

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ADVANCED LIGHTING CONCEPTS LLC,
Petitioner,

v.

MATE LLC,
Patent Owner.

IPR2023-01265
Patent 9,320,093 B2

Before KRISTINA M. KALAN, KIMBERLY McGRAW, and
JAMES J. MAYBERRY, *Administrative Patent Judges*.

KALAN, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Advanced Lighting Concepts LLC (“Petitioner”) filed a Petition requesting *inter partes* review of claims 1, 2, 5–7, 9–13, 15–17, 19, and 20 of U.S. Patent No. 9,320,093 B2 (Ex. 1001, “the ’093 patent”). Paper 1 (“Pet.”). In lieu of filing a Preliminary Response, mate LLC (“Patent Owner”) filed a Waiver of Preliminary Response. Paper 7.

To institute *inter partes* review, we must determine that the information presented in the Petition shows “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). Upon considering the Petition and the evidence of record, we determine that Petitioner has not shown a reasonable likelihood that it would prevail in showing the unpatentability of at least one of the claims challenged in the Petition. Accordingly, we do not institute *inter partes* review.

A. Related Proceedings

The parties identify the following district court litigation (“the Litigation”) as a related matter: *mate, LLC v. Advanced Lighting Concepts LLC (dba Environmental Lights)*, 3:22-cv-01095-CAB-DEB (S.D. Cal.). Pet. 1–2; Paper 3, 2 (Patent Owner’s Mandatory Notices). Patent Owner also identifies “recently filed IPR petitions” on the patents involved in the district court litigation: IPR2023-01257; IPR2023-01258; IPR2023-01259; IPR2023-01264; and IPR2023-01266. Paper 3, 2.

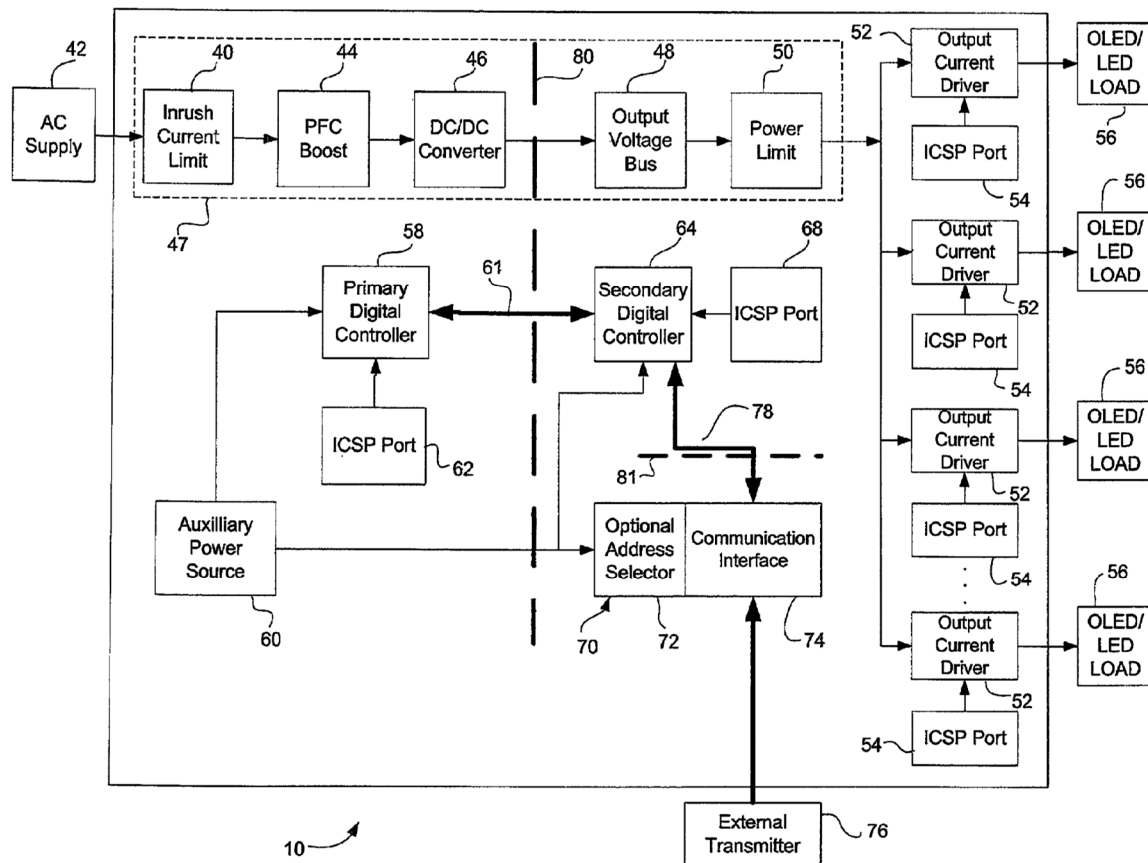
B. Real Party-in-Interest

Petitioner states its real party in interest is “Advanced Lighting Concepts LLC.” Pet. 1. Patent Owner states that the “Real Party in Interest for Patent Owner is: mate LLC.” Paper 3, 2.

C. The '093 patent (Ex. 1001)

The '093 patent is titled “Configurable LED Driver/Dimmer for Solid State Lighting Applications.” Ex. 1001, code (54). The invention provides a light emitting diode (LED) “driver/dimmer” for solid state lighting (SSL). *Id.* at 1:20–43. More particularly, the invention provides a configurable LED driver/dimmer, at times called simply a “dimmer,” that “can function as either a driver, a dimmer or both.” *Id.* at 3:59–64.

Figure 3, reproduced below, is a block diagram illustrating an LED dimmer. *Id.* at 4:34–35.



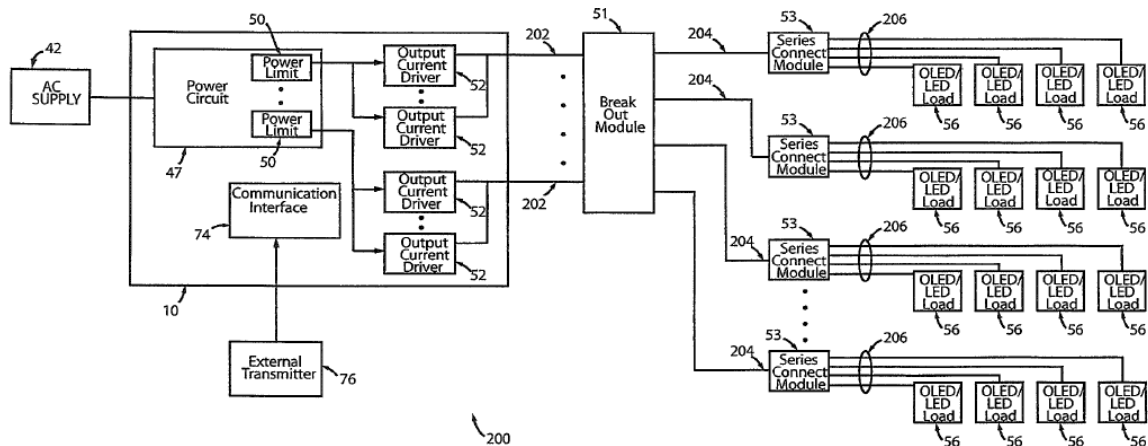
Inrush current limit 40 receives power from AC power source or supply 42, and is connected to Power Factor Correction (PFC) boost 44, which is in turn connected to DC/DC converter 46, which is connected to Output

Voltage bus 48, which is connected to power limit 50. *Id.* at 4:35–45. All together these elements make up inrush power circuit 47. *Id.* at 4:43–45. Power limit 50 is connected to output current drivers 52 each having an in-circuit serial programming (ICSP) port 54. *Id.* at 4:47–50. Each output current driver 52 outputs to respective LED load 56. *Id.* at 4:50–53.

Primary digital controller 58 is connected to auxiliary power source 60 and ICSP port 62, and also connected by communication bus 61 to secondary digital controller 64, which also receives power from auxiliary power source 60, and which is connected to ICSP port 68. *Id.* at 4:55–61. Interface component 70 includes optional address selector 72 and communication interface 74, which receives inputs from external transmitter 76; interface component 70 receives power from auxiliary power source 60 and communicates via serial communication bus 78 with secondary digital controller 64. *Id.* at 4:62–67.

Primary digital controller 58 controls PFC Boost 44 and DC/DC Converter 46. *Id.* at 5:14–15. Secondary digital controller 64 monitors output voltage bus 48, provides digital feedback control information via isolated communication bus 61 to regulate output voltage bus 48, and translates dimming and/or color mixing information from external transmitter 76 into LED control information for output current drivers 52. *Id.* at 5:16–22. “The primary 58 and secondary 64 digital controllers and output current drivers 52 have an associated programming port for further configuring the LED dimmer.” *Id.* at 5:22–25.

Figure 12, reproduced below, is a block diagram illustrating a “configurable LED dimmer implemented in a low voltage DC distribution LED lighting system.” *Id.* at 10:44–46.



In dimmer 10, power circuit 47 receives power from AC power supply 42 and outputs a limited power to output current drivers 52. *Id.* at 10:61–11:3. “Each set of output current drivers 52 is connected to the breakout module 51 by means of communications cabling 202.” *Id.* at 11:20–22. The “output current drivers or the set of output current drivers 52 are connected via the cabling 202, 204, 206, directly or indirectly, to breakout modules 51, and series connect modules 53 to the LED loads 56.” *Id.* at 11:37–40. Thus, LED dimmer 10, via output current drivers 52, “connects into at least one breakout module 51 via the cabling 202 as a set of output channels.” *Id.* at 11:50–52. Breakout module 51 then “splits the set of channels into individual channels or into a predetermined number of channels depending on the required configuration of the lighting system.” *Id.* at 11:52–55.

D. Challenged Claims

Claims 1 and 11 are the only independent claims; claim 1 is reproduced below.

1. [p] A method of configuring and powering a set of light fixture loads in a light emitting diode (LED) low voltage distribution system comprising:

[a] converting power for powering the set of light fixture loads;

[b] limiting converted power to multiple current outputs supplied to the set of light fixture loads;

[c] splitting or regrouping the multiple current outputs prior to delivery of the multiple current outputs to the set of light fixture loads;

[d] receiving a protocol from an external transmitter;

[e] converting the protocol into a data stream; and

[f] translating the data stream to LED control information;

[g] wherein the LED control information is used for controlling the limited power.

Ex. 1001, 14:52–65 (bracketed letters added to show Petitioner’s designations).

E. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability:

Claims Challenged	35 U.S.C. § ¹	Reference(s)
1, 2, 9–13, 19, 20	102(b)	Leong ²
5–7, 15–17	103(a)	Leong, Lee ³

¹ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102 and 103. Because the ’093 patent claims benefits of priority antedating the applicable AIA amendments, we refer to the pre-AIA versions of §§ 102 and 103. See Ex. 1001, codes (60), (63); Ex. 1004, 24 (the ’093 patent’s prosecution history, and, particularly, the Notice of Allowability confirming “no” status under the AIA). We note, however, that our analysis does not depend on whether the claims should be evaluated under the AIA statute or pre-AIA statute.

² US 7,490,957 B2, issued February 17, 2009 (Ex. 1005).

³ US 2015/0097484 A1, published April 9, 2015 (Ex. 1006).

Petitioner relies on the Declaration of Joseph C. McAlexander in support of its arguments. Ex. 1002.

II. ANALYSIS

A. Claim Construction

We apply the claim construction standard articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*). 37 C.F.R. § 42.100(b). Under *Phillips*, claim terms are afforded “their ordinary and customary meaning.” *Phillips*, 415 F.3d at 1312. The “ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. Only terms that are in controversy need to be construed, and then only to the extent necessary to resolve the controversy. *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

Petitioner does not propose any express claim construction, but argues that each “claim term challenged by this Petition should be construed in accordance with its ordinary and customary meaning.” Pet. 9. We conclude that no claim term requires express construction for purposes of this decision. *See, e.g., Vivid Techs.*, 200 F.3d at 803.

B. Level of Ordinary Skill in the Art

The Petition does not assert a level of ordinary skill. *See generally* Pet.; *but see* Ex. 1002 ¶ 31 (Petitioner’s declarant stating the level of ordinary skill was “at least a bachelor’s degree in electrical engineering,

computer science, or a related field and significant experience with power regulation devices, like LED drivers and dimmers”).

We apply Petitioner’s declarant’s definition of a person of ordinary skill in the art (“POSITA”), and also determine that the asserted prior art demonstrates a level of ordinary skill in the art sufficient for deciding institution. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (“[T]he absence of specific findings on the level of skill in the art does not give rise to reversible error ‘where the prior art itself reflects an appropriate level and a need for testimony is not shown.’” (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed.Cir.1985))).

C. Principles of Law

To establish anticipation under 35 U.S.C. § 102, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference. *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). Each element of the challenged claim must be found, either expressly or inherently, in the single prior art reference. *Verdegaal Bros., Inc. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). Although the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsissimis verbis* test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009). Thus, the dispositive question is whether one skilled in the art would have reasonably understood or inferred from a prior art reference that every claim element is disclosed in that reference. *Eli Lilly & Co. v. L.A. Biomedical Research Inst.*, 849 F.3d 1073, 1074–1075 (Fed. Cir. 2017).

A claim is unpatentable under 35 U.S.C. § 103 if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) if in evidence, objective evidence of nonobviousness.⁴ *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). A decision on the ground of obviousness must include “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006). The obviousness analysis “should be made explicit” and it “can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *KSR*, 550 U.S. at 418.

D. Asserted Anticipation by Leong (Ground 1)

Petitioner argues that Leong anticipates claims 1, 2, 9–13, 19, and 20. Pet. 10–41.

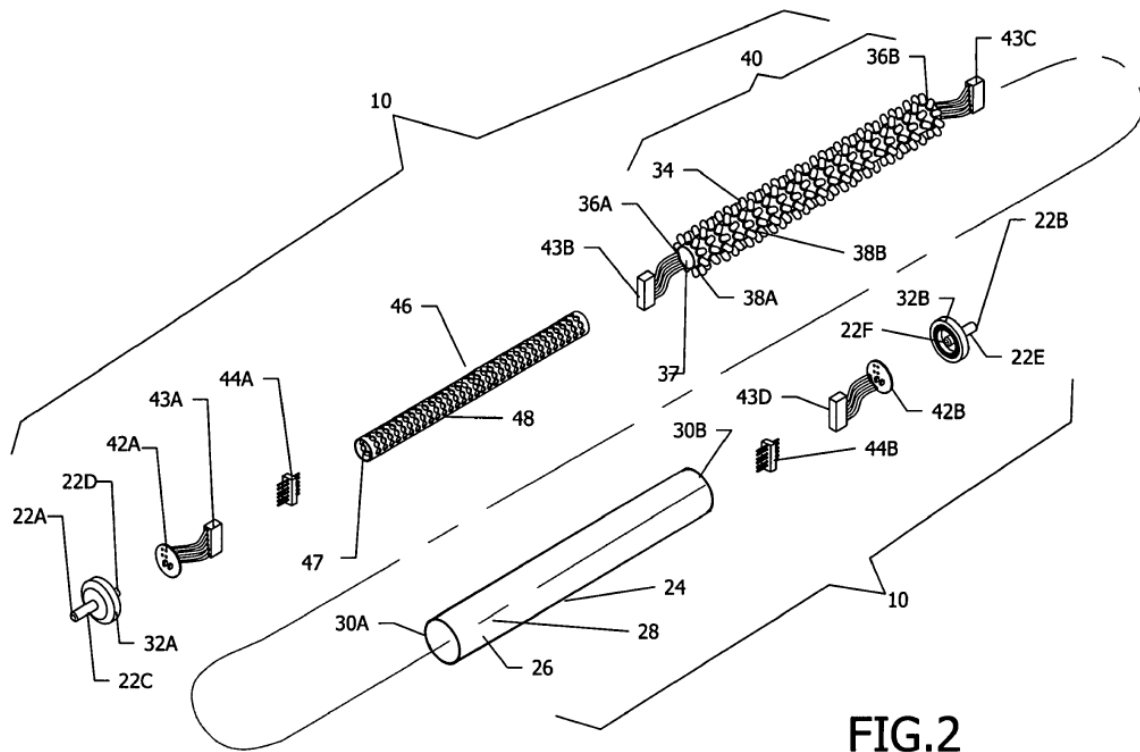
1. Leong (Ex. 1005)

Leong is a U.S. patent titled “Power Controls with Photosensor for Tube Mounted LEDs with Ballast.” Ex. 1005, code (54). Leong states that the “invention relates to tubular lamps having LED arrays with ballasts” and

⁴ The record does not contain any arguments relating to objective evidence of nonobviousness.

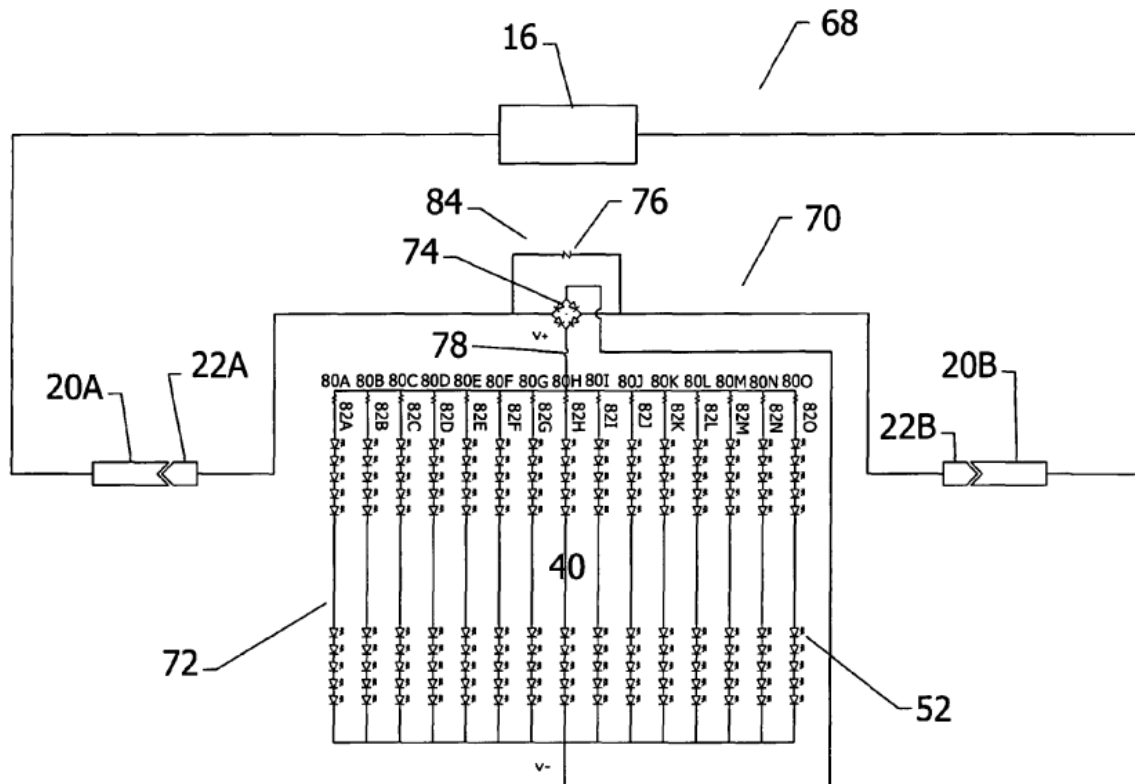
is pertinent to “Daylight Harvesting” whereby light level sensors or photosensors “detect available daylight” and “adjust the output of electric lights to compensate for light coming into an architectural space from the outside.” *Id.* at 1:17–18, 1:39–43.

Figure 2, reproduced below, illustrates “an exploded perspective view of the LED retrofit lamp.” *Id.* at 19:21–22.



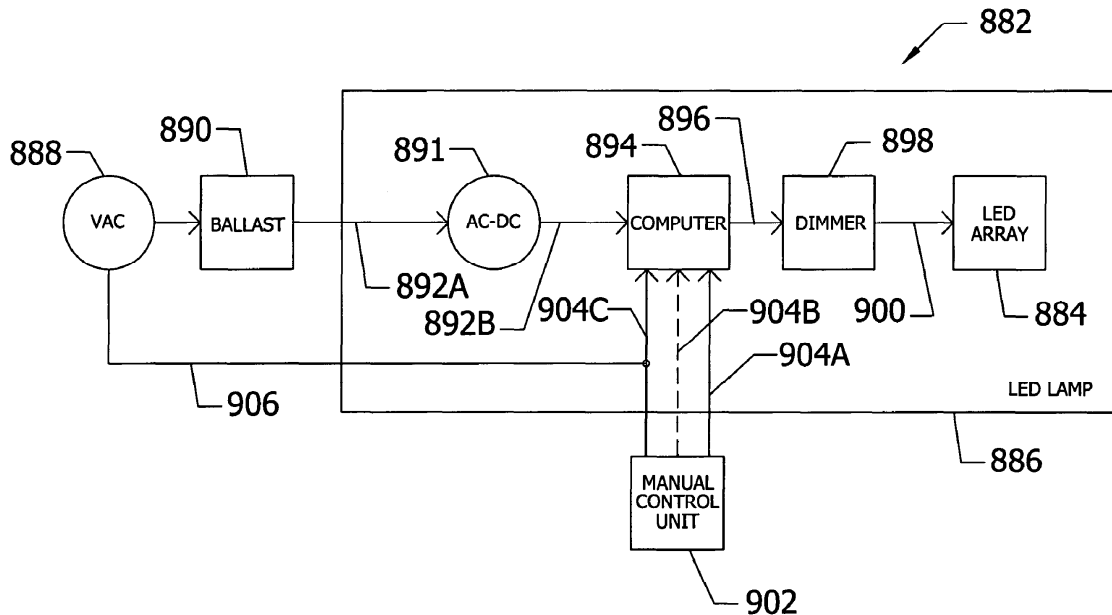
LED lamp 10 includes “elongated housing 24 particularly configured as tubular wall 26 circular in cross-section taken transverse to a center line 28.” *Id.* at 29:64–30:3. LED array circuit board 34 is arranged within housing 24 and has bookending circuit-board circular ends 36A, 36B. *Id.* at 30:21–22. “An integral electronics circuit board 42A is positioned between LED array circuit board 34 and base end cap 32A, and an integral electronics circuit board 42B is positioned between LED array circuit board 34 and base end cap 32B.” *Id.* at 30:36–40.

Figure 4, reproduced below, illustrates an “overall electrical circuit” for LED lamp 10. *Id.* at 19:31–34, 31:45–46.



In Figure 4, the total circuitry includes two circuit assemblies—(i) existing ballast assembly circuitry 68 providing a voltage supply with fixed current limit across ballast socket electrical contacts 20A, 20B and (ii) LED circuitry 70 including LED array circuitry 72 and integral electronics circuitry 84. *Id.* at 31:48–57. Voltage suppressor 76 is used to protect LED lighting element array 40 and other electronic components. *Id.* at 31:65–67. The power supply is conducted through LED circuitry 70, by way of contact pins 22A, 22B to voltage input at bridge rectifier 74. *Id.* at 31:57–61. Ballast circuitry 68 limits the current going into LED circuitry 70. *Id.* at 32:12–13. LED array circuitry 72 powers fifteen electrical strings 80A–80O all in parallel relationship with all LEDs 52. *Id.* at 32:20–24.

Figure 73A, reproduced below, illustrates a “schematic block diagram of an LED lamp 882.” *Id.* at 91:39–41.



In Figure 73A, LED array 884 is connected to a power supply comprising source of VAC power 888 electrically connected to ballast 890, which powers electrical connection 892A, which transmits power into the lamp. *Id.* at 91:42–46. In the lamp, AC power is carried to AC-DC power converter 891, which transmits DC power to computer 894 and dimmer 898. *Id.* at 91:47–50. Computer 894 is connected by electrical control connection 896 to dimmer 898, which provides the proper current drive power to LED array 884. *Id.* at 91:55–61. LED array 884 and dimmer 898 can represent multiple LED arrays 884 each controlled by multiple respective dimmers 898, which are each independently controlled by computer 894. *Id.* at 91:61–65. Manual control unit 902, external to the lamp, is operationally connected to computer 894. *Id.* at 92:1–2. Manual control unit 902 activates computer 894 to signal dimmer 898 to adjust the

power to LED array 884 by a power factor preset in computer 894.
Id. at 92:16–19.

Figure 76, reproduced below, illustrates a “schematic block diagram of a network 1086 of two LED lamps 1086A and 1086B.” *Id.* at 98:41–42.

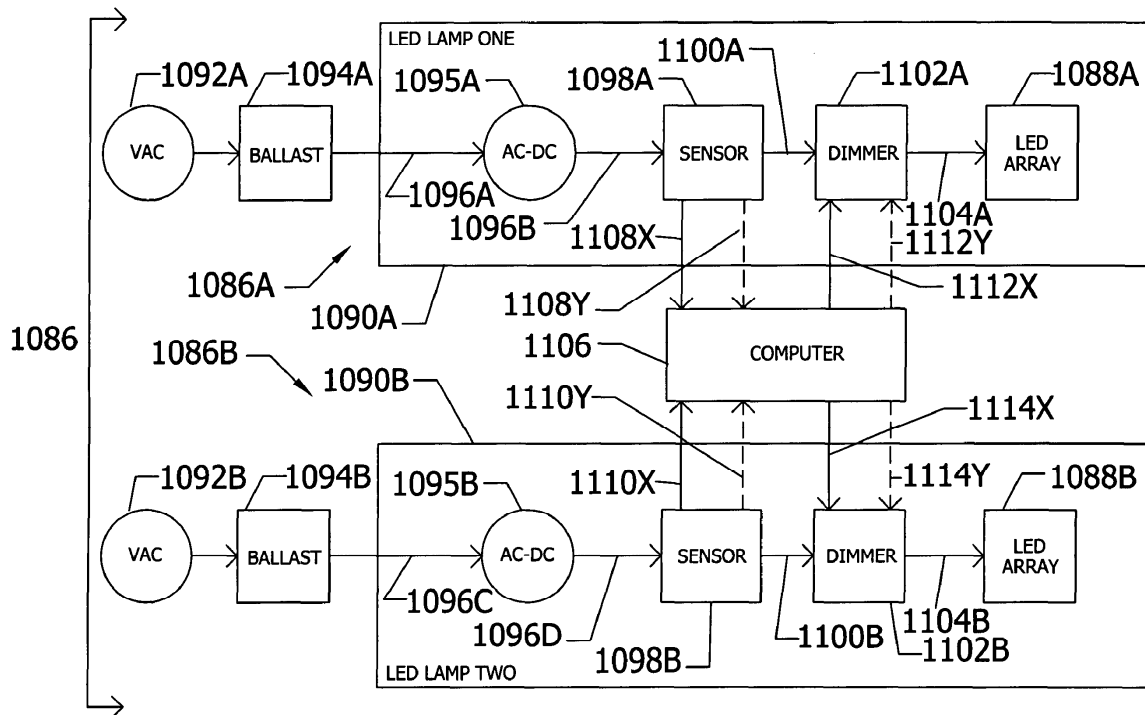


Figure 76 depicts VAC power supply 1092A, 1092B; ballast 1094A, 1094B; AC-DC converter 1095A, 1095B; dimmer 1102A, 1102B; and LED array 1088A, 1088B. *Id.* at 98:43–99:3. External central computer 1106 is positioned between LED lamps 1086A, 1086B and in communication with sensors 1098A, 1098B and dimmers 1102A, 1102B of each lamp. *Id.* at 99:4–7. Computer 1106 receives a respective sensor data signal from each sensor 1098A, 1098B and responsively sends a respective computer data signal to each dimmer 1102A, 1102B. *Id.* at 99:7–23. Computer 1106 continuously compares the received sensor data signals as part of controlling dimmers 1102A, 1102B so as to prevent flickering of LED lamps 1086A, 1086B. *Id.* at 99:26–41.

2. *Petitioner's Arguments – Claim 1*

a) *Limitations 1(p), 1(a), 1(b)*

(1) *1[p]: A method of configuring and powering a set of light fixture loads in a light emitting diode (LED) low voltage distribution system comprising:*⁵

Petitioner argues that “Leong discloses LED lamps contain a means for controlling the delivery of electrical power from the ballast assembly to the LEDs.” Pet. 11 (citing Ex. 1005, 18:3–13). Petitioner also argues that a “POSITA would understand that Leong’s disclosure of the electrical power delivery means is equivalent to the method of configuring (i.e. controlling) and powering (i.e., delivery of electrical power) a set of light fixture loads in a light emitting diode (LED).” *Id.* (citing Ex. 1002 ¶ 53).

(2) *1(a): converting power for powering the set of light fixture loads;*

Petitioner argues that a “POSITA would readily understand that using a bridge rectifier to perform an AC to DC voltage conversion is analogous to⁶ the power conversion step of the ‘093 Patent.” Pet. 12 (quoting Ex. 1005, 14:16–28; citing Ex. 1002 ¶ 54).

⁵ We need not determine, on this record, whether the preamble is limiting.

⁶ Petitioner’s use of the term “analogous,” here and throughout the Petition, is also problematic for Petitioner’s anticipation arguments. “Analogous” does not mean identical, but rather indicates that two items are similar or comparable. Anticipation “requires that the identical invention that is claimed was previously known to others.” *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1267 (Fed. Cir. 1991).

(3) 1(b): limiting converted power to multiple current outputs supplied to the set of light fixture loads;

Petitioner argues that Leong discloses voltage surge absorbers, and that a “POSITA would readily understand that using the voltage surge absorbers to limit the voltage to a ‘workable voltage’ is equivalent to limiting converted power.” Pet. 13 (quoting Ex. 1005, 14:24–36; citing Ex. 1002 ¶ 55).

(4) Analysis

On this record, we are not persuaded by Petitioner’s argument. Petitioner relies on the use of voltage surge absorbers, discussed in the general introductory section of Leong, to disclose the “limiting converted power” limitation of claim element 1(b). *See* Pet. 13; Ex. 1005, 14:24–36 (“Voltage surge absorbers are used to limit the high voltage to a workable voltage.”). In its earlier discussion of limitation 1(a), “converting power for powering the set of light fixture loads,” Petitioner argues that “using a bridge rectifier to perform an AC to DC voltage conversion” meets limitation 1(a). Pet. 12 (citing Ex. 1005, 14:16–28; Ex. 1002 ¶ 54). Accordingly, as we understand Petitioner’s argument, the “converted power” in limitation 1(b) is DC power. This same section of Leong, however, provides: “In addition, a voltage surge absorber or transient voltage suppresser device can be used on the AC input side of the circuit to limit the AC voltage driving the power converter circuit.” Ex. 1005, 14:54–57. Petitioner points to no portion of Leong that explains how the voltage surge absorber, which Leong discloses as limiting the AC voltage, can or does function as “limiting converted power [i.e. DC power] to multiple current outputs supplied to the set of light fixture loads.” Petitioner’s declarant does not provide clarification.

Ex. 1002 ¶ 55 (discussing voltage surge absorbers in general, but concluding without additional support that a “POSITA would readily understand that using the voltage surge absorbers to limit the voltage to a ‘workable voltage’ is equivalent to limiting converted power”).

Even if Petitioner were able to demonstrate that the voltage surge absorber in Leong is configured to absorb DC voltage, Petitioner fails to point to any embodiment or version of Leong in which the voltage surge absorber is configured to limit “converted power” i.e. DC power, to multiple current outputs supplied to the set of light fixture loads. “Not only must each claim element be shown in a single reference, but the elements must be ‘arranged or combined in the same way as recited in the claims.’” *TF3 Ltd. v. Tre Milano, LLC*, 894 F.3d 1366, 1374 (Fed. Cir. 2018) (quoting *Net MoneyIN*, 545 F.3d at 1370). Here, Petitioner does not address the second portion of limitation 1(b). As discussed above, we are not directed to any portion of Leong in which the voltage surge absorber limits “converted power;” we also are not directed to any disclosure in Leong that shows the voltage surge absorber limiting converted power to multiple current outputs supplied to the set of light fixture loads, i.e. any disclosure in which the voltage surge absorber itself effects the limitation of converted power to multiple current outputs.

Additionally, the relied-upon general disclosure in Leong, in and of itself, is insufficient to support Petitioner’s contentions without providing readily apparent specific details that teach limitation 1(b). The statement upon which Petitioner relies discusses generally how Leong is designed to work with existing ballast output configurations. *See* Ex. 1005, 14:16–18, 14:24–36. Our rules require the petition to include “a detailed explanation

of the significance of the evidence.” 37 C.F.R. § 42.22(a)(2). The Board may “give no weight to the evidence where a party as failed to state its relevance.” 37 C.F.R. § 42.104(b)(5). Petitioner does not provide sufficient explanation of the relied-upon general disclosure to remedy this problem. Petitioner also does not direct us to any specific embodiment to which this discussion applies. *Cf. Wasica Fin. GmbH v. Cont'l Auto. Sys., Inc.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017) (“[I]t has long been understood that ambiguous references do not, as a matter of law, anticipate a claim.”); *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1120 (Fed. Cir. 2002) (“A single reference must describe the claimed invention with sufficient precision and detail to establish that the subject matter existed in the prior art.”).

b) Limitation 1(c)

(1) 1(c): splitting or regrouping the multiple current outputs prior to delivery of the multiple current outputs to the set of light fixture loads;

Petitioner argues that a “POSITA would understand that the ballast assembly described in Leong functions as an LED driver which regulates power to the LEDs.” Pet. 14–15 (quoting Ex. 1005, 32:55–59, 32:60–33:7 (discussing Figure 4); Ex. 1002 ¶¶ 57–59). Petitioner also argues that a “POSITA would further understand that using the ballast assembly in the manner described in Leong to supply current to individual LED strings before providing power to the individual LEDs is equivalent to splitting or regrouping the multiple current outputs necessary to power the LEDs.” *Id.* at 15 (citing Ex. 1002 ¶¶ 58–59).

(2) Analysis

For this limitation, Petitioner relies Leong’s disclosure regarding Figure 4. *See* Ex. 1005, 29:45–47 (“Reference is now made to the drawings

and in particular to FIGS. 1-10 in which identical or similar parts are designated by the same reference numerals throughout.”), 31:46–33:18 (“FIG. 4 shows the total LED electrical circuitry for LED lamp 10.”).

The step of limitation 1(c) refers to the multiple current outputs from the step of limitation 1(b). As discussed above, Petitioner relies on Leong’s general discussion of a voltage surge absorber as performing the step of limitation 1(b). It is unclear from Petitioner’s arguments how the voltage surge absorber from Leong’s general disclosure would function in Leong’s Figure 4 configuration. We understand that “a reference can anticipate a claim even if it ‘d[oes] not expressly spell out’ all the limitations arranged or combined as in the claim, if a person of skill in the art, reading the reference, would ‘at once envisage’ the claimed arrangement or combination,” but Petitioner has provided no evidence or reasoning to persuade us that one of ordinary skill in the art would “at once envisage” the arrangement or combination. *Kennametal, Inc. v. Ingersoll Cutting Tool Co.*, 780 F.3d 1376, 1381 (Fed. Cir. 2015) (alteration in original) (quoting *In re Petering*, 301 F.2d 676, 681 (CCPA 1962)).

To support its limitation 1(c) argument, Petitioner relies on Mr. McAlexander’s testimony at paragraphs 57–59. These paragraphs of the declaration largely mirror the language of the Petition, with one citation to an article relied upon to provide a general description of ballasts and drivers (§ 58). These paragraphs, however, provide little basis for Mr. McAlexander’s opinion. Unsupported declarant testimony is entitled to little weight. *See* 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.”); *see also Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624,

Paper 9 at 15–17 (PTAB Aug. 24, 2022) (precedential) (finding that a declaration that “merely repeats, *verbatim*, the conclusory assertion for which it is offered to support” and provides no additional supporting evidence or technical reasoning “is conclusory and unsupported, adds little to the conclusory assertion for which it is offered to support, and is entitled to little weight”); *Upjohn Co. v. Mova Pharm. Corp.*, 225 F.3d 1306, 1311 (Fed. Cir. 2000) (“Lack of factual support for expert opinion going to factual determinations, however, may render the testimony of little probative value in a validity determination.”) (quoting *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 294 (Fed. Cir. 1985)); *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 138 (Fed. Cir. 1986) (“Although in some circumstances unsupported oral testimony can be sufficient to prove prior knowledge or use, it must be regarded with suspicion and subjected to close scrutiny.”).

c) Limitations 1(d), 1(e)

(1) 1(d): receiving a protocol from an external transmitter;

Petitioner argues that a “POSITA would understand that receiving a wireless data control signal using WiFi/802.11 or Bluetooth technology or receiving a data control signal from a direct hard-wire connection including DMX512, RS232, Ethernet, DALI, Lonworks, RDM, TCPIP, or CEBus Standard EIA-600, X10,” as in Leong, “is equivalent to receiving a protocol.” Pet. 15–16 (quoting Ex. 1005, 18:17–31; citing Ex. 1002 ¶¶ 60–61). Petitioner also argues that a “POSITA would understand that the data control signal must be from an external source in order to be received wirelessly or from a direct hard-wire connection.” *Id.* at 16 (citing Ex. 1002 ¶¶ 60–61).

(2) *1(e): converting the protocol into a data stream; and*

Petitioner argues that a “POSITA would understand that the data signals would need to be converted upon receipt from the external transmitter into a form usable by the LED controller/dimmer.” Pet. 16–17 (quoting Ex. 1005, 18:17–31, 99:26–31; citing Ex. 1002 ¶ 62). Petitioner also argues that a “POSITA would further understand that comparison of the sensor data signals received in accordance with a computer monitoring program and transmits computer signals to dimmers is analogous a converting into a data stream.” *Id.* (citing Ex. 1002 ¶ 62).

(3) *Analysis*

Here, Petitioner relies on portions of Leong taken from the general disclosure and from the Figure 76 description, without explaining how they are intended to be configured to anticipate the invention of claim 1. This calls into question whether Petitioner has met its burden to demonstrate that every element of claim 1 is demonstrated by the extensive and multi-embodiment disclosure of Leong, without the need for picking, choosing, and combining different elements from different embodiments. *See generally* Ex. 1005 (disclosure of Leong, having 86 figures with multiple sub-parts, 124 columns, 43 claims, and 179 pages); *see also In re Arkley*, 455 F.2d 586, 587 (CCPA 1972) (an anticipating reference “must clearly and unequivocally disclose the claimed compound or direct those skilled in the art to the compound without *any* need for picking, choosing, and combining various disclosures not directly related to each other by the teachings of the cited reference”).

Throughout its claim 1 arguments, Petitioner relies on different portions of Leong to argue that Leong meets every limitation of claim 1.

See, e.g., 1(p) (general disclosure); 1(a) (general disclosure); 1(b) (general disclosure); 1(c) (Figure 4); 1(d) (general disclosure); 1(e) (general disclosure, Figure 76); 1(f) (Figure 73A, Figure 76); 1(g) (Figure 73A, Figure 76).

Leong, however, expressly states that different figures relate to different embodiments. More particularly, Leong states that Figure 4, Figure 73A, and Figure 76 relate to different embodiments. *See e.g.*, Ex. 1005, 29:45–47 (“Reference is now made to the drawings and in particular to FIGS. 1-10 in which identical of similar parts are designated by the same reference numerals throughout.”), 31:46–33:18 (“FIG. 4 shows the total LED electrical circuitry for LED lamp 10.”), 90:43–47 (“FIGS. 73, 73A, 74, 74A, 74B, 75, 75A, 75B, 75C, 76, 76A, 77, 78, 78A, 79A, and 79B show various embodiments and details of the present invention.”), 90:59 (“Figure 73 shows an embodiment of the present invention.”), 91:39 (“Figure 73A shows another embodiment of the present invention.”), 98:40 (“Figure 76 shows another embodiment of the present invention.”).

Accordingly, for these limitations 1(e), 1(d), and the additional limitations identified above, Petitioner’s unexplained reliance on multiple embodiments does not support its contentions of anticipation of claim 1 by Leong.

d) Limitations 1(f), 1(g)

(1) 1(f): translating the data stream to LED control information;

Petitioner argues that a POSITA “would understand that the data signals would need to be converted into a form usable by the dimmer” and “would further understand that using the dimmer to decode the data control

signals sent by computer 894 and to provide the proper current drive power required to operate LED array 884 is analogous to converting data streams to LED control information.” Pet. 18–19 (quoting Ex. 1005, 91:56–67; 99:26–41; citing Ex. 1002 ¶¶ 62–63).

(2) *1(g): wherein the LED control information is used for controlling the limited power.*

Petitioner argues that a “POSITA would understand from Leong’s disclosure of using a computer program to control the current output of dimmers 1102A and 1102B in order to prevent flickering of LED lamps 1086A and 1086B is equivalent to using the LED control information to limit power.” Pet. 20–21 (quoting Ex. 1005, 91:56–67, 99:26–41; citing Ex. 1002 ¶ 64)).

(3) *Analysis*

In its arguments for limitations 1(f) and 1(g), Petitioner relies on disclosures from different embodiments of Leong, namely, the embodiments depicted in Figures 73A and 76. As explained above, we are unpersuaded that this reliance on different embodiments satisfies Petitioner’s burden to demonstrate a reasonable likelihood of prevailing on its anticipation challenge to claim 1.

Additionally, in its arguments for limitations 1(f) and 1(g), Petitioner relies on declarant testimony for support, namely, Exhibit 1002, paragraphs 62–64. This testimony does not provide any explanation of how the different embodiments of Leong demonstrate anticipation of “translating the data stream to LED control information; wherein the LED control information is used for controlling the limited power.” We afford little weight to Mr. McAlexander’s verbatim testimony, because he does not

provide any basis for his opinion, nor does he provide any evidence in support of his opinion. *See* 37 C.F.R. § 42.65(a); *see also Xerox Corp.*, Paper 9 at 15–17.

3. *Petitioner’s Arguments – Claim 11*

Independent claim 11, the only other independent claim in the ’093 patent, is also a method claim. It differs only minimally from claim 1. Specifically, 1(p)–1(c) are identical to 11(p)–11(c), 1(f) is identical to 11(e), and 1(g) is identical to 11(f). Petitioner’s arguments for those identical claim 11 limitations are essentially identical to the arguments for their claim 1 counterparts. *Compare* Pet. 10–21 *with* Pet. 26–35. One difference between claims 1 and 11 lies in 11(d), which instead of reciting “receiving a protocol from an external transmitter” as in claim 1(d), recites “receiving a data stream from an external transmitter.” Additionally, the step of “converting the protocol into a data stream” as in claim 1(e) is omitted in claim 11. The shortcomings we have identified in Petitioner’s 1(p)–1(d), 1(f), and 1(g) arguments are the same as those present in Petitioner’s 11(p)–11(f) arguments.

4. *Conclusion*

We have considered the arguments and evidence presented by Petitioner, and are not persuaded that Petitioner has demonstrated a reasonable likelihood that independent claim 1 or 11 is anticipated by Leong. We also have considered Petitioner’s arguments and evidence as to dependent claims 2, 9, 10, 12, 13, 19, and 20, all of which depend directly from claim 1 or claim 11, and are not persuaded that Petitioner’s arguments for those claims overcome the deficiencies in Petitioner’s arguments for claim 1 or claim 11. For the foregoing reasons, Petitioner has not

established a reasonable likelihood of prevailing in showing anticipation of claims 1, 2, 9–13, 19, and 20 by Leong.

E. Asserted Obviousness based on Leong and Lee (Ground 2)

Petitioner argues that claims 5–7 and 15–17 would have been obvious in view of Leong and Lee. Pet. 41–50.

For claims 5–7 and 15–17, Petitioner relies on many of the same arguments and evidence for its obviousness grounds as it presents for its anticipation ground. *See, e.g.*, Pet. 41. For example, Petitioner asserts, referring back to its anticipation argument: “Leong anticipates independent claims 1 and 11 for the reasons discussed above and incorporated herein. *Supra* Sections IX.A.1, 5.” *Id.*; *see also id.* (discussing claim 5: “Leong anticipates claim 1 for the reasons discussed above and incorporated herein. *Supra* Section IX.A.1.”), 45 (discussing claim 15: “Leong anticipates claim 11 for the reasons discussed above and incorporated herein. *Supra* Section IX.A.5.”).

Petitioner’s obviousness ground does not cure the deficiency in Petitioner’s argument and evidence about whether Leong discloses every element of claims 1 and 11. Here, in its obviousness ground, Petitioner relies on the same reasoning as it presents for anticipation and has not provided any argument or evidence as to why Leong might disclose or suggest the limitations of claims 1 and 11 under an obviousness standard. Nor does Petitioner’s reliance on Lee present any reasoning as to why Lee might disclose or suggest the limitations of claims 1 and 11 under an obviousness standard. On this record, Petitioner’s obviousness arguments fail to meet Petitioner’s burden of demonstrating that the prior art discloses or suggests every element of the challenged claims. For the foregoing

reasons, Petitioner has not established a reasonable likelihood of prevailing in showing obviousness of claims 5–7 and 15–17 over Leong and Lee.

III. CONCLUSION

We have considered the Petition and the evidence relied upon by Petitioner and, for the foregoing reasons, determine that Petitioner has not established a reasonable likelihood of prevailing in challenging claims 1, 2, 5–7, 9–13, 15–17, 19, and 20 of the '093 patent.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that the Petition is *denied* and no *inter partes* review is instituted.

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Patent 9,320,093 B2

FOR PETITIONER:

Winston Huff
MUNSCH HARDT KOPF & HARR, P.C.
whuff@munsch.com

FOR PATENT OWNER:

Melanie Reichenberger
Kevin Moran
MICHAEL BEST & FRIEDRICH LLP
mjreichenberger@michaelbest.com
kpmoran@michaelbest.com