the wavelength conversion component to contribute to a final visible emission product.”¹ *See* EX1001 at 26:18-24. This limitation finds support in the originally filed application, for example, at ¶ 0047, which describes LEDs that generate blue light “in a wavelength range of 400 nm to 480 nm (typically 450 nm to 470 nm).” EX1004 at 53, ¶ 0047; *see* Paper 42 at 23-24. The applicant added this limitation in response to the examiner’s rejection based on U.S. Patent Publication No. 2002/0180351 (“McNulty”). EX1004 at 200-05; EX2003. At no point did the examiner suggest that the 440 nm limitation

¹ Original Claims 19, 27, 28, and 29 recite similar limitations. *See* EX1001 at 27:27-33, 28:12-18, 28:33-39, 28:55-61.

was unsupported by the specification. Nor did the examiner suggest that the 440 nm was limited to “peak” wavelengths, as Petitioners now propose. At best, Petitioners’ argument (Paper 49 at 6-7) amounts to a claim interpretation dispute disguised as a written description argument.

As the Board correctly noted in its Preliminary Guidance,

[I]t is not necessary that the limitations of a claim be set forth *in haec verba* or, presumably, in the case where numbers, not words, are at issue, *in haec numera*, . . . the specification must indicate with some clarity what the claim recites. In the case of a claimed range, a skilled artisan must be able to reasonably discern a disclosure of that range.

Paper 42 at 24 citing *Indivior UK Ltd. v. Dr. Reddy's Lab'ys S.A.*, 18 F.4th 1323, 1328 (Fed. Cir. 2021). Petitioners have presented no evidence to suggest that a skilled artisan would have been unable to reasonably discern the range recited in the amended claim language, nor is there any reason to believe that to be the case. Patent Owner respectfully submits that Petitioners have failed to meet their burden, and the Board should reject Petitioners’ suggestion that the 450 nm to 470 nm feature recited in amended limitations 30[e], 40[b][4], and 45[f] lacks written description support.

B. The reduction in wavelength conversion material recited in limitation 30[f] is not obvious

As Patent Owner explained in its Revised Motion (Paper 46 at 16-18), Petitioners' arguments rest on hindsight bias and conclusory testimony, which should be provided no weight. Petitioners do not even address these arguments in their renewed opposition. *See* Paper 49 at 11-13.

Citing no evidence in support, Petitioners baldly state that the reduction in wavelength conversion material amounts to "the natural result of obvious structure." Paper 49 at 12. Petitioners tout Professor Doolittle's testimony (Paper 49 at 13), but close inspection shows that the cited testimony is conclusory at best. *See* EX1065, ¶¶ 11-15. Professor Doolittle cites to no reference materials and offers no explanation of the reasoning behind his conclusion that the claimed reduction in wavelength conversion material was allegedly known to a POSITA. *See Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 (P.T.A.B. Aug. 24, 2022) (precedential) (finding that expert testimony that "does not cite to any additional supporting evidence or provide any technical reasoning [is] conclusory and unsupported [and] is entitled to little weight."); *see also* 37 C.F.R. § 42.65(a) ("Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight."); *Upjohn Co. v. Mova Pharm. Corp.*, 225 F.3d 1306, 1311 (Fed. Cir. 2000) ("Lack of factual support for expert

opinion to factual determinations, however, may render the testimony of little probative value in a validity determination.”).

To the extent Professor Doolittle offers any support at all, it comes only from the '678 patent itself. *See* EX1065, ¶ 15 (citing EX1001 specification). This is the very definition of hindsight bias. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (“A factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 36 (1966) (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to “guard against slipping into use of hindsight”))). Patent Owner respectfully submits that Petitioners have not met their burden, and the Board should reject Petitioners’ arguments with respect to amended claim 30. *See Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, -01130, Paper 15 at 4 (P.T.A.B. Feb. 25, 2019).

C. The reduction of between 20% to 40% recited in claim 31 is fully supported, not indefinite, and not obvious

The proposed amendment requiring a 20% to 40% reduction in wavelength conversion material is fully supported by the original specification. *See* Paper 46 at 7 (identifying support for claim element 31[b]). Petitioners themselves cite to multiple examples of support in the specification. *See* Paper 49 at 5-6. For

instance, Petitioners acknowledge that “[t]he specification discloses reduction of ‘up to 40%’” and “experimental reductions of approximately 25% and 33%.” *Id.* (citing EX1001). The claimed range of 20% to 40% falls within the broader range of “up to 40%” disclosed in the specification and captures both of the specifically-described examples that Petitioners cite (25% and 33%). Again, Petitioners overlook both the Board’s Preliminary Guidance and the Federal Circuit’s precedent that *in haec numera* recitation is not necessary. Paper 42 at 24; *see, e.g., Rai Strategic Holdings, Inc. v. Philip Morris Prods. S.A.*, 92 F.4th 1085, 1088 (Fed. Cir. 2024) (finding sufficient written description support where “[t]he claims at issue related to a process for making freeze-dried instant coffee and required the solids content of the concentrated coffee extract to be “between 35% and 60%” (claims 2, 4, 37, and 38) [and t]he specification disclosed a broader solids content range of 25% to 60% and provided examples of specific embodiments with solid contents of 36% or 50%.”). Similar to *Rai Strategic*, there is no dispute that the ’678 patent specification discloses *more* than the claimed range and describes in detail specific examples within that range.

Petitioners also contend incorrectly that amended claim 31 is indefinite because one of skill in the art would allegedly be unable to measure a 20% to 40% reduction in wavelength conversion layer material. Petitioners advanced similar

arguments in their initial opposition and as part of the district court claim construction proceedings with respect to the term “average particle size.” *See* Paper 41 at 4-5; EX1044 at 12. In both instances, the Board and the district court rejected Petitioners’ arguments, and the same result should apply here. *See* Paper 42 at 18 (affirming the *Markman* Order’s (EX1044) analysis that the claims do not require a specific measurement technique and thus are not indefinite).

As to obviousness, Petitioners cite to no reference that discloses the claimed range of 20% to 40%. Petitioners identify no specific teaching in Virens, relying instead on a general statement regarding phosphor grain density (a concept that Petitioners have failed to link to any reduction in phosphor material).

For all of these reasons, Patent Owner respectfully submits that Petitioners have failed to meet their burden of showing a lack of written description support, indefiniteness of the claim language, and/or obviousness, and the Board should reject Petitioners’ arguments regarding claim 31.

D. The relative scattering feature recited in limitation 40[b][5] and 45[g] is not obvious over Stokes²

As Patent Owner explained in its Revised Contingent Motion to Amend (Paper 46 at 18-20), Petitioners' obviousness arguments fail because Stokes, upon which Petitioners rely for every ground, actively teaches away from any combination with Basin-2007 and/or Krummacher. Petitioners now assert that "Stokes does not teach away from the particle-size principle" (Paper 49 at 16), but this conflates two different issues: (1) whether one of skill in the art would have been motivated to combine Stokes with Basin-2007 or Krummacher; and

² Petitioners' assertion that the Board has already rejected this argument is false. The Board's Institution Decision in IPR2025-00698 (*see* Paper 49 at 17), a proceeding involving related Patent No. 8,614,539, fails to support Petitioners' assertion because Patent Owner did not raise this argument in its Preliminary Response in that proceeding. *See generally* IPR2025-00698 Paper 10. As a result, the Board had no opportunity to consider this argument. Patent Owner *has* made similar arguments in this proceeding regarding Stokes' teaching away from the claimed invention, but the Board has not yet ruled on those arguments. *See* Patent Owner Response to IPR2025-00260 (Paper 34); Revised Contingent Motion to Amend (Paper 46).

(2) whether Stokes actually teaches the particle-size principle. Unless Petitioners can demonstrate an affirmative answer to the first question, the second question does not matter. Petitioners have failed to demonstrate that affirmative answer to the first question—because Stokes expressly teaches away from any combination with Basin-2007 or Krummacher.

Stokes is expressly critical of various prior art, including Basin-2007 and Krummacher, in which the scattering material is *above*, rather than *below*, the luminescent material. For example, Stokes identifies the Shimizu reference (EX1010, Pat. 6,069,440) as one method that suggests placing the light scattering material *above* the luminescent (phosphor) material, and Stokes expressly criticizes that approach because of the resulting penumbra effect. EX1008 at 2:23-64. Stokes similarly criticizes other prior art embodiments that suggest placing the light scattering material *above* the luminescent material. *Id.* at 1:36 – 2:22; EX2039 at ¶ 17. Instead, Stokes urges the opposite: positioning the scattering material 46 *below* the luminescent material (*i.e.*, *between* the radiation source 43 and the luminescent material 45).

As Stokes explains:

[O]ne purpose of the scattering layer *between* the radiation source, such as the LED or a laser diode, and the luminescent material, such as a phosphor, is to make the blue light source appear more similar to

the yellow light source. Thus, the blue light source effectively loses the memory of the LED or laser diode chip geometry, and the resulting collimation, by virtue of having been scattered by the scattering layer.

EX1008 at 4:3-10 (emphasis added); *see also id.* at 4:10-15. Another benefit Stokes cites for placing the scattering material 46 *between* the LED and the phosphor is to maintain the integrity of the phosphor itself.

By placing material 46 *between* the phosphor 45 and the LED 43, the phosphor 45 will remain cooler than if the phosphor 45 was in direct contact with the heat emitting LED 43. This configuration is advantageous because it reduces or eliminates the reversible thermal quantum efficiency degradation of the phosphor 45 during the operation of the lamp 41.

EX1008 at 6:13-19.

Not surprisingly, Stokes discloses no embodiment in which the scattering material is placed on the outside, above the luminescent material. That is because doing so would frustrate the benefits that Stokes touts of doing the opposite. In a textbook case of teaching away, Stokes expressly criticizes prior art that suggests placing the scattering material *above* the luminescent material, and Stokes repeatedly emphasizes the benefits of placing the scattering material *below* the luminescent material (*i.e.*, *between* the LED and the luminescent material). Petitioners' reliance on Stokes therefore fails, and Patent Owner respectfully

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submits that Petitioners have failed to meet their burden with respect to limitations 40[b][5] and 45[g].

III. CONCLUSION

For the reasons set forth herein, Patent Owner asserts that the proposed amended claims meet all statutory requirements and respectfully requests that the Board allow proposed amended claims 30-49 in the event that it finds any of the corresponding original claims to be unpatentable.

Date: January 28, 2026

Respectfully submitted,

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APPENDIX A

Proposed Amended Claim 30 (Substitute for Original Claim 1)

30. A wavelength conversion component for a light emitting device comprising:

a wavelength conversion layer comprising particles of at least one photoluminescence material; and

a light diffusing layer comprising particles of a light scattering material, wherein the light diffusing layer improves an off-state white appearance of the wavelength conversion component;

wherein the light diffusing layer is configured such that a portion of excitation light generated by the light emitting device is directed back at the wavelength conversion layer;

wherein the wavelength conversion component is configured such that in operation a portion of excitation light comprising blue light having a wavelength of ~~greater than or equal to 440 nm~~between 450 nm and 470 nm generated by the light emitting device is emitted through the wavelength conversion component to contribute to a final visible emission product;

wherein the portion of excitation light generated by the light emitting device and directed back at the wavelength conversion layer reduces the wavelength conversion layer material necessary for a given color emission product.

Proposed Amended Claim 31 (Substitute for Original Claim 2)

31. The component of claim [[1]]30, wherein the wavelength conversion layer and the light diffusing layer are in direct contact with each other, and wherein the wavelength conversion layer material necessary for a given color emission product is reduced by between 20% and 40%.

Proposed Amended Claim 32 (Substitute for Original Claim 3)

32. The component of claim [[1]]30, wherein the wavelength conversion layer comprises a mixture of the at least one phosphor material and a light transmissive binder and the light diffusing layer comprises a mixture of the light scattering material and the light transmissive binder.

Proposed Amended Claim 33 (Substitute for Original Claim 6)

33. The component of claim [[3]]32, wherein the light transmissive binder comprises a curable liquid polymer selected from the group consisting of: a polymer resin, a monomer resin, an acrylic, an epoxy, a silicone and a fluorinated polymer.

Proposed Amended Claim 34 (Substitute for Original Claim 7)

34. The component of claim [[3]]32, wherein the weight loading of light scattering material to binder selected from the group consisting of: 7% to 35% and 10% to 20%.

Proposed Amended Claim 35 (Substitute for Original Claim 9)

35. The component of claim ~~[[1]]~~30, wherein the wavelength conversion and light diffusing layers are deposited using a method selected from the group consisting of: screen printing, slot die coating, spin coating, roller coating, drawdown coating and doctor blading.

Proposed Amended Claim 36 (Substitute for Original Claim 10)

36. The component of claim ~~[[1]]~~30, wherein the light scattering material is selected from the group consisting of: titanium dioxide, barium sulfate, magnesium oxide, silicon dioxide and aluminum oxide.

Proposed Amended Claim 37 (Substitute for Original Claim 16)

37. The component of claim ~~[[1]]~~30 in which the wavelength conversion layer and the light diffusing layer comprises planar shapes.

Proposed Amended Claim 38 (Substitute for Original Claim 17)

38. The component of claim ~~[[1]]~~30 in which the light diffusing layer comprises a dome or elongated dome shape.

Proposed Amended Claim 39 (Substitute for Original Claim 18)

39. The component of claim [[17]]38 in which the wavelength conversion layer fills a volume formed beneath the dome or elongated dome shapes.

Proposed Amended Claim 40 (Substitute for Original Claim 19)

40. A light emitting device, comprising:
at least one solid-state light emitter operable to generate excitation light; and
a wavelength conversion component comprising:
a wavelength conversion layer excitable by the excitation light, wherein the wavelength conversion layer comprises particles of at least one photoluminescence material; and
a light diffusing layer comprising particles of a light scattering material,
wherein the light diffusing layer improves an OFF state white appearance of the wavelength conversion component;
wherein the wavelength conversion component is configured such that in operation a portion of light comprising blue light having a wavelength of ~~greater than or equal to 440 nm~~between 450 nm and 470 nm generated by the at least one solid-state light emitter is emitted through the wavelength conversion component to contribute to a final visible emission product;
wherein the light scattering material scatters excitation light from the one or more solid-state light emitters relatively more than the light

scattering material scatters light generated by the at least one photoluminescence material.

Proposed Amended Claim 41 (Substitute for Original Claim 20)

41. The device of claim ~~[[19]]~~40, wherein the light emitting device is selected from the group consisting of: downlights, light bulbs, linear lamps, lanterns, wall lamps, pendant lamps, chandeliers, recessed lights, track lights, accent lights, stage lighting, movie lighting, street lights, flood lights, beacon lights, security lights, traffic lights, headlamps, taillights, and signs.

Proposed Amended Claim 42 (Substitute for Original Claim 21)

42. The device of claim ~~[[19]]~~40 in which the light scattering material within the light diffusing layer corresponds to an average particle size that improves the OFF state white appearance of the wavelength conversion component.

Proposed Amended Claim 43 (Substitute for Original Claim 25)

43. The device of claim ~~[[19]]~~40 in which the wavelength conversion layer and the light diffusing layer comprises planar shapes.

Proposed Amended Claim 44 (Substitute for Original Claim 26)

44. The device of claim ~~[[19]]~~40 in which the light diffusing layer comprises a dome or elongated dome shape.

Proposed Amended Claim 45 (Substitute for Original Claim 29)

45. A light bulb comprising:

a connector base configured to be inserted in a socket to form an electrical connection for the light bulb;

a body comprising one or more solid-state light emitters;

a wavelength conversion component having a three dimensional shape that is configured to enclose the one or more solid-state light emitters and to in part at least define a light mixing chamber,

wherein the wavelength conversion component comprises a wavelength conversion layer comprising particles of at least one photoluminescence material and a light diffusing layer comprising particles of a light scattering material,

wherein the light diffusing layer improves an off-state white appearance of the wavelength conversion component;

wherein the wavelength conversion component is configured such that in operation a portion of light comprising blue light having a wavelength of ~~greater than or equal to 440 nm~~ between 450 nm and 470 nm generated by the one or more solid-state light emitters is emitted through the wavelength conversion component to contribute to a final visible emission product;

wherein the light scattering material scatters excitation light from the one or more solid-state light emitters relatively more than the light scattering material scatters light generated by the at least one photoluminescence material.

Proposed Amended Claim 46 (Substitute for Original Claim 11)

46. The component of claim ~~[[1]]~~30, wherein the light scattering material has an average particle size that is selected such that the light scattering material will scatter the excitation light relatively more than the light scattering material will scatter light generated by the at least one photoluminescence material.

Proposed Amended Claim 47 (Substitute for Original Claim 12)

47. The component of claim ~~[[11]]~~46, wherein the light scattering material scatters the excitation light at least twice as much as light generated by the at least one photoluminescence material.

Proposed Amended Claim 48 (Substitute for Original Claim 13)

48. The component of claim ~~[[11]]~~46, wherein the excitation light comprises blue light.

Proposed Amended Claim 49 (Substitute for Original Claim 14)

49. The component of claim ~~[[13]]~~48, wherein the light scattering material has an average particle size that is less than about 150 nm.

CERTIFICATE OF PAGE COUNT UNDER 37 C.F.R. § 42.24(a)(vi)

I, the undersigned, do hereby certify that the foregoing Patent Owner's
Reply in Support of its Revised Contingent Motion to Amend contains under 12
pages, as specified by 37 C.F.R. § 42.24(c)(3).

/Charles M. McMahon/

Charles M. McMahon

CERTIFICATE OF SERVICE

I hereby certify that on January 28, 2026, a true and correct copy of the foregoing was served by electronic mail upon the following counsel of record for

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