

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD., AND
SAMSUNG ELECTRONICS AMERICA, INC.,
Petitioners

v.

SINOTECHNIX LLC,
Patent Owner

Case IPR2025-00335

U.S. Patent No. 8,132,952

PATENT OWNER'S PRELIMINARY RESPONSE

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	THE '952 PATENT AND THE CHALLENGED CLAIMS	1
A.	Overview of the '952 Patent	1
B.	The Challenged Claims.....	3
III.	LEVEL OF ORDINARY SKILL	4
IV.	CLAIM CONSTRUCTION.....	4
V.	APPLICABLE LEGAL STANDARD	4
A.	Obviousness	5
1.	Claims cannot be found obvious if an element is absent	5
2.	A petition must address the Graham factors	6
3.	A petition must provide articulated reasoning with rational underpinning to combine and/or modify references.....	6
VI.	THE PETITION DOES NOT ESTABLISH A REASONABLE LIKELIHOOD OF SUCCESS.....	8
A.	Ground I Fails	8
B.	Ground II Fails	17
VII.	VIII. PATENT OWNER'S FINAL COMMENTS	17
VIII.	CONCLUSION.....	18

TABLE OF AUTHORITIES

<u>Cases:</u>	<u>Page(s):</u>
<i>CFMT, Inc. v. YieldUp Int'l Corp.</i> , 349 F.3d 1333 (Fed. Cir. 2003)	5
<i>Eizo Corp. v. Barco N.V.</i> , IPR2014-00358 (PTAB July 23, 2014)	6
<i>Garmin Int'l, Inc. v. Patent of Cuozzo Speed Techs. LLC</i> , IPR2012-00001 (PTAB Jan. 9, 2013).....	6
<i>Graham v. John Deere Co.</i> , 383 U.S. 1 (1966).....	5, 6
<i>Henny Penny Corp. v. Frymaster LLC</i> , 938 F.3d 1324 (Fed. Cir. 2019)	9
<i>In re Kahn</i> , 441 F.3d 977 (Fed. Cir. 2006).....	7
<i>In re Rijckaert</i> , 9 F.3d 1531 (Fed. Cir. 1993).....	5
<i>In re Royka</i> , 490 F.2d 981 (C.C.P.A. 1974)	5
<i>Innogenetics, N.V. v. Abbott Labs.</i> , 512 F.3d 1363 (Fed. Cir. 2008)	7
<i>InTouch Techs., Inc. v. VGo Comm'ns., Inc.</i> , 751 F.3d 1327 (Fed. Cir. 2014)	6
<i>Johns Manville Corp. v. Knauf Insulation, Inc.</i> , IPR2018-00827 (PTAB Oct. 16, 2018)	7
<i>KSR Int'l Co. v. Teleflex Inc.</i> , 550 U.S. 398 (2007).....	6, 7, 11

<i>LG Elecs., Inc. v. Cellular Commc'ns Equip. LLC</i> , IPR2016-00197 (PTAB April 29, 2016).....	7
<i>Personal Web Techs., LLC v. Apple, Inc.</i> , 848 F.3d 987 (Fed. Cir. 2017).....	8
<i>Qualcomm Inc. v. Apple Inc.</i> , Nos. 2023-1208, 2023-1209, 2025 U.S. App. LEXIS 9614 (Fed. Cir. Apr. 23, 2025).....	17
<i>Securus Techs., Inc. v. Global Tel*Link Corp.</i> , 701 F. App'x 971 (Fed. Cir. 2017)	7
<i>TQ Delta, LLC v. Cisco Sys.</i> , 942 F.3d 1352 (Fed. Cir. 2019)	8

Rules, Statutes and Regulations:

35 U.S.C. § 103(a)	5
35 U.S.C. § 313	1
35 U.S.C. § 314(a)	5, 8
37 C.F.R. § 42.107	1
37 C.F.R. § 42.108(c).....	5

TABLE OF EXHIBITS

Exhibit	Description and Short Name
Ex. 2001	Docket Report for <i>Sinotechnix LLC v. Samsung Electronics Co., Ltd., et al.</i> , 2:24-cv-544-JRG (E.D. Tex. Jul. 17, 2024)
Ex. 2002	<i>Sinotechnix LLC v. Samsung Electronics Co., Ltd., et al.</i> , 2:24-cv-544-JRG-RSP, Dkt. No. 48, Amended Docket Control Order
Ex. 2003	<i>MyPort, Inc. v. Samsung Elecs. Co., Ltd.</i> , Case No. 2:22-cv-00114-JRG, Order, Dkt. No. 73 (E.D. Tex. June 13, 2023)
Ex. 2004	<i>General Access Solutions, Ltd. v. Cellco Partnership</i> , Case No. 2:22-cv-00394-JRG, Order, Dkt. No. 225 (E.D. Tex. May 22, 2024)
Ex. 2005	Excerpts of Petitioners' Amended Invalidity Contentions served in <i>Sinotechnix LLC v. Samsung Electronics Co., Ltd., et al.</i> , 2:24-cv-544-JRG (E.D. Tex. Jul. 17, 2024) (highlighting added)
Ex. 2006	Petitioners' Subpoena to Lumileds, LLC dated February 5, 2025 (trimmed)
Ex. 2007	Petitioners' Subpoena to Sony Corporation of America dated February 11, 2025 (trimmed)
Ex. 2008	Collection of Petitioners' Notices of Subpoenas
Ex. 2009	Minutes Entry for April 10, 2025 Hearing (<i>Sinotechnix LLC v. Samsung Electronics Co., Ltd., et al.</i> , 2:24-cv-544-JRG, Dkt. No. 102 (E.D. Tex. Jul. 17, 2024))
Ex. 2010	Minutes Entry for April 15, 2025 Hearing (<i>Sinotechnix LLC v. Samsung Electronics Co., Ltd., et al.</i> , 2:24-cv-544-JRG, Dkt. No. 120 (E.D. Tex. Jul. 17, 2024))

Ex. 2011	Email from Y. Ha, counsel for Petitioners, to the Board dated April 17, 2025 (highlighting added)
Ex. 2012	Petitioners' Motion to Transfer Venue (<i>Sinotechnix LLC v. Samsung Electronics Co., Ltd., et al.</i> , 2:24-cv-544-JRG, Dkt. No. 53 (E.D. Tex. Jul. 17, 2024)) (highlighting added)
Ex. 2013	Declaration of Thomas William Kennedy Jr.
Ex. 2014	Excerpts of Phosphor Handbook (2 nd Ed.)

I. INTRODUCTION

Under 35 U.S.C. § 313 and 37 C.F.R. § 42.107, Patent Owner Sinotechnix LLC (“Patent Owner”) submits this Preliminary Response to the Petition for *Inter Partes* Review (“Petition,” Paper 1) filed by Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (“Petitioners”) challenging claims 1, 2, 4, and 5 of U.S. Patent No. 8,132,952 (the “’952 Patent”) (Ex. 1001).

For at least the reasons detailed below, Petitioners have not met their burden of showing a reasonable likelihood of prevailing on any of their proposed grounds of unpatentability, and the Board should not institute *inter partes* review.

II. THE ’952 PATENT AND THE CHALLENGED CLAIMS

A. Overview of the ’952 Patent

The ’952 Patent relates to “a backlight panel employing a white light emitting diode with red and green phosphors as a light source to enhance color reproducibility and luminance.” ’952 Patent, Ex. 1001 at 1:20-23. A backlight panel provides light that allows a user to view a displayed image on a liquid crystal display (“LCD”). *Id.* at 1:27-36. Backlight panels can use several kinds of light sources, e.g., incandescent lamps, fluorescent lamps, or LEDs, to provide the light for the LCD. *Id.* at 1:37-40. In certain instances, backlight panels use an array of red, green, and blue LEDs. *Id.* at 1:48-51.

In addition to the LEDs, a backlight panel can contain several other components. Those components can include, for example, a reflection sheet that reflects light emitted from the LEDs in “an upward direction” (*id.* at 1:58-61); a light

transmission layer positioned above the LEDs that can transmit and shield light emitted from the LEDs (*id.* at 1:65-2:6); a diffusion plate above the light transmission layer, designed to make the light emitted from the transmission layer uniform (*id.* at 2:11-19); and a brightness enhancement film above the diffusion plate that can diffract light emitted at a large showing angle from the diffusion plate into light with a small showing angle such that the light can be incident onto the LCD panel (*id.* at 2:20-31).

But in the example above, the red, green, and blue light emitted from the respective LEDs needs to be mixed to obtain uniform light. *Id.* at 2:32-35. Thus, in that example, it is preferable to prevent light from transmitting directly from the LEDs through the light transmission layer and toward the diffusion plate. *Id.* at 2:35-39. The shielding pattern in the example light transmission layer can prevent that direct transmission. *Id.* Moreover, the backlight panels may also include air gaps that aid in the mixing of the light. *Id.* at 2:39-40. “These result in an increase in thickness of a backlight panel.” *Id.* at 2:40-41.

Moreover, while light emitted from the LEDs is mixed, light loss occurs. *Id.* at 2:42-43. Several solutions can counteract that light loss, including increasing the current supplied to the LEDs, using more LEDs, or by using brightness enhancement film(s). *Id.* at 2:43-46. But those solutions introduce additional problems, such as increased power consumption, increased heat generation, deterioration of the light shielding layer, increased thickness, and increased manufacturing costs. *Id.* at 2:46-53.

The '952 Patent seeks to “provide a backlight panel which has smaller thickness and reduced manufacturing costs as compared with a conventional backlight panel” that is “capable of enhancing its luminance as compared with a conventional backlight panel.” *Id.* at 2:57-62.

The '952 Patent achieves that goal in several embodiments that include various features and components. Those components include, for example, “white light emitting diode with red and green phosphors.” *Id.* at 2:66-3:1. The embodiments include at least three options for arranging those white LEDs: (1) on the side of the light guide plate as shown, *e.g.*, in Figure 2 (*id.* at 3:5-7; 4:59-62); (2) in a “receiving groove” in the light guide plate as shown, *e.g.*, in Figure 3 (*id.* at 5:46-48); or (3) below the bottom surface of the diffusion plate as shown, *e.g.*, in Figure 4 (*id.* at 3:22-24; 6:18-20). The '952 Patent explains, that for the third option, “since the luminance can be enhanced with the use of a light source for upward emitting light, brightness enhancement films can be omitted.” *Id.* at 3:34-36.

B. The Challenged Claims

The Petition challenges claims 1, 2, 4, and 5 of the '952 Patent. Claim 1 is an independent claim. Claims 2, 4, and 5 depend from claim 1.

Independent claim 1 recites:

1. A backlight panel, comprising:

a diffusion plate comprising a top surface and a bottom surface;

a plurality of white light emitting diodes arranged below the bottom surface of the diffusion plate, the white light emitting

diodes to emit light directly onto the bottom surface of the diffusion plate; and

a reflection sheet arranged below light exit surfaces of the white light emitting diodes, the reflection sheet to reflect light toward the diffusion plate,

wherein each white light emitting diode comprises a blue light emitting diode chip and a red phosphor and a green phosphor arranged on the blue light emitting diode chip.

'952 Patent, Ex. 1001 at Claim 1.

III. LEVEL OF ORDINARY SKILL

For the limited purpose of this Preliminary Response, Patent Owner does not contest Petitioners' definition of a person of ordinary skill in the art, but it reserves the right to do so in the event that trial is instituted.

IV. CLAIM CONSTRUCTION

Petitioners did not offer any terms for construction, and Patent Owner's arguments below do not presently put any claim terms into controversy. Thus, for the limited purpose of this Preliminary Response, Patent Owner does not offer any terms for construction. To the extent necessary, Patent Owner reserves the right to provide claim constructions if trial is instituted.

V. APPLICABLE LEGAL STANDARD

The Board may only grant a petition for *inter partes* review where "the information presented in the petition ... shows that 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); 37 C.F.R. § 42.108(c). Petitioners bear the burden of showing that this statutory threshold has been met. *See* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756 (Aug. 14, 2012) (“The Board ... may institute a trial where the petitioner establishes that the standards for instituting the requested trial are met”).

A. Obviousness

Section 103 of the Patent Act provides that “[a] patent may not be obtained . . . 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.” 35 U.S.C. § 103(a). The obviousness analysis requires several threshold inquiries: the level of ordinary skill in the art must be established; the scope and content of the prior art must be determined; and any differences between the prior art and the claims at issue must be ascertained. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

1. Claims cannot be found obvious if an element is absent

If a single element of the claim is absent from the prior art, the claim cannot be considered obvious. *See CFMT, Inc. v. YieldUp Int’l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (“Obviousness requires a suggestion of all limitations in a claim.”) (citing *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974)); *In re Rijckaert*, 9 F.3d 1531, 1534 (Fed. Cir. 1993) (reversing obviousness rejection where prior art did not

teach or suggest all claim limitations); *Garmin Int'l, Inc. v. Patent of Cuozzo Speed Techs. LLC*, IPR2012-00001, Paper 15 at 15 (PTAB Jan. 9, 2013) (refusing to institute an *inter partes* review under 35 U.S.C. § 103 where prior art did not disclose all claim limitations).

Additionally, it is improper to use the challenged claim as a roadmap to piece together disparate disclosure using hindsight bias. See *InTouch Techs., Inc. v. VGo Comm'ns., Inc.*, 751 F.3d 1327, 1351 (Fed. Cir. 2014) (reversing obviousness where “[i]t appears that [the expert] relied on the [] patent itself as her roadmap for putting what she referred to as pieces of a ‘jigsaw puzzle’ together.”); *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.”).

2. A petition must address the Graham factors

Obviousness is resolved on a number of factual determinations “including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of ordinary skill in the art.” See *Graham*, 383 U.S. at 17-18. Petitions for *inter partes* reviews “must address the Graham factors.” *Eizo Corp. v. Barco N.V.*, IPR2014-00358, Paper 11 at 29-30 (PTAB July 23, 2014).

3. A petition must provide articulated reasoning with rational underpinning to combine and/or modify references

The conclusion of obviousness based on a combination of references must also be supported with explicit analysis of a reason to combine those references. *KSR*

Int'l Co. v. Teleflex Inc., 550 U.S. 398, 418 (2007). The Federal Circuit has stated that such reasons must be more than “mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006); *accord Innogenetics, N.V. v. Abbott Labs.*, 512 F.3d 1363, 1374 (Fed. Cir. 2008) (agreeing with the district court’s reasoning that “some kind of motivation must be shown from some source, so that the jury can understand why a person of ordinary skill would have thought of either combining two or more references or modifying one to achieve the patented method”); *see also LG Elecs., Inc. v. Cellular Commc’ns Equip. LLC*, IPR2016-00197, Paper 7 at 7-11 (PTAB April 29, 2016) (faulting a petition’s obviousness analysis for lack of sufficient articulated reasons with rational underpinnings for modifying references to achieve particular elements required in the claims).

Furthermore, “[d]emonstrating that a reference is analogous art or relevant to the field of endeavor of the challenged patent is not sufficient to establish that one of ordinary skill would have had reason to combine its teachings with other prior art in the manner set forth in the claim.” *Johns Manville Corp. v. Knauf Insulation, Inc.*, IPR2018-00827, Paper 9 at 10 (PTAB Oct. 16, 2018) (citing *See Securus Techs., Inc. v. Global Tel*Link Corp.*, 701 F. App’x 971, 977 (Fed. Cir. 2017) (“a broad characterization of [prior art references] as both falling within the same alleged field . . . without more, is not enough for [Petitioner] to meet its burden of presenting a sufficient rationale to support an obviousness conclusion”)). “Mere compatibility of

the references is likewise not sufficient.” *Id.* (citing *Personal Web Techs., LLC v. Apple, Inc.*, 848 F.3d 987, 993 (Fed. Cir. 2017) (it is not enough to show that “a skilled artisan, once presented with the two references, would have understood that they could be combined”).

VI. THE PETITION DOES NOT ESTABLISH A REASONABLE LIKELIHOOD OF SUCCESS

To justify the institution of an *inter partes* review, a petitioner must establish that 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). Petitioners have not met their burden of establishing a reasonable likelihood of success as demonstrated below. Thus, the Board should deny the Petition and decline to institute the *inter partes* review.

A. Ground I Fails

Claim 1 recites a specific white LED. Namely, claim 1 recites a “white light emitting diode [that] comprises a blue light emitting diode chip and a red phosphor and a green phosphor arranged on the blue light emitting diode chip.” Petitioners admit that Hong “does not specifically disclose how [its] white LED is implemented.” Petition at 18, 21. Thus, Petitioners look outside of Hong to fill that admitted gap in their primary reference. In doing so, Petitioners improperly use the claims of the ’952 Patent as a roadmap for their obviousness combination. *See, e.g., TQ Delta, LLC v. Cisco Sys.*, 942 F.3d 1352, 1360 (Fed. Cir. 2019) (“we concluded that the expert appeared to have improperly relied on the challenged patent itself as

her roadmap for putting what she referred to as pieces of a jigsaw puzzle together.”) (cleaned up) (internal quotations omitted). Petitioners argue that there are several “solutions of white LEDs” that a POSITA purportedly could use in combination with Hong. *See, e.g.*, Petition at 25 (“(1) a package that includes red, green, and blue LEDs; (2) a blue LED with overlying yellow phosphors; and (3) a blue LED with overlying green and red phosphors.”).

Petitioners argue that a POSITA would have simply substituted option three into Hong. But instead of Petitioners’ suggestion, a POSITA would have instead been motivated to use the widely available prior art LEDs described in Lee – those that cannot fill the evidentiary gap in Ground 1. *See* Lee, Ex. 1004 at 1:22-2:5. A POSITA would have been motivated to use those LEDs because of the ease of implementation associated with using a currently widely available LED instead of having to endure the difficulty of fabricating a new LED according to Lee’s purported invention. *See, e.g., Henny Penny Corp. v. Frymaster LLC*, 938 F.3d 1324, 1332 (Fed. Cir. 2019) (“The benefits, both lost and gained, should be weighed against one another. That is consistent with the longstanding principle that the prior art must be considered for all its teachings, not selectively.”) (cleaned up) (internal citations and quotations omitted). Petitioners’ true motivation for their choice of LED is that the claims of the challenged patent require a specific LED to fill a gap in Hong. Accordingly, Ground I fails because Petitioners improperly used the challenged claims as a roadmap for their obviousness combination.

Petitioners incorrectly allege that their proposed “combination would have merely amounted to a simple substitution of known white LEDs (Hong’s white LEDs 134 in the LED array 130 of the backlight unit) for other known white LEDs (Lee’s white LEDs that include blue LEDs with overlying green and red phosphors) to obtain predictable results of providing white light in Hong’s backlight unit.” Petition at 24. To begin, that allegation improperly characterizes Lee’s LED as a single solution that a POSITA could simply substitute into Hong. Instead, Lee offers complex chemical formulas for each of its green and red phosphors, where those formulas include a menu of elements and mole fractions from which a POSITA would have needed to make specific selections that would have affected the performance of the LEDs.

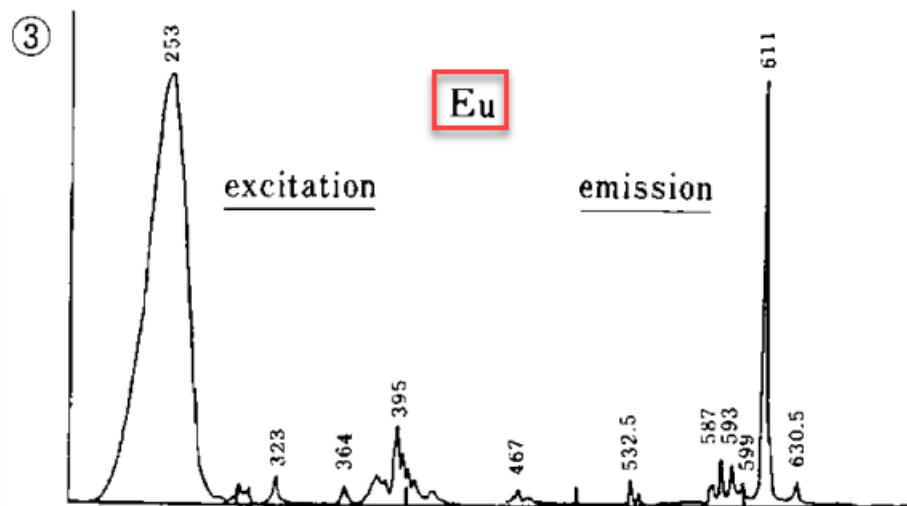
For the green phosphor, Lee provides that “[t]he barium-silicate-base green light emitting phosphor is represented by the chemical formula $(\text{Ba}_{1-p}\text{X}_p)_2\text{SiO}_4:\text{Y}$. X is more than one chemical element selected from the group consisting of Sr, Ca, Mg, K, and Na, at a rate of 0-1 mol. Y is more than one chemical element selected from the group consisting of Eu, Tb, Mn, Y, Gd, Ho, Ce, Er, Tm, La, Sm, and Dy, at a rate of 0-0.5 mol.” Lee, Ex. 1004 at 8:10-14. Thus, Lee discloses a vast selection of potential green phosphors, given that the chemical composition of Lee’s green phosphor is defined by variable elements X and Y and their respective variable mole fractions.

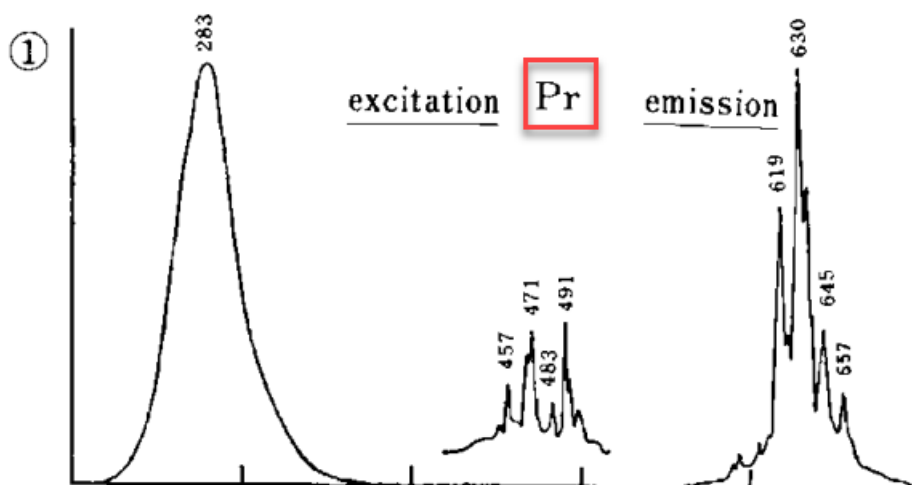
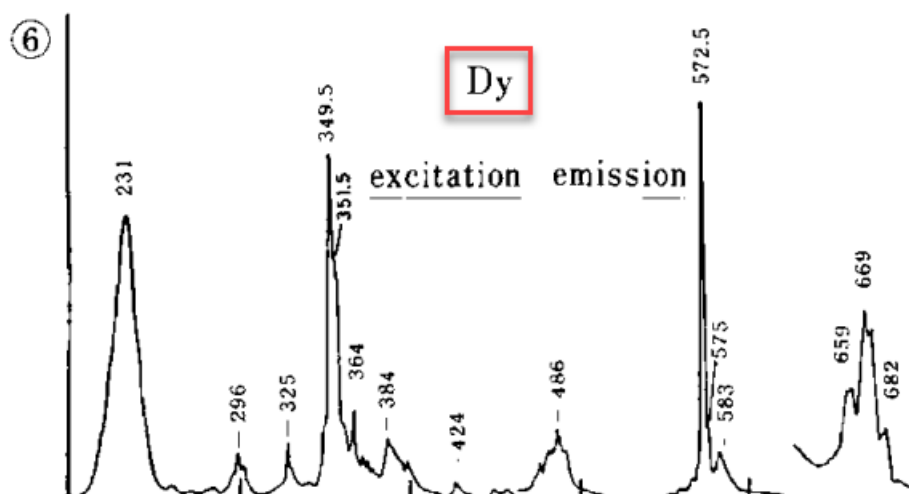
The same is true for the red phosphor in Lee, which is also disclosed via a chemical formula with variable elements X and Y with variable mole fractions. Lee

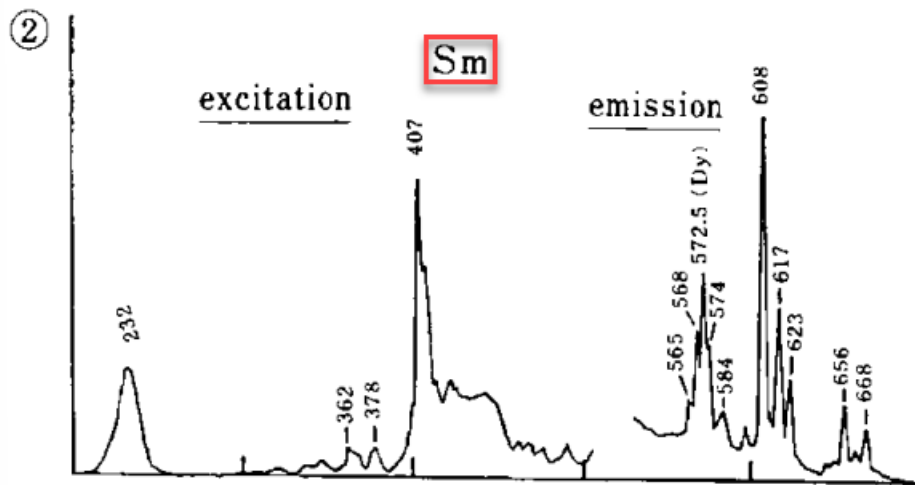
states that “[t]he zinc-selenium-base red light emitting phosphor is represented by the chemical formula $(\text{Zn}_{1-q}\text{X}_q)_2\text{SeO}_4:\text{Y}$. X is more than one chemical element selected from the group consisting of Cd, Ca, Mg, Li, Ba, and Sr, preferably at a rate of 0-0.1 mol. Y is more than one chemical element selected from the group consisting of an IB group (Cu and Ag), a IIIB group (Al, Ga, and In), and a VIIB group (Cl, Br, and I), or rare-earth-elements (Eu, Ce, Pr, Dy, and Sm), at a rate of 0-1 mol.” Lee, Ex. 1004 at 8:15-20. Thus, Lee discloses a vast selection of potential red phosphors, given that the chemical composition of Lee’s red phosphor is defined by variable elements X and Y and their respective variable mole fractions.

Because its formulas for both the red and green phosphors include so many chemical options, Lee does not present “a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421, 127 S. Ct. 1727, 1742 (2007). For example, to arrive at just the red phosphor using this formula $(\text{Zn}_{1-q}\text{X}_q)_2\text{SeO}_4:\text{Y}$, a POSITA needs to choose more than one chemical element for variable X from this group of six elements Cd, Ca, Mg, Li, Ba, and Sr, and also choose those elements’ mole fractions. Then, for Y the POSITA must chose more than one chemical element from among the thirteen possible elements Cu, Ag, Al, Ga, In, Cl, Br, I, Eu, Ce, Pr, Dy, Sm. That does not result in a finite number of identified, predictable solutions for the green phosphor or the red phosphor proposed in the Lee.

Moreover, the selection of the elements and their mole fraction for Lee's red and green phosphors affects both light excitation and emission from the phosphors. Accordingly, using those phosphors in LEDs affects the LED's performance and attributes in ways that would not lead to a "simple substitution" of one LED for another. For example, in Lee's chemical formula for its red phosphor, Y represents "more than one chemical element selected from the group consisting of an IB group (Cu and Ag), a IIIB group (Al, Ga, and In), and a VIIB group (Cl, Br, and I), or rare-earth-elements (Eu, Ce, Pr, Dy, and Sm), at a rate of 0-1 mol." The selection of Y would affect an LEDs performance because the elements selected for the phosphor have different wavelength spectra for excitation and emission. For example, if rare-earth-elements are chosen from among the three groups available for Y, the different rare-earth options available are both excited by different wavelength spectra and emit different wavelength spectra, as shown in the graphs below elements Eu, Pr, Dy, and Sm.







Phosphor Handbook, Ex. 2014 at 11. Those graphs show the complexity of the various elemental options for the phosphors in Lee, and how those phosphors would affect an LED's performance in backlighting an LCD. For example, an LED using a red phosphor with Eu as part of its chemical composition would be excited by different wavelengths and emit different wavelengths than an LED with a red phosphor using the other options for rare-earth elements. Accordingly, that LED would function differently as a light source for an LCD. For each different rare-earth element chosen, only a specific part of the overall light emitted from the LED would excite the phosphor, meaning that the rare-earth element selected would affect how much light is emitted from the phosphor to the LCD. And the excited phosphor in the LED would emit a different wavelength spectra (e.g., color) depending on which rare-earth metal was selected. Both of those conditions affect the light emitted to the LCD.

Petitioners did not consider that complexity when they alleged that Lee offered a simple substitution of an LED. In fact, the example above is just one of

many elemental considerations introduced by Lee. As discussed above, there are many elemental options besides the example of the rare-earth element from which a POSITA would have needed to select to implement the LED of Lee in Hong. Petitioners did not consider the complexity of how those choices affect the light provided to the LCD. Petitioners' failure to propose any specific elemental composition of phosphors from among the wide variety proposed by Lee prevents the Board (and Patent Owner) from evaluating whether such a substitution would adequately function in a backlight. Thus, Petitioners have failed to meet their burden.

In addition to the variations in excitation and emission spectra among the various phosphors proposed by Lee, there are other differing effects of the phosphors based on their chemical compositions. This includes things such as afterglow, which is light emission that persists after excitation stops. Phosphor Handbook, Ex. 2014 at 3-4. A POSITA would need to carefully choose its phosphor composition to avoid afterglow to ensure that an LED would stop emitting light to the LCD at the correct time. Otherwise, the LCD would display unwanted images.

Hong's driving method also introduces additional complexity for a POSITA choosing specific phosphors for an LED. Hong describes that its LED array is driven according to a specific "flashing method in order to prevent the blur phenomenon." Hong, Ex. 1003 at [0062]. Hong describes that "[a]ccording to the flashing driving method, LED array 130 is driven during a certain time T1 of one frame interval to thereby turn on the LED 134. LED 134 remains off in the remaining time interval

excluding the time T_i . Thus, in the flashing driving method, the LED array 130 is driven in an impulse manner to eliminate the blur phenomenon.” *Id.* at [0063].

Hong further describes its driving method as follows: “FIG. 9 is a waveform diagram of a scanning backlight driving method of the light emitting diode shown in FIG. 7.” *Id.* at [0065]. “In the scanning backlight method, LED arrays 130a, 130b, 130c, 130d, 130e and 130f of the backlight unit are sequentially driven. More specifically, the LED’s 134a to 134f are sequentially turned on in the scanning direction.” *Id.* Hong continues, “[i]n accordance with the scanning backlight method, the LED’s 134a to 134f of the liquid crystal display module 100 are sequentially turned on and off to emit a light at an initial time of one frame interval while shutting off the light in the remaining time interval. Thus, LED’s 134a to 134f of the liquid crystal display module 100 are driven in a quasi-impulse scheme. Accordingly, the scanning backlight method prevents the blur phenomenon by eliminating the effect of the previous field on the next field, thereby improving a display quality of the liquid crystal display module.” *Id.* at [0066].

Petitioners did not address how and whether Hong’s driving method would affect the ultimate emission of light from the phosphors or whether any noticeable after-glow would occur when the driving method dictates that a particular LED is off.

As shown above, Lee does not provide a simple substitution for an LED. Instead, a POSITA must choose from a variety of chemical elements and mole ratios, each of which will affect the performance of the LED. Petitioners did not identify a

specific proposed chemical composition from the options discussed in Lee. Accordingly, neither the Board nor Patent Owner can evaluate whether the substitution proposed would provide an adequate light source for the LED backlight in Hong.

B. Ground II Fails

Ground II fails because it relies on applicant admitted prior art (or “AAPA”) as part of its basis for a ground. *Qualcomm Inc. v. Apple Inc.*, Nos. 2023-1208, 2023-1209, 2025 U.S. App. LEXIS 9614, at *21 (Fed. Cir. Apr. 23, 2025) (“Under the plain meaning of § 311(b), the question is whether a petitioner has used AAPA as the basis, or part of the basis, of a ground—not whether the request relies on AAPA in combination with prior art patents or printed publications.”). Here, Petitioners make repeated statements that AAPA is part of the basis of Ground II. *See, e.g.*, Petition at iii (“B. Ground II: Hong, Lee, And AAPA Render Obvious Claims 2, 4, And 5.”) (emphasis added); *id.* at 45 (“Ground II: Hong, Lee, And AAPA Render Obvious Claims 2, 4, And 5”) (emphasis added); *id.* at 51 (“Hong/Lee/AAPA renders obvious claim 4 for the reasons provided in Section X.B.2 [Ground II, Claim 4]. Hong/Lee/AAPA also renders obvious claim 5.”) (emphasis added) (brackets in original). Accordingly, Ground II fails.

VII. VIII. PATENT OWNER’S FINAL COMMENTS

Patent Owner does not concede the legitimacy of any arguments in the Petition that are not specifically addressed herein, and expressly reserves the right to rebut any such arguments in its Patent Owner Response if *inter partes* review is instituted.

Similarly, Patent Owner also does not concede any underlying contentions in the Petition and reserves the right to rebut them later. Additionally, Patent Owner is not limited to the arguments presented here in this Preliminary Response, but expressly reserves the right to raise further arguments, including claim construction arguments, not presented in this Preliminary Response.

VIII. CONCLUSION

For the reasons discussed above, the Board should not institute review.

Dated: June 6, 2025

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CERTIFICATE OF COMPLIANCE WITH WORD COUNT

Pursuant to the March 26, 2025, memorandum entitled “Interim Processes for PTAB Workload Management” and consistent with 37 C.F.R. § 42.24, I certify that this Brief in Support of Discretionary Denial complies with the type-volume limits of the March 26, 2025, memorandum because it contains 4,122 words, excluding the parts of this brief that are exempted by 37 C.F.R. § 42.24(a)(1), according to the word processing system used to prepare this brief.

Dated: June 6, 2025

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I hereby certify that on June 6, 2025, a copy of Patent Owner's Brief in Support of Discretionary Denial has been served in its entirety via email on the following:

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