UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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CURRENT LIGHTING SOLUTIONS, LLC
D/B/A GE CURRENT

Petitioner,

v.

JIAXING SUPER LIGHTING ELECTRIC APPLIANCE CO., LTD.

Patent Owner.

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Case No. IPR2023-00270

Patent No. 9,723,662

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**PATENT OWNER'S PRELIMINARY RESPONSE**

## Table of Contents

Exhibit List ..... ii
I. Introduction ..... 1
II. The '662 Patent ..... 2
III. PETITIONER HAS NOT ESTABLISHED A REASONABLE LIKELIHOOD OF PROVING ANY CHALLENGED CLAIM IS INVALID. ..... 4
A. Ground 1 Fails Because Petitioner Has Not Shown that Zhang Teaches or Suggests All of the Features of Independent Claims 1, 17, 21, 23, 41, and 42 ..... 4
B. Ground 2 Fails Because Petitioner Has Not Shown that Tao Teaches or Suggests All of the Features of Independent Claims 1, 21, 23, 41, and 42 ..... 16
C. Ground 3 Fails Because a POSITA Would Not be Motivated to Combine Tao and Langovsky as Proposed by Petitioner. ..... 21
IV. The Board Should Deny Institution Under 35 U.S.C. § 325(d) / *Advanced Bionics* ..... 26
V. The Board Should Deny Institution Under 35 U.S.C. § 314(a) ..... 28
A. Discretionary Denial Is Appropriate Under *Fintiv* Given the Co-Pending District Court Litigation ..... 28
B. Discretionary Denial is Also Appropriate Under *General Plastic* Given the Previously-Filed MaxLite IPR. ..... 34
VI. Conclusion ..... 39

## EXHIBIT LIST

| Exhibit | Description |
|---|---|
| Ex. 2003 | Case Docket for *Jiaxing Super Lighting Electric Appliance Co., Ltd. and Obert, Inc. v. Current Lighting Solutions, LLC*, Case No. 6:22-CV-00534-ADA-DTG (W.D. Tex.) |
| Ex. 2004 | Scheduling Order in *Jiaxing Super Lighting Electric Appliance Co., Ltd. and Obert, Inc. v. Current Lighting Solutions, LLC*, Case No. 6:22-CV-00534-ADA-DTG (W.D. Tex.) |
| Ex. 2005 | Defendant Current Lighting Solutions, LLC d/b/a GE Current's Preliminary Invalidity Contentions in *Jiaxing Super Lighting Electric Appliance Co., Ltd. and Obert, Inc. v. Current Lighting Solutions, LLC*, Case No. 6:22-CV-00534-ADA-DTG (W.D. Tex.) |
| Ex. 2006 | Amended Certification and Notice of Interested Parties for *Jiaxing Super Lighting Electric Appliance Co., Ltd. and Obert, Inc. v. MaxLite, Inc.*, Case No. 2:19-cv-04047-PSG-MAA (C.D. Cal.) |
| Ex. 2007 | Defendants CH Lighting Technology Co., Ltd. and Shaoxing Ruising Lighting Co., Ltd.'s Corporate Disclosure Statement in *Jiaxing Super Lighting Electric Appliance Co., Ltd. and Obert, Inc. v. CH Lighting Technology Co., Ltd. Elliott Electric Supply, Inc. and Shaoxing Ruising Lighting Co. Ltd.*, Case No. 6:20-CV-00018-ADA (W.D. Tex.) |
| Ex. 2008 | [redacted] |
| Ex. 2009 | Order of Final Judgment in *Jiaxing Super Lighting Electric Appliance Co., Ltd. and Obert, Inc. v. CH Lighting Technology Co., Ltd. Elliott Electric Supply, Inc. and Shaoxing Ruising Lighting Co. Ltd.*, Case No. 6:20-CV-00018-ADA (W.D. Tex.) |

# I. INTRODUCTION

Current's Petition tries to recycle the primary invalidity ground from the failed MaxLite petition by presenting it as an obviousness argument rather than an anticipation argument. But a person of ordinary skill in the art ("POSITA") would not have modified Zhang in the way Petitioner proposes. The grounds based on Tao fare no better because the Petition fails to show that Tao's filter capacitors limit a current from the filament simulating circuit and fails to show that any of Tao's capacitors smooth the current from the first rectifier.

The Petition should also be denied for a host of other reasons. The *Advanced Bionics* framework favors denial under § 325(d) because Petitioner fails to show the Board made any "material error" in rejecting the MaxLite petition based on the very same Zhang prior art. The *Fintiv* factors favor denial under § 314(a) given the co-pending district court case that is set to go to trial several months before a final written decision would issue. The *General Plastic* factors also favor denial under § 314(a) given the present Petition used the Board's rejection of the MaxLite petition as a roadmap.

## II. THE '662 PATENT

The '662 Patent, titled "Power Source Module for LED Lamp" issued on Aug. 1, 2017 from a continuation application of an earlier-filed application filed on April 29, 2015.

The '662 Patent describes "a power source module for an LED lamp for use in a fluorescent lamp base including a ballast." Ex. 1001 ("'662 Patent") at 2:12-14. The patent explains that a starter and ballast are used to drive traditional fluorescent lamps. *Id.* at 1:30-31; *id.* at 1:31-38 ("The starter is used for heating filaments in the fluorescent lamp and raising a voltage between the two terminals of the fluorescent lamp, so as to ignite the fluorescent lamp to light. The traditional fluorescent lamp has a negative incremental impedance characteristic, so that it needs the ballast to limit the amount of the current for preventing the fluorescent lamp from damage.").

Figure 1 of the '662 Patent shows a "block diagram illustrating a power source module for an LED lamp according to an embodiment of the invention." *Id.* at 2:62-64.

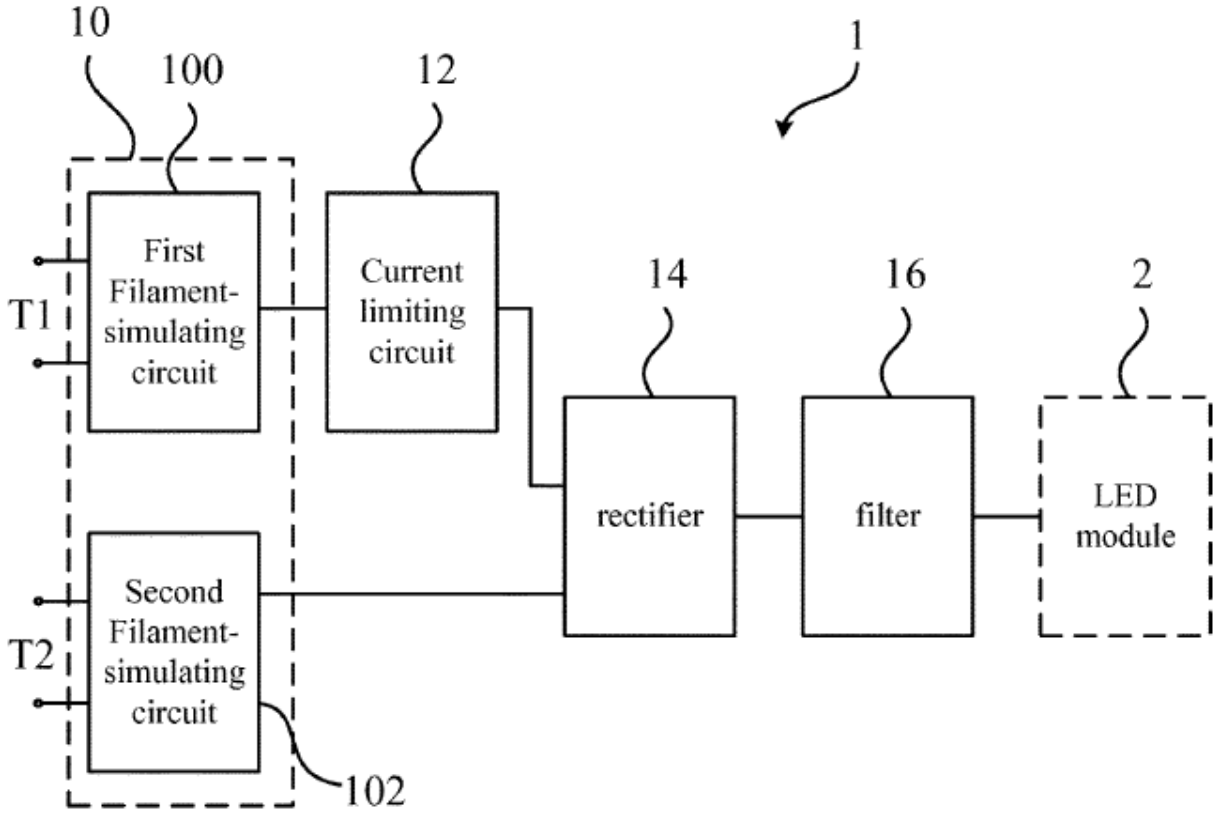



FIG. 1

*Id.* at Fig. 1. "The power source module 1 may be configured inside a casing of the LED lamp to connect an LED module 2 of the LED lamp to terminals of the LED lamp." *Id.* at 3:9-13.

Ballasts in traditional fluorescent lamp bases may execute a pre-heat process to heat the filaments of the traditional fluorescent lamp. *Id.* at 3:55-57. "The filament-simulating unit 10 can simulate a filament of the traditional fluorescent lamp, so as to prevent the ballast from erroneously judging the

filaments are open-circuited or short-circuited during the preheating process of the ballast." *Id.* at 3:57-60; *see also id.* at 3:32-54.

"The current limiting circuit 12 is … used for limiting the current from the first bi-pin terminal T1 to be in a suitable range for driving the LED module 2." *Id.* at 3:41-45. "The rectifier 14 is used for rectifying the current from the bi-pin terminals T1, T2. The current inputted from the external power source is an alternating current, and the rectifier 14 rectifies the alternating current to be a direct current." *Id.* at 3:47-51. "The filter 16 is electrically connected to the rectifier 14 for filtering the rectified current and outputting the filtered current to the LED module 2." *Id.* at 3:51-54.

## III. PETITIONER HAS NOT ESTABLISHED A REASONABLE LIKELIHOOD OF PROVING ANY CHALLENGED CLAIM IS INVALID.

### A. Ground 1 Fails Because Petitioner Has Not Shown that Zhang Teaches or Suggests All of the Features of Independent Claims 1, 17, 21, 23, 41, and 42.

#### 1. Petitioner Fails to Show That a POSITA Would Have Been Motivated to Combine Zhang's Two Disparate Embodiments.

Zhang does not render the claims of the '662 patent obvious for at least three reasons. First, a POSITA would not be motivated to combine two disparate embodiments of Zhang to obtain Petitioner's modified lighting apparatus because the modified lighting apparatus is unsatisfactory for Zhang's intended purpose

which is to provide redundancy. In Ground 1, Petitioner modifies Zhang's disclosure by cutting Zhang's temperature-varying filament-imitating impedance from one embodiment (shown as 1400 in FIG. 14 below) and pasting it in Zhang's lighting apparatus from another embodiment (shown as 1800 in annotated FIG. 18A below). Petition at 20-22. Thus, Petitioner creates a ***modified lighting apparatus 1800'*** (reproduced below) where the two original filament-imitating impedances 1820a, 1820b in FIG. 18A are replaced with the temperature-varying filament imitating impedance 1400. *Id*. at 21-22. However, as explained below, a POSITA would not have been motivated to combine Zhang's disparate embodiments because Petitioner's modified lighting apparatus 1800' renders it unsatisfactory for its intended purpose which is to ***provide redundancy in its circuits***. *See* MPEP 2143.01(V) ("[i]f a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification.").

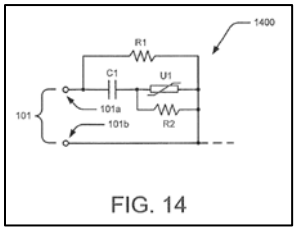



FIG. 14

FIG. 14 from Zhang

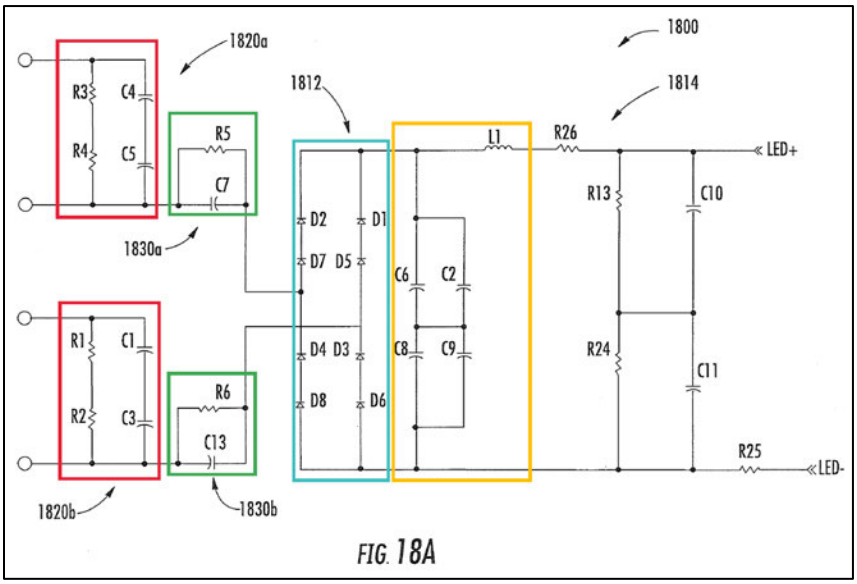
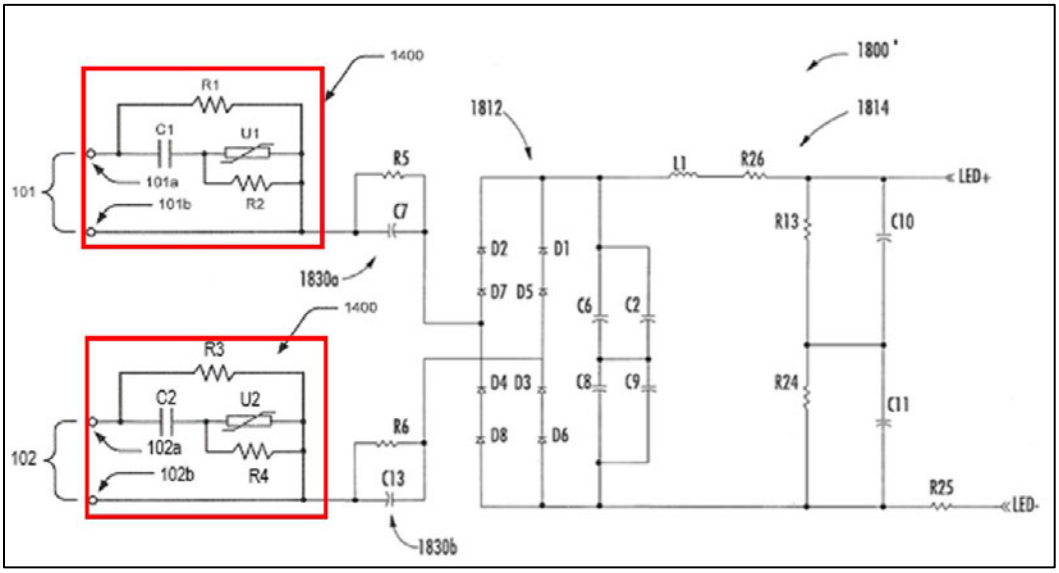



FIG. 18A

Annotated FIG. 18A from Zhang




Petitioner's Modified Lighting Apparatus 1800'

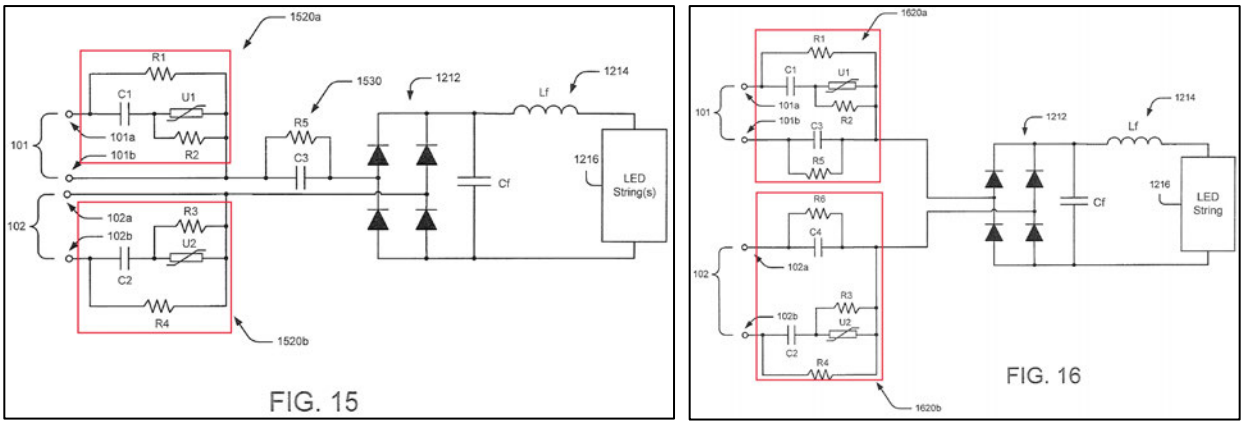
Zhang explicitly states that the intended purpose of filament-imitating impedances 1820a, 1820b in Zhang's unmodified lighting apparatus 1800 is to ***provide redundancy***, but this purpose ***cannot be achieved*** by the temperature-varying filament-imitating impedances 1400 in Petitioner's modified apparatus

1800'. According to Zhang, the filament-imitating impedances 1820a, 1820b in Zhang's unmodified lighting apparatus 1800 "are [] ***configured to provide component redundancy by using serially-connected components in each of the circuit branches***." Ex. 1004 ("Zhang") at 9:19-21 (emphasis added). Zhang provides an example of this specifically designed redundancy by stating that "if the capacitor C4 shorts, the capacitor C5 may still provide a suitable filament-impedance imitating function to ***maintain acceptable operation of the apparatus 1800***." *Id*. at 9:21-24 (emphasis added). Thus, the filament-imitating impedances 1820a, 1820b are designed to provide redundancies. By contrast, the temperature-varying filament-imitating impedances 1400 in Petitioner's modified apparatus 1800' ***cannot provide redundancy***. For instance, each temperature-varying filament-imitating impedance 1400 includes a single capacitor (e.g., C1) that cannot provide serial redundancy by itself. In other words, if capacitor C1 shorts in the temperature-varying filament-imitating impedance 1400, then one end of C1 will short with the other end of C1 so that the circuit cannot provide a capacitance that would have been provided by C1. By contrast, in Zhang's unmodified lighting apparatus 1800, Zhang states that "if the capacitor C4 shorts, the ***capacitor C5 may still provide a suitable filament-impedance imitating function to maintain acceptable operation of the apparatus 1800***." *Id.* (emphasis added). Other circuits in Zhang's unmodified lighting apparatus 1800

are also specifically designed with redundancies. For example, Zhang's blocking impedances 1830a, 1830b "also provide redundancy" because "if one of the capacitors C7, C13 fails, low-frequency blocking may still be provided by the other capacitor." *Id*. at 9:33-36 (emphasis added). Similarly, Zhang's rectifier circuit 1812 includes a diode bridge (D1-D8) that "is configured to provide redundancy by including respective serially-connected diode pairs." *Id*. at 9:10-13 (emphasis added). Finally, Zhang's matching circuit 1814 includes "capacitors C2, C6, C8, C2 [that] are configured to provide serial redundancy, so the matching circuit 1814 may continue to operate in an acceptable manner if one the capacitors C2, C6, C8, C2 shorts out." *Id*. at 9:52-56 (emphasis added). Thus, Petitioner's modified lighting apparatus 1800' would ***render it unsatisfactory for its intended purpose which is to provide redundancy in its circuits***. *See* MPEP 2143.01(V) ("[t]he proposed modification cannot render the prior art unsatisfactory for its intended purpose.").

A second reason why a POSITA would not be motivated to cut and paste circuits from two disparate embodiments is that Zhang teaches how to implement the temperature-varying filament imitating impedance of FIG. 14 in two specific circuits and in no other embodiments. Zhang describes the lighting apparatuses of FIGS. 15-16 (reproduced below) by referring to the temperature-varying filament-imitating impedance of FIG. 14. Specifically, Zhang states that "FIG. 15 illustrates

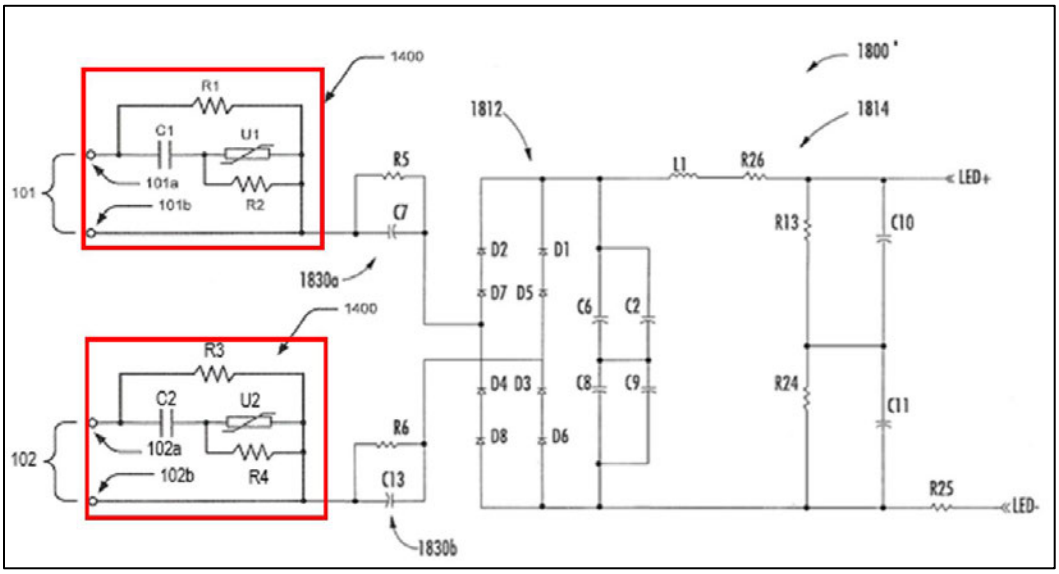
use of ***such a filament-imitating impedance*** in a lighting apparatus 1500," and that "FIG. 16 illustrates another use of ***a temperature-varying filament-imitating impedance*** in a lighting apparatus 1600." *See* Zhang at 8:16-26, 8:37-38 (emphasis added). In FIG. 15, each of Zhang's temperature-varying filament imitating impedances 1520a-1520b is connected to two terminals (e.g., 101a-101b) with a blocking circuit 1530 connected to one of the two temperature-varying filament imitating impedances 1520a-1520b. *Id*. at FIG. 15. And, in FIG. 16, each of Zhang's temperature-varying filament imitating impedances 1620a-1620b which includes an additional resistor (e.g., R5) and an additional capacitor (e.g., C3) is connected to two terminals 101a-101b or 102a-102b. *Id*. at FIG. 16. Notably, Zhang does not teach that its temperature-varying filament imitating impedance of FIG. 14 can be implemented in ***any of other embodiments*** in Zhang. In other words, a POSITA would not be motivated to "mix-and-match" the temperature-varying filament imitating impedance of FIG. 14 with any of Zhang's other disparate embodiments because Zhang has already provided an exact implementation for the temperature-varying filament imitating impedance in FIGS. 15-16.




Annotated FIGS. 15-16 from Zhang

A POSITA would not be motivated to combine Zhang's disparate embodiments as proposed by Petitioner because the modified lighting apparatus 1800' (reproduced below) changes the schematics of the two lighting apparatuses of FIGS. 15-16 in a manner not taught by Zhang. For instance, Petitioner's modified lighting apparatus 1800' differs from Zhang's implementation in FIG. 15 by connecting each temperature-varying filament imitating impedance 1400 to a blocking impedance (e.g., 1830a or 1830b). And, Petitioner's modified lighting apparatus 1800' differs from Zhang's implementation in FIG. 16 by connecting the temperature-varying filament imitating impedances 1400 in series with the blocking impedances 1830a, 1830b, whereas FIG. 16 shows temperature-varying filament imitating impedances 1620a, 1620b in parallel with the resistor-capacitor (e.g., R5, C3 or R6, C4) elements. Thus, a POSITA would not be motivated to combine the temperature-varying filament imitating impedance of FIG. 14 with the lighting apparatus of FIG. 18A contrary to two lighting apparatus schematics that

explicitly show how to implement the temperature-varying filament imitating impedance of FIG. 14.

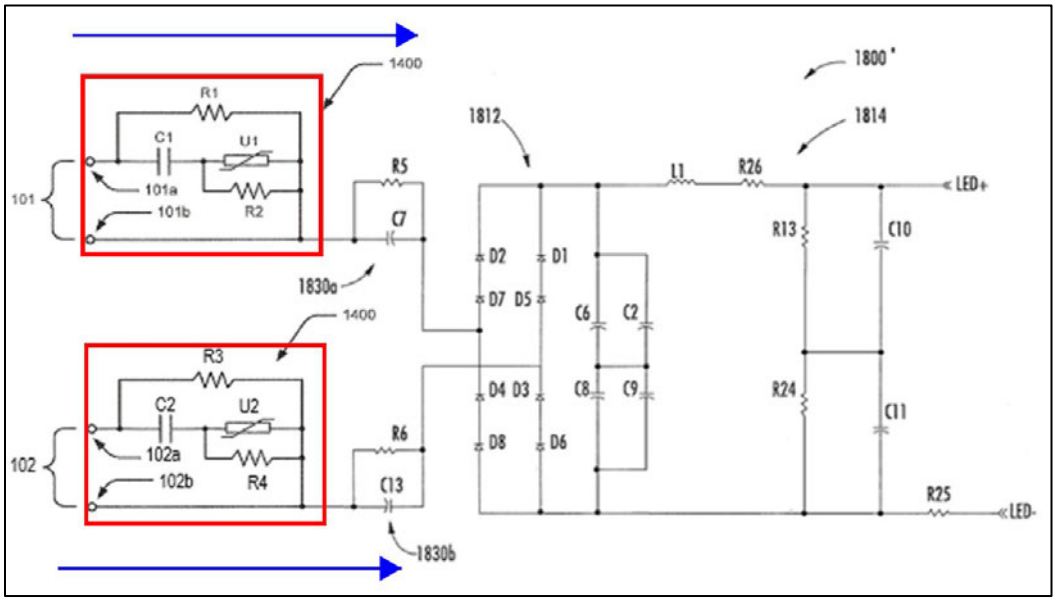



Petitioner's Modified Lighting Apparatus 1800'

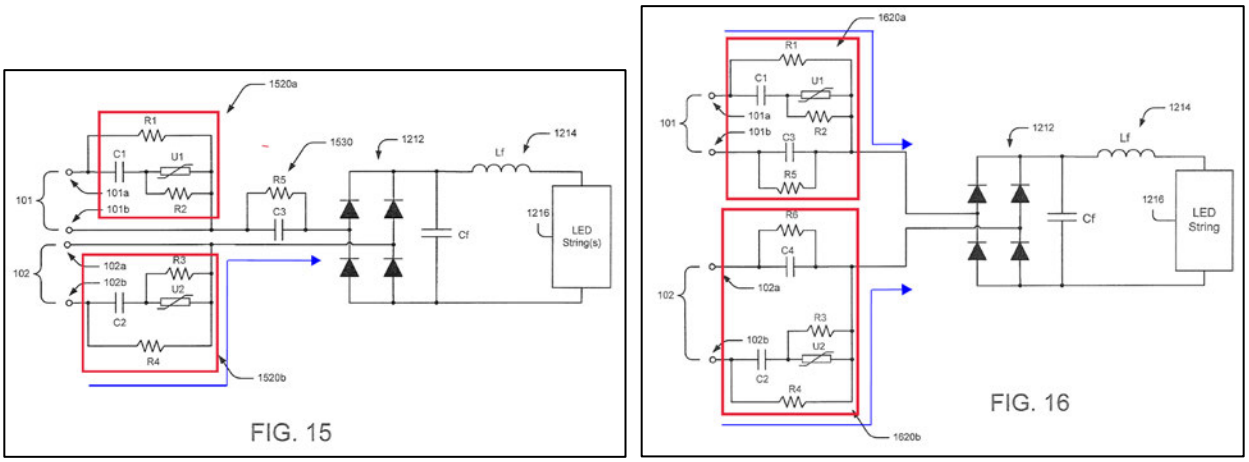
Finally, a third reason why a POSITA would not have been motivated to combine Zhang's disparate embodiments is that the modified lighting apparatus 1800' would generate more heat than Zhang's lighting apparatuses in FIGS. 15-16. As shown below, the modified lighting apparatus 1800' includes two temperature-varying filament imitating impedances 1400, and both of which are ***in series with*** the blocking impedances 1830a, 1830b so that current would have to flow through both impedances 1400 and 1830b, and through impedances 1400 and 1830b (as indicated in blue arrow). This would generate more heat unlike in Zhang's lighting apparatuses in FIGS. 15 and 16. In FIG. 15, only one blocking impedance 1530 is connected to one temperature-varying filament imitating

impedances 1520a so that temperature-varying filament imitating impedances 1520b is not connected in series to another blocking impedance. Thus, as shown in blue arrow in the annotated FIG. 15 of Zhang below, the current flowing through temperature-varying filament imitating impedances 1520b does not flow through another blocking impedance. In FIG. 16, the temperature-varying filament imitating impedances 1620a, 1620b are in parallel with the resistor-capacitor (e.g., R5, C3 or R6, C4) elements so that there are no extra blocking impedances connected in series to the impedances 1620a, 1620b. This means that the current does not have to flow additional blocking impedances after having flown through the temperature-varying filament imitating impedances 1620a, 1620b as shown in blue arrow in the annotated FIG. 16 of Zhang below. Thus, Petitioner's modified lighting apparatus 1800' would generate more heat compared to Zhang's lighting apparatuses in FIGS. 15-16, which indicates that Petitioner is using hindsight to modify Zhang's disclosures in hopes of invalidating claims of the '662 Patent. However, a POSITA would not have done so because Zhang already describes two embodiments in FIGS. 15-16 where the temperature-varying filament imitating impedance is implemented. Petitioner contends that a POSITA would have combined disparate embodiments to obtain the modified lighting apparatus 1800' because Zhang teaches that temperature-varying filament-imitating impedance accommodate filament tests performed by

ballasts. *See* Petition at 22-23. But once again, a POSITA would have realized that Zhang's FIGS. 15-16 already provides implementations for the temperature-varying filament-imitating impedance so that the lighting apparatuses of FIGS. 15-16 are designed to accommodate filament tests performed by ballasts.




Annotated Petitioner's Modified Lighting Apparatus 1800'




Annotated FIGS. 15-16 from Zhang

Thus, Zhang does not render the claims of the '662 patent obvious because a POSITA would not have combined Zhang's two disparate embodiments as proposed by Petitioner.

**2. Petitioner Fails to Show That Zhang Discloses a Filamenta-Simulating Circuit that Allows a Current to Flow From One Pin to the Other As Required by Independent Claims 1, 23, 41, and 42.**

Element 1[a] of independent claim 1 recites:

> a filament-simulating circuit electrically connected to a first bi-pin terminal and a second bi-pin terminal of the LED lamp, each of the first bi-pin terminal and the second bi-pin terminal ***configured to allow a current to flow from one pin to the other pin*** via the filament-simulating circuit during a pre-heat process executed by a ballast;

(emphasis added). Elements 23[d], 41[d], and 42[d] of independent claims 23, 41, and 42 similarly recite current flow from one pin to the other during a pre-heat process.

Petitioner points to Zhang's disclosure that the connected ballast "perform[s] filament tests in which a filament is tested by measuring a 'cold' impedance of the filament before energizing, and then testing the filament impedance after the filament has been energized and heated up." Pet. at 27

(quoting Zhang at 8:9-13). But neither this disclosure nor any other in Zhang states that current flows from one pin to the other during this process.

Recognizing Zhang fails to actually disclose the required feature, Petitioner makes the conclusory assertion that "a POSITA would have recognized that measuring impedances and energizing and heating up a filament—or a 'filament-imitating impedance' (Zhang at 8:8-9)—requires a current to flow from one pin 101a to the other pin 101b and also from one pin 102a to the other pin 102b." Pet. at 28. Petitioner cites to Dr. Baker's declaration which makes the same conclusory assertion. *Id.* (citing Ex. 1002 ("Baker") ¶ 61). The only support Petitioner and Dr. Baker provide for this assertion is a patent (Ex. 1042) which Petitioner opted not to include as part of the proposed invalidity ground. This is a transparent and improper attempt to supplement the disclosure of Zhang with a secondary reference without demonstrating any motivation to combine. *See, e.g.*, *Helmerich & Payne Int'l Drilling Co. v. Nabors Drilling Techs. Usa, Inc.*, IPR2021-00671, Paper 12 at 19 (PTAB Oct. 1, 2021) ("Even if we were inclined to accept the alleged knowledge of the ordinary artisan to fill gaps left by the references listed in Petitioner's ground, we would be looking for evidence that a concept was well known in the art, not merely 'known' in a single reference.").

Petitioner also states that "a POSITA would have further recognized that the only path from one pin 101a to the other pin 101b in apparatus 1800' is

through the top filament-imitating impedance 1400." Again, Dr. Baker makes the same conclusory assertion in his declaration. Baker ¶ 61. These assertions are incorrect, however. Based on Petitioner's mockup figure (*see* Pet. at 22), current could flow from pin 101a to 101b or to the first blocking impedance 1830. Neither Petitioner not its expert address first blocking impedance 1830 or why the current would not flow from pin 101a to the first blocking impedance.

Accordingly, Petitioner has failed to show that Zhang teaches of suggests elements 1[a], 23[d], 41[d], and 42[d] of independent claims 1, 23, 41, and 42. For at least this reason, Petitioner has not shown that claims 1, 23, 41 and 42 are obvious based on Ground 1. For at least this reason, the challenged dependent claims depending from claims 1, 23, 41, and 42 have also not been shown to have been obvious based on Ground 1.

### B. Ground 2 Fails Because Petitioner Has Not Shown that Tao Teaches or Suggests All of the Features of Independent Claims 1, 21, 23, 41, and 42

#### 1. Petitioner Fails to Show that Tao's Filter Capacitors Limit Current as Recited in Independent Claims 1, 21, 23, 41, and 42.

Petitioner fails to show that Tao's filter capacitors limit current as recited in independent claims 1, 21, 23, 41, and 42. In FIG. 4 of Tao (reproduced below), Tao describes a light apparatus 60 that includes input terminals 18, 20 connected to node 46 via "filter capacitors 72, 74" and that the "filter capacitors 72, 74" are

connected to two resistors 84, 86. Ex. 1005 ("Tao") at [0053]. While Tao describes capacitors 72, 74 as filter capacitors that are redundant (*see id.* at [0048]), Tao fails to describe any other function or operation performed by the filter capacitors 72, 74. Thus, Tao does not teach that the filter capacitors 72, 74 limit current. Tao also does not describe the capacitance values of the capacitors 72, 74. Despite this lack of evidence, Petitioner contends that filter capacitors 72, 74 could have limited current by making an assumption not supported by Tao as further explained below.

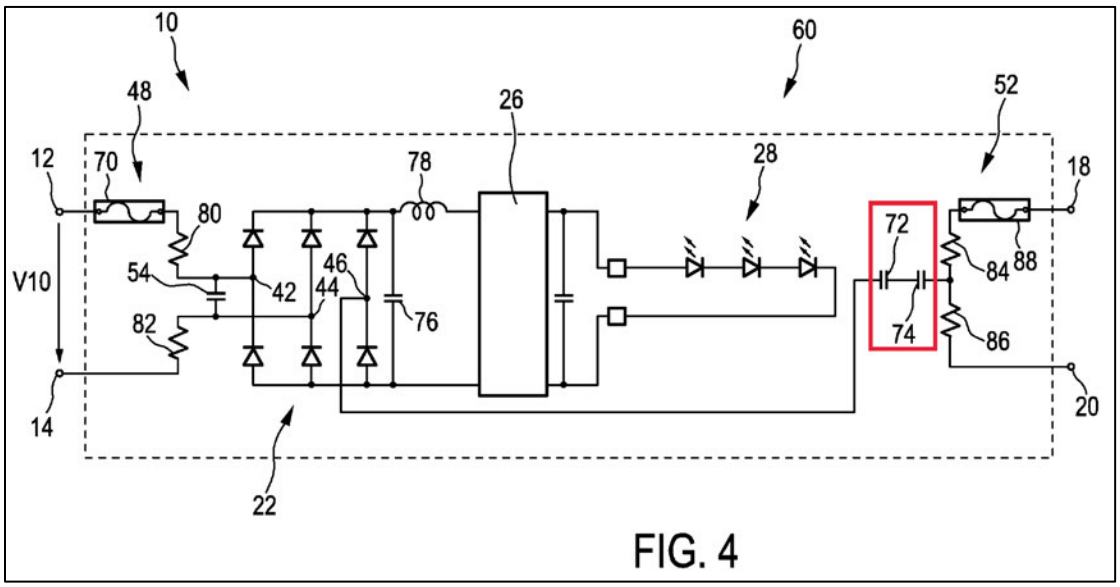



FIG. 4

Annotated FIG. 4 from Tao

Petitioner assumes that the total capacitance value of the filter capacitors 72, 74 from the embodiment related to FIG. 4 is the same as the capacitance values mentioned for filter capacitor 50 from another embodiment related to FIG. 1 of Tao (reproduced below). Petition at 60-61. Tao teaches that the filter

capacitor 50 has a capacity of 0.5 nF to 10 nF. Tao at [0037]. Thus, Petitioner seems to contend that a POSITA would have been motivated to select 0.5 nF -10 nF as the total capacitance of filter capacitors 72 and 74 because Tao describes capacitors 50, 72, and 74 as "filter" capacitors. Petition at 61. However, Tao nowhere teaches or suggests that the total capacitance of filter capacitors 72, 74 of one embodiment in FIG. 4 is the same as the capacitance of filter capacitor 50 of another embodiment FIG. 1. Furthermore, Tao fails to teach that elements in two different embodiments have the same values when those elements perform the same function. While Petitioner calculates the impedance of filter capacitors 72,74 using capacitance values of filter capacitor 50 (Petition at 61), Petitioner has not shown how the impedance of the filter capacitors 72, 74 makes it a current limiting circuit. Thus, Petitioner has failed to show that the filter capacitors 72, 74 limit current as recited in independent claims 1, 21, 23, 41, and 42.

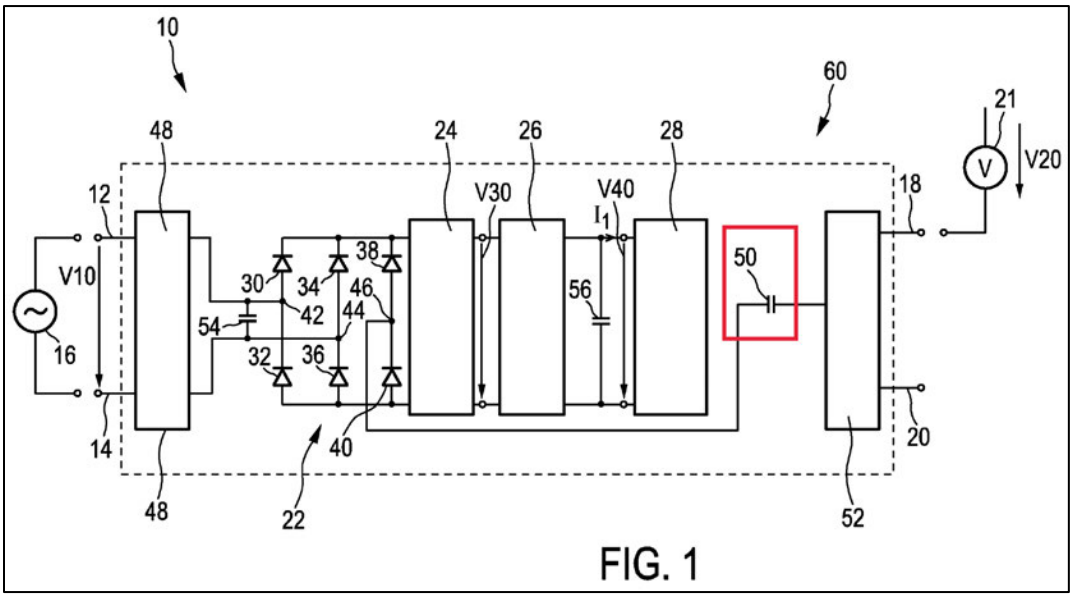


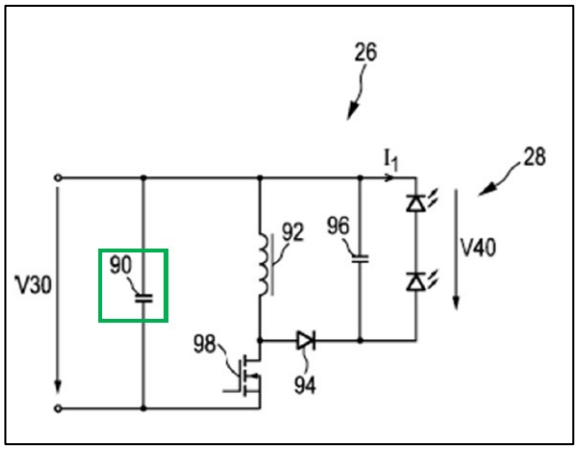

FIG. 1

Annotated FIG. 1 from Tao

**2. Petitioner Fails to Show that Tao's Capacitor Smooths Current from the First Rectifier as Recited in Independent Claims 1, 17, 21, 23, 41, and 42.**

Petitioner contends that Tao teaches a filter configured to smooth the current from a first rectifier by citing to ***different capacitors from Tao in three different alternatives***. Petition at 77-83. In one of the alternatives, Petitioner cites to Tao's capacitor 90 in FIG. 5 (reproduced below). However, Petitioner fails to show that Tao's capacitor 90 is configured to smooth the current from the first rectifier. Tao's capacitor 90 is located in driver stage 26 which is shown in FIG. 4 of Tao (reproduced below). Tao at [0055]. But Tao provides no description to explain the operation of capacitor 90. Despite this, Petitioner contends that a "POSITA would have understood that input capacitor 90 comprises a filter that is configured to smooth the current from the third rectifier

path." Petition at 69-70. Petitioner cites to another patent (U.S. Patent No. 6,703,795) to state that a filter capacitor "***remove[s] ripple voltages***." Petition at 69. However, Petitioner does not explain how a description of ***removing ripple voltage*** would allegedly ***smooth current*** from a rectifier. Furthermore, Petitioner fails to show that the circuit comprising the filter capacitor from U.S. Patent No. 6,703,795 is the same as the circuit of FIG. 4 of Tao that includes the capacitor 90 with inductor 78, capacitor 76 and diodes. Thus, Petitioner fails to prove that the input capacitor 90 of Tao would smooth current from the first rectifier as recited in independent claims 1, 21, 23, 41, and 42.




Petitioner's Annotated FIG. 5 from Tao

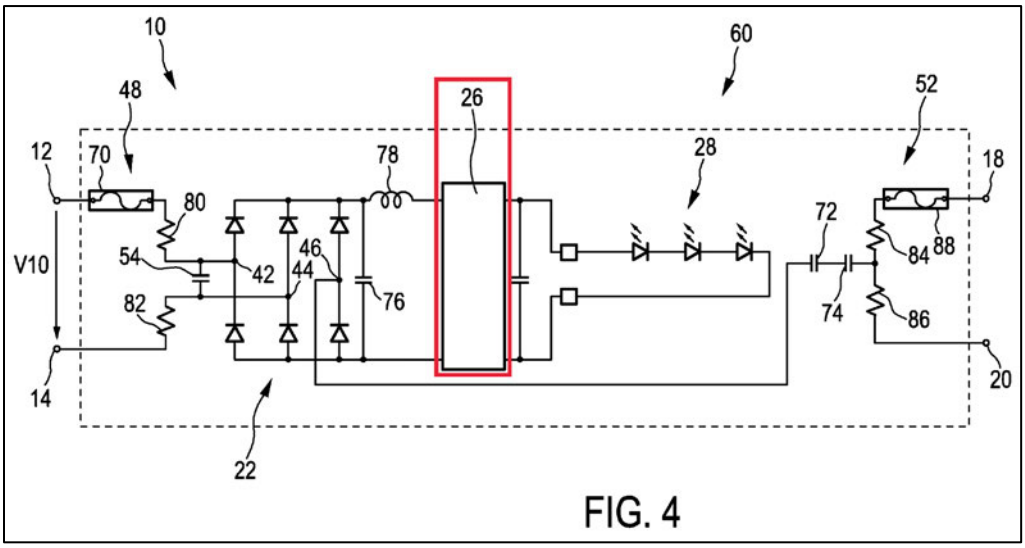


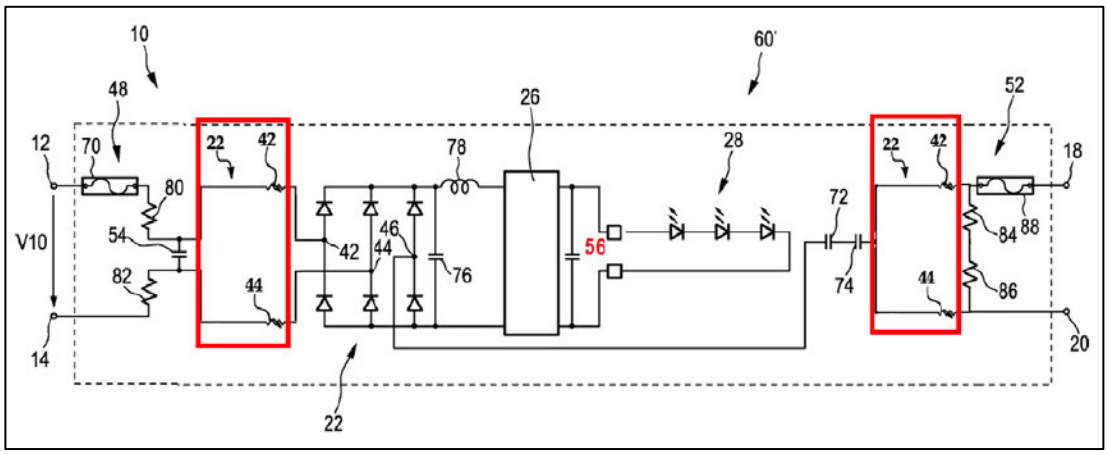

FIG. 4

Annotated FIG. 4 from Tao

### C. Ground 3 Fails Because a POSITA Would Not be Motivated to Combine Tao and Langovsky as Proposed by Petitioner.

The combination of Tao and Langovsky does not render the claims of the '662 Patent obvious because a POSITA would not have been motivated to combine Tao and Langovsky as proposed by Petitioner. As shown below in Petitioner's modified light apparatus 60', Petitioner contends that a POSITA would have been motivated to modify Tao's light apparatus 60 in FIG. 4 by adding Langovsky's inrush current limiters 42, 44 in between Tao's capacitor 54 and nodes 42,44 on one side and in between Tao's capacitor 74 and resistors 84, 86 on the other side. Petition at 84-87. Petitioner asserts that a POSITA would have made this combination because the POSITA would have been motivated to protect Tao's connection circuit 10 from inrush current. *Id*. However, as

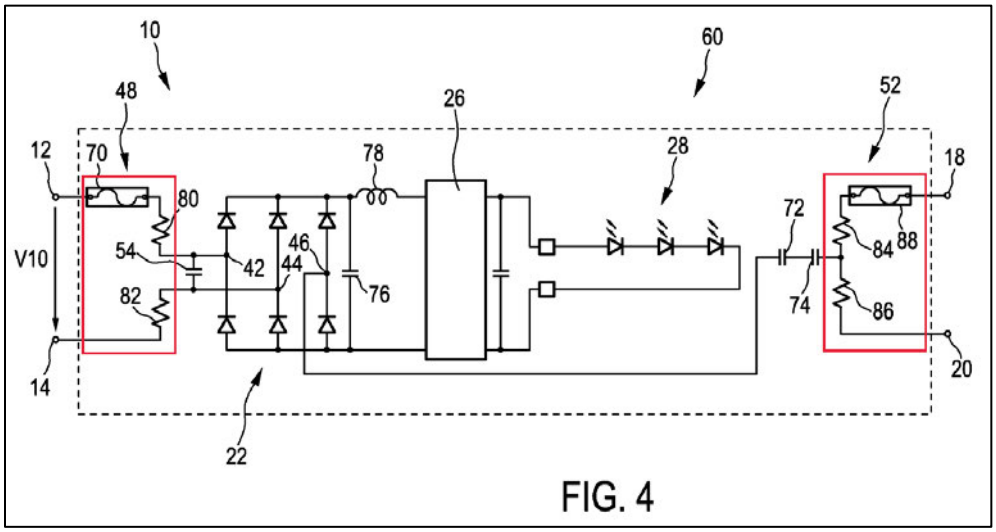
explained below, a POSITA would not have been motivated to combine Tao and Langovsky for at least two reasons.




Petitioner's Modified Light Apparatus 60'

First, the Petitioner's modified light apparatus 60' renders it unsatisfactory for its intended purpose which is to ***provide a LED light apparatus with a resistance that is similar to a filament resistance of a fluorescent lamp***. *See* MPEP 2143.01(V) ("[i]f a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification."). In FIG. 4 of Tao (reproduced below), Tao discloses an improved lighting apparatus with LED unit 28 with two input circuitries 48, 52. Tao at [0052]-[0053]. Each of the two input circuitries 48, 52 includes two resistors that "have a resistance value similar to the filament resistance of the fluorescent lamp, which shall be replaced by the light apparatus 60." *Id.*. Tao teaches that the input resistance of the two resistors in

each input circuitry causes an external power supply to ***work properly*** because the ***input resistance of the connected light apparatus 60 is similar to the filament resistance of the fluorescent lamp***. *See id.*.




Annotated FIG. 4 from Tao

FIG. 2 of Langovsky (reproduced below) shows a power converter 18 that includes an inrush protection circuit 22 that receives AC signal to power the LED array 20. Ex. 1006 ("Langovsky") at 3:29-31, 3:49-50. The inrush protection circuit 22 includes inrush current limiters 42, 44 that can be negative temperature coefficient (NTC) resistors. *Id.* at 3:51-52, 3:67-4:2. A NTC resistor can be cool and have a high resistance when a signal source is first connected to the power converter, and can lower its resistance when the NTC resistor is warm due to current flowing therein. *Id.* at 3:67-4:6.

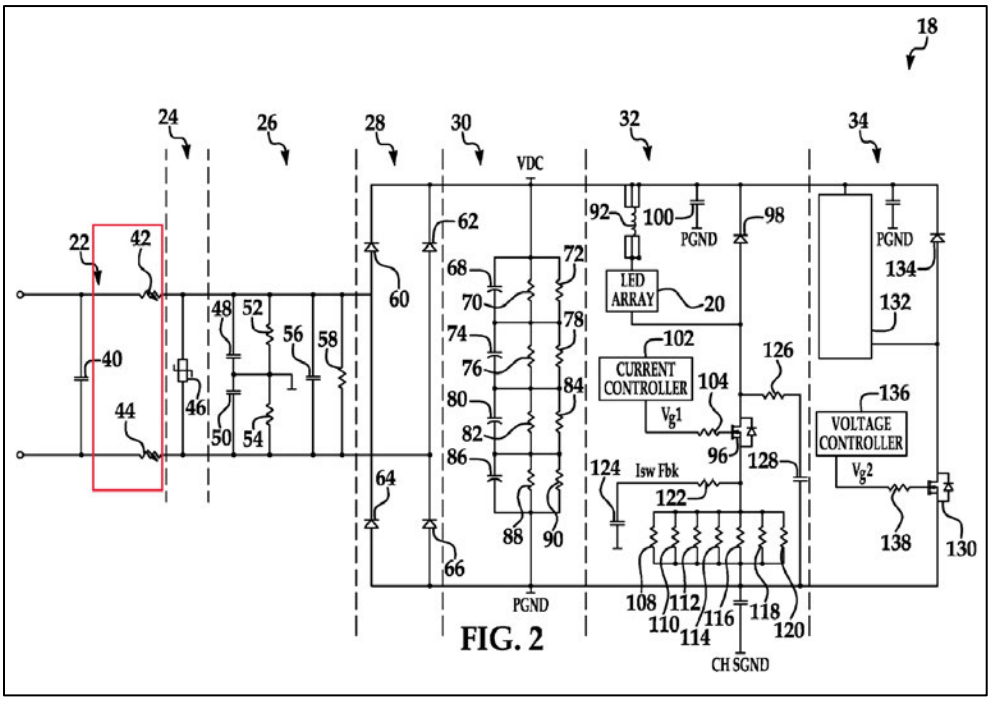
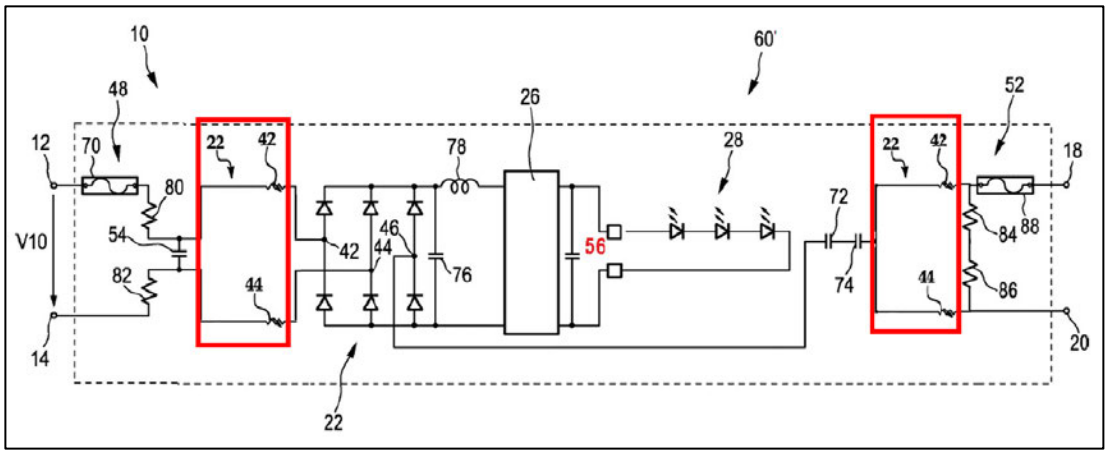



FIG. 2

Annotated FIG. 2 from Langovsky

As mentioned above, Petitioner adds Langovsky's inrush current limiters 42, 44 to Tao's input circuitries 48, 52 and creates a modified light apparatus 60' (reproduced below). However, such a modification changes the input resistance of Tao's light apparatus 60' or at least makes it dependent on temperature of the inrush current limiters 42, 44 so that it would not achieve its intended purpose which is to provide a LED light apparatus with a resistance that is similar to a fluorescent lamp's filament resistance. For example, on the right side of the modified light apparatus 60', the input circuitry 52 shows resistors 84, 86 in parallel with current limiting resistors 42, 44. Thus, if the input resistance of the modified light apparatus 60' were to be measured, the input resistance would be a

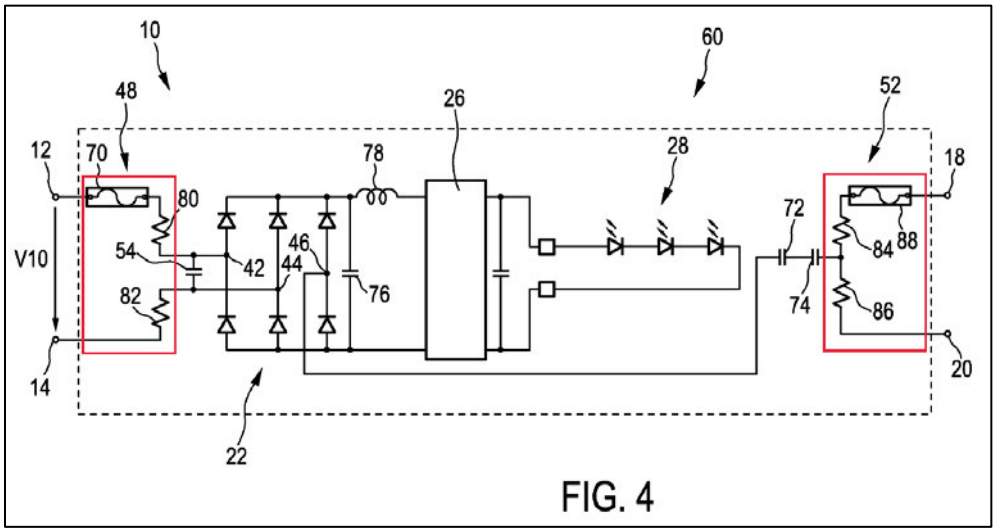
function of the resistances of four resistors, where the resistances of the current limiting resistors 42, 44 can vary as a function of its temperature. Thus, a POSITA would not be motivated to add Langovsky's inrush current limiters 42, 44 to Tao's input circuitries 48, 52 because doing so would make the modified light apparatus 60' unsatisfactory for its intended purpose.




Petitioner's Modified Light Apparatus 60'

Second, a POSITA would not be motivated to adds Langovsky's inrush current limiters 42, 44 to Tao's input circuitries 48, 52 because Tao's circuit already includes an element to protect against high current. Tao and Langovsky take mutually exclusive/different paths and reach different solutions to the problem of high current protection. Since they teach away from each other, a POSITA would not be motivated to combine them in this regard. As shown in FIG. 4 of Tao (reproduced below), each of the input circuitries 48, 52 include a fuse 70, 88, and Tao specifically teaches that the "fuse 70 … protect[s] the

connection circuit ***against high currents***." *See* Tao at [0048], [0051] (emphasis added). Thus, for at least these reasons, a POSITA would not have been motivated to combine Tao and Langovsky as proposed by Petitioner.




Annotated FIG. 4 from Tao

## IV. THE BOARD SHOULD DENY INSTITUTION UNDER 35 U.S.C. § 325(D) / *ADVANCED BIONICS*

In its precedential *Advanced Bionics* decision, the Board described the two-party framework for applying its discretion under § 325(d):

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. If a condition in the first part of the framework is

> satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute *inter partes* review.

*Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8-9 (PTAB Feb. 13, 2020) (precedential).

Petitioner concedes that the Zhang prior art was previously presented to the Office in the MaxLite IPR. *See* Pet. at 8 (Section V(B)(1)). Accordingly, the Board should deny institution unless Petitioner made a showing of material error under part two of the *Advanced Bionics* framework. Petitioner has not shown that the Board committed any material error in denying institution of the MaxLite Petition. Petitioner half-heartedly suggests the Board erred by not considering an alleged "motivation to replace the filament-imitating impedances 1820a and 1820b of Figure 18A with the temperature-varying filament-imitating impedance 1400 of Figure 14." Pet. at 9. Petitioner's "material error" argument fails for at least two reasons. First, it ignores the fact that MaxLite presented Zhang as an anticipatory reference and never discussed any motivation for combining features of different embodiments. Ex. 1007 at 3 ("Ground 1: Claims 1, 2, 5-7, 9-10, 15-18, 21, 23-24, 29, 31-32, 34-39, and 41-42 are anticipated by Zhang."). The term "motivation" does not even appear in the MaxLite Petition. *See* Ex. 1007. Petitioner's apparent position that the Board materially erred by failing to

consider an argument MaxLite never actually presented is unreasonable and falls well short of the showing required under the second step of the *Advanced Bionics* framework. *See also, e.g.*, *Roku, Inc. v. Universal Elecs., Inc.*, No. IPR2019-01619, 2021 WL 2123912, at *5 (P.T.A.B. May 25, 2021) ("The record shows that, rather than overlooking or misapprehending any argument or evidence in the Petition or the Reply, the Decision simply considered the arguments and explanations of the evidence Petitioner presented within the four corners of the Petition and the Reply ...."). Additionally, a POSITA in fact would ***not*** have been motivated to make the proposed modification to Zhang's Fig. 18A embodiment for the reasons discussed above in Section III(A).

## V. THE BOARD SHOULD DENY INSTITUTION UNDER 35 U.S.C. § 314(a)

### A. Discretionary Denial Is Appropriate Under *Fintiv* Given the Co-Pending District Court Litigation

#### 1. Legal Standard

The Board's precedential decision in *Apple, Inc. v. Fintiv, Inc*. identified six factors for consideration in determining whether to deny institution under § 314(a) where there is a parallel district court litigation:

> 1. whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted;
>
> 2. proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;

> 3. investment in the parallel proceeding by the court and the parties;
>
> 4. overlap between issues raised in the petition and in the parallel proceeding;
>
> 5. whether the petitioner and the defendant in the parallel proceeding are the same party; and
>
> 6. other circumstances that impact the Board's exercise of discretion, including the merits.

IPR2020-00019, Paper 11 at 6 (PTAB Mar. 20, 2020) (precedential).

On June 21, 2022, the USPTO issued a Director's Memorandum, titled "Interim Procedure for Discretionary Denials in AIA Post Grant Proceedings with Parallel District Court Litigation" ("Director's Memo"). Among other things, the Director's Memo stated "Consistent with *Sotera Wireless, Inc.*, the PTAB will not discretionarily deny institution in view of parallel district court litigation where a petitioner presents a stipulation not to pursue in a parallel proceeding the same grounds or any grounds that could have reasonably been raised before the PTAB." Director's Memo at 3 (referencing *Sotera Wireless Inc. v. Masimo Corp.*, IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential as to § II.A).

Petitioner has not presented any *Sotera Wireless* stipulation here and the *Fintiv* factors discussed below weigh in favor of a discretionary denial in view of the parallel district court litigation.

### 2. The Co-Pending District Court Litigation

On May 24, 2022, Patent Owner filed a patent infringement complaint against Petitioner. Ex. 2003 (docket report) at ECF 1. On September 16, 2022, Patent Owner filed an amended complaint which asserted infringement of the '662 patent. *Id.* at ECF 12.

A scheduling order was entered on December 12, 2022. Ex. 2004 (scheduling order). Fact discovery opened on April 20, 2023 and is scheduled to close on November 15, 2023. *Id.* at 2, 3. Final infringement and invalidity contentions are due June 14, 2023. A jury trial is scheduled for April 2024—four months before any final written decision would be due in this proceeding. *Id.* at 4.

Claim construction briefing has been completed and a claim construction hearing is set for June 2, 2023. Ex. 2003 (docket report) at ECF 74.

Petitioner moved to transfer the district court case to the Northern District of Ohio. Following venue discovery and a hearing, the transfer motion was denied on April 20, 2023. Ex. 2003 (docket report) at ECF 69.

Petitioner has also filed a motion to dismiss certain claims in the litigation, and that motion has been fully briefed. *Id.* at ECF Nos. 14, 18, and 19.

### 3. Factor 1: The Court Has Not Stayed the District Court Case and Is Very Unlikely to Do So

Petitioner has not moved to stay the district court case in view of its IPR filings nor even indicated it intends to do so.[1] Even if Petitioner does so move, Judge Albright has typically denied motions to stay litigations based on instituted IPR proceedings. *See, e.g., Ravgen, Inc. v. Lab'y Corp. of Am. Holdings*, No. W-20-CV-00969-ADA, 2022 WL 4240937 (W.D. Tex. Aug. 16, 2022); *Sonrai Memory Ltd. v. LG Elecs. Inc.*, No. 6:21-CV-00168-ADA, 2022 WL 2307475 (W.D. Tex. June 27, 2022) (both denying post-institution motions to stay). Judge Albright is even less likely to stay the district court case given Petitioner has filed IPRs on just a subset of the patents-in-suit. Accordingly, *Fintiv* Factor 1 favors discretionary denial.

### 4. Factor 2: The District Court's Trial Date is Four Months Before the Expected Date of any Final Written Decision

Jury Trial is currently set for April 17, 2024. Ex. 2004 (scheduling order) at 4. A final written decision in this case is unlikely to be due much before

[1] Recently, on May 12, 2023, Petitioner did move to stay the district court case pending resolution of its objections to Magistrate Judge Gilliland's denial of Petitioner's transfer motion. Ex. 2003 (docket report) at ECF 75.

August 17, 2024 (*i.e.,* one year and 3 months after the May 17, 2023 filing date of the present paper). Accordingly, *Fintiv* Factor 2 favors discretionary denial.

### 5. Factor 3: Both Parties And The Court Have Invested Substantial Effort Into This Case And Will Invest Even More Before an Institution Decision

The parties have already invested substantial effort into this case. The claim construction process is almost complete and the parties are already into fact discovery. Final infringement and invalidity contentions are due in less than a month on June 14, 2023—roughly two months before the Board is likely to issue an institution decision in this proceeding. Moreover, Patent Owner already prevailed on Petitioner's transfer motion and Petitioner's motion to dismiss has been fully briefed. Accordingly, *Fintiv* Factor 3 favors discretionary denial. *See Fintiv*, Paper 15 at 15 (reasoning that factor 3 favored discretionary denial based on efforts already invested into claim construction and invalidity conventions).

### 6. Factor 4: Overlap Of Issues Raised In The Petition And District Court Case

Petitioner's invalidity contentions in the district court case rely on the same prior art advanced in the Petition. Ex. 2005 (invalidity contentions cover pleading) at 19 (listing Zhang, Tao, and Langovsky as prior art for the '662 patent). Accordingly, *Fintiv* Factor 4 favors discretionary denial. *See Fintiv*, Paper 15 at 15. As noted above, Petitioner opted not to present a *Sotera Wireless* stipulation in its Petition. Petitioner apparently intends to pursue the same

invalidity theories simultaneously before the PTAB and in district court. This is inefficient and increases the chance of inconsistent outcomes between the two fora.

### 7. Factor 5: Petitioner and the Defendant in the District Court Case Are the Same Party

Petitioner here is itself a defendant in the parallel district court proceeding. Accordingly, Fintiv Factor 5 favors discretionary denial. *See Fintiv*, Paper 15 at 15.

### 8. Factor 6: Fatal Flaws in the Petition Favor Discretionary Denial

Given the flaws in the proposed obviousness combinations discussed above in Section III, the present Petition falls well short of the "compelling merits" standard required to avoid a discretionary denial based on *Fintiv* Factors 1-5. *See* Director's Memo at 4 (When determining whether there is a compelling unpatentability challenge, the Board evaluates whether the Petition presents challenges "in which the evidence, if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.").

### 9. Conclusion

Similar to *Fintiv*, "the District Court case is ongoing, trial is scheduled to begin [four] months before [the Board] would reach a final decision in this

proceeding, the District Court has expended effort resolving substantive issues in the case, the identical claims are challenged based on the same prior art in both the Petition and in the District Court, and the defendant in District Court and the Petitioner here are the same party." *Fintiv*, Paper 15 at 17. Given that the *Fintiv* factors decidedly favor a discretionary denial, instituting a trial based on this Petition would be an inefficient use of the Board's resources. Accordingly, the Board should deny institution under § 314(a).

### B. Discretionary Denial is Also Appropriate Under *General Plastic* Given the Previously-Filed MaxLite IPR.

#### 1. Legal Standard

In *General Plastic Industrial Co., Ltd. v. Canon Kabushiki Kaisha*, the Board articulated a non-exhaustive list of factors to be considered in determining whether to exercise discretion under § 314(a) to deny a petition that challenges the same patent as a previous petition. IPR2016-01357, Paper 19 at 15-16 (PTAB Sept. 6, 2017) (precedential). Those factors are:

> 1. whether the same petitioner previously filed a petition directed to the same claims of the same patent;
>
> 2. whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should have known of it;
>
> 3. whether at the time of filing of the second petition the petitioner already received the patent owner's

> preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition;
>
> 4. the length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition;
>
> 5. whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent;
>
> 6. the finite resources of the Board; and
>
> 7. the requirement under 35 U.S.C. § 316(a)(11) to issue a final determination not later than 1 year after the date on which the Director notices institution of review.

*Id.* (citation omitted).

The Board has clarified that *General Plastic* Factor 1 can favor discretionary denial where the earlier petition and later petition were filed by different petitioners if the petitioners have a "significant relationship." *Valve Corp. v. Electronic Scripting Prods., Inc.*, IPR2019-00062, Paper 11 at 9-10 (PTAB Apr. 2, 2019) (precedential). For example, in *Valve Corp.*, HTC filed the earlier petition and Valve filed the later petition. HTC and Valve were co-defendants in a district court litigation, and both were accused of infringing the

challenged patent. *Id.* at 9. Additionally, HTC devices incorporated technology licensed from Valve. *Id.* at 10. The Board reasoned that *General Plastic* Factor 1 favored denying institution. *Id.*

**2. The MaxLite IPR**

On May 8, 2019, Patent Owner filed a patent infringement complaint against MaxLite, Inc. asserting six patents including the '662 Patent. *Jiaxing Super Lighting Electric Appliance Co., Ltd. v. MaxLite, Inc.*, No. 2:19-cv-04047 (C.D. Cal.). On November 25, 2019, MaxLite filed an IPR petition asserting the invalidity of the '662 Patent. Ex. 1007. The MaxLite petition asserted two anticipation grounds, the first of which was based on the same Zhang reference Petitioner uses in the present Petition. *Id.* On May 26, 2020, the Board denied institution of the MaxLite IPR. Ex. 1008.

**3. Factor 1: [redacted] Was a Real Party in Interest in the MaxLite IPR**

In the MaxLite petition, CH Lighting Technology Co., Ltd. ("CH") was identified as a real party in interest. Ex. 1007 at 73. In the district court litigation between Patent Owner and MaxLite, MaxLite disclosed CH and CH's subsidiary, Shaoxing Ruising Lighting Co., Ltd. ("Ruising"), as parties having a financial interest in the litigation. Ex. 2006; *see also* Ex. 2007 (CH / Ruising corporate disclosure statement from *Ruising* litigation identifying CH as Ruising's parent).

[redacted]

[redacted] In 2020, Patent Owner filed a patent infringement suit against CH and Ruising. *Jiaxing Super Lighting Electric Appliance Co. Ltd. v. CH Lighting Technology Co. Ltd.*, No. 6:20-cv-00018-ADA (W.D. Tex.) ("*Ruising* litigation"). The case went to trial in November 2021 and CH and Ruising were found to have willfully infringed three of Patent Owner's patents. Ex. 2009 (final judgment). MaxLite's lead counsel that prepared and filed the MaxLite IPR, David Radulescu, was counsel for CH and Ruising in the *Ruising* litigation. *See, e.g.*, Ex. 2007 (CH / Ruising corporate disclosure statement signed by David Radulescu).

Given the "significant relationship" between Petitioner and an RPI in the MaxLite IPR, *General Plastic* Factor 1 favors discretionary denial. *See Valve Corp. v. Electronic Scripting Prods., Inc.*, IPR2019-00062, Paper 11 at 9-10 (PTAB Apr. 2, 2019) (precedential).

#### 4. Factor 3: Petitioner Used the Board's Denial of Institution in the MaxLite IPR as a Roadmap for Its Petition

As discussed above, the Board denied institution of the MaxLite Petition because it improperly mixed and matched features of separate embodiments of

the Zhang reference. Ex. 1008 at 10-12. Petitioner has used the Board's decision denying institution of the MaxLite IPR as a roadmap to cure the deficiencies identified by the Board in denying institution of the MaxLite Petition. Specifically, Ground 1 in the present Petition re-packages MaxLite's Zhang arguments as an obviousness argument because obviousness provides some latitude for mixing and matching features from separate embodiments. Accordingly, Factor 3 favors discretionary denial.

**5. Factors 6 & 7: The Board's Finite Resources Should Not Be Used to Address Serial Petitions Against the Same Patent.**

The Board has explained that the intent behind Factor 6 is "to conserve Board resources from repeat or multiple staggered petitions challenged the same claims of the same patent before the Board." *Samsung Elecs. Co., Ltd. v. Immersion Corp.*, IPR2018-01499, Paper 11 at 17 (PTAB Mar. 6, 2019) (citing *General Plastic*, Paper 19 at 17-18). Accordingly, Factors 6 and 7 favor discretionary denial.

**6. Conclusion**

Because at least *General Plastic* Factors 1, 3, 6, and 7 favor discretionary denial, the Board should deny institution of the present Petition.

## VI. CONCLUSION

For all the reasons discussed above, the Board should deny institution of Petitioner's Petition for *inter partes* review of the '662 Patent.

Dated: May 17, 2023

Respectfully submitted,

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**CERTIFICATION OF WORD COUNT UNDER 37 C.F.R. § 42.24(d)**

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Preliminary Response totals 7,550, excluding the parts exempted by 37 C.F.R. § 42.24(a). Accordingly, this Petition is under the word count limit of 14,000 words.

This word count was calculated by using the built-in word-count tool in Microsoft Word 2016, the software used to prepare the document.

Dated: May 17, 2023

Respectfully submitted,

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## CERTIFICATE OF SERVICE

I hereby certify that on this 17th day of May 2023, true and correct copies of the foregoing PATENT OWNER'S PRELIMINARY RESPONSE and Exhibits 2003-2009 were served via electronic mail upon the following counsel of record for Petitioner:

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