

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Hisense USA Corporation

Petitioner,

v.

Brightplus Ventures LLC,

Patent Owner

Case No. IPR2023-01168

U.S. Patent No. 9,605,835

**PATENT OWNER'S CONTINGENT MOTION TO AMEND UNDER 37
C.F.R. § 42.121**

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As discussed in the call with the Board, Patent Owner requests preliminary guidance from the Board. Patent Owner understands this will be provided by a date four weeks after Due Date 2.....	28
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I. INTRODUCTION

Patent Owner Brightplus Ventures LLC (“Brightplus” or “Patent Owner”) respectfully submits this contingent request to substitute challenged claims 1-5 of U.S. Patent No. 9,605,835 (the “’835 Patent”). In the instituted trial, the Petitioner Hisense USA Corporation (“Hisense” or “Petitioner”) has challenged the patentability of claims 1-5 and 7-14 as obvious under 35 U.S.C. § 103, as follows:

- Claims 1-5 and 7-14 as obvious in view of Mok, Holman, and Lamb in view of the Knowledge of a POSITA (Ground 1).
- Claims 1-5 and 7-14 as obvious over Epstein, Holman, and Lamb in view of the Knowledge of a POSITA (Ground 2).
- Claims 1-5 and 7-14 as obvious over Ko, Kretman, and Epstein in view of the Knowledge of a POSITA (Ground 3).

Patent Owner submits that this Motion satisfies the statutory and regulatory requirements for a motion to amend the claims under 35 U.S.C. § 316(d) and 37 C.F.R. § 42.121 because the proposed amendments: (i) do not enlarge the scope of the claims or introduce new subject matter; (ii) are responsive to at least one ground of patentability instituted in this proceeding; (iii) are supported by the disclosure of the originally-filed application; and (iv) are patentable over the closest known prior art Mok, Holman, Lamb and Epstein references asserted in the Petition.

II. MOTION TO AMEND IS CONTINGENT

Patent Owner submits that this Motion is contingent upon a finding in a final written decision that challenged claims 1-5 are unpatentable. Specifically, Patent Owner requests the following contingencies:

- if claims 1-5 are found to be unpatentable, substitute proposed amended claims 21, 22, 23, 24 and 25.

III. MOTION TO AMEND PILOT PROGRAM

Patent Owner requests that this Motion be subject to the MTA Pilot Program (84 F.R. 9497). This proceeding was instituted on Jan 23, 2024, *see* Paper 7, and thus qualifies for the MTA Pilot Program effective on March 15, 2019. Patent Owner requests preliminary guidance from the Board on this Motion and whether to file a revised motion to amend. Patent Owner reserves its right to file a revised motion to amend subject to the Board's preliminary guidance.

IV. A REASONABLE NUMBER OF CLAIMS ARE AMENDED

Under 37 C.F.R. §42.121(a)(3), a motion to amend may propose a reasonable number of substitute claims for each challenged claim. Generally, it is presumed “that only one substitute claim would be needed to replace each challenged claim,” but that presumption may be rebutted upon a showing of need. 37 C.F.R. § 42.121(a)(3); *Lectrosonics, Inc. v. Zaxcom, Inc.*, IPR2018-01129, Paper 15 at 4-5 (PTAB Feb. 25, 2019). “An amendment under this subsection may not enlarge the scope of the claims of the patent or introduce new matter.” 35 U.S.C. § 316(d)(3); *Pulse Elecs., Inc. v.*

U.D. Elec. Corp., No. 3:20-cv-01676-BEN-DEB, 2021 U.S. Dist. LEXIS 69938, at *22 (S.D. Cal. 2021). Patent Owner submits that this Motion complies with the requirement because Patent Owner proposes 5 substitute claims for 5 original claims. None of the proposed substitute claims include new matter.

V. THE PROPOSED AMENDMENTS RESPOND TO A GROUND OF UNPATENTABILITY INVOLVED IN THIS TRIAL

Under 37 C.F.R. § 42.121(a)(2)(i), the amendment(s) to the claims must be responsive to at least one ground of unpatentability involved in the trial. In the Institution Decision, the Board determined—in regard to each respective Ground—that:

- (i) “In view of the foregoing, we determine that Petitioner has demonstrated a reasonable likelihood of showing that claims 1–3, 5, 7, and 9–14 would have been obvious over Mok, Holman, and Lamb. We express concerns, however, regarding Petitioner’s analysis for claims 4 and 8.” (Institution Decision at 37)
- (ii) “In view of the foregoing, we determine that Petitioner has demonstrated a reasonable likelihood of showing that claims 1–5 and 7–14 would have been obvious over Epstein, Holman, and Lamb.” (Institution Decision at 56)
- (iii) “For the reasons given above, we are not persuaded by Petitioner’s showing for claim 1. Because claims 2–5 and 7–14 depend from claim 1, we also are not persuaded by Petitioner’s showing for these

dependent claims.” (Institution Decision at 61)

As set forth below, the amendments recited in proposed substitute claims 21, 22, 23, 24 and 25 add further new limitations that render the claim patentable over the closest known prior art —the combination of Mok with Holman and Lamb; Epstein with Holman and Lamb; and Ko, Kretman, and Epstein cited in the Petition. Therefore, Patent Owner submits that the amendments recited in proposed substitute claims 21, 22, 23, 24 and 25 are directly responsive to the grounds of unpatentability involved in the trial.

VI. THE PROPOSED AMENDMENTS DO NOT SEEK TO ENLARGE THE SCOPE OF THE CHALLENGED CLAIMS

The proposed amendments to the challenged claims of the '835 Patent are listed in Appendix A below. The proposed amendments are indicated with underlining for the additional limitations that have been added and strikethroughs for deletions. Under 35 U.S.C. § 316(d)(3) and 37 C.F.R. § 42.121(a)(2)(ii), a motion to amend may not seek to enlarge the scope of the challenged claims. This Motion satisfies the requirement because the amendments recited in proposed substitute claims 21, 22, 23, 24 and 25 add further new limitations to the challenged claims and, thus, further narrow the scope of these claims.

With respect to substitute claim 21, independent claim 1 has been rewritten to include the addition of the claim limitation “wherein the reflector is extended and angled with respect to the surface of the substrate” which further limits the claim’s scope to require the reflector to extend and angle with respect to the substrate surface.

With respect to substitute claim 22, original claim 2 has been substituted with a dependent claim from proposed substitute independent claim 21. The limitation “wherein the diffuser sheet contacts the reflector” further limits the scope of proposed substitute claim 21 to the exclusion of interpretations that the diffuser sheet is on the reflector via intervening elements.

With respect to substitute claim 23, original claim 3 has been substituted with a dependent claim from proposed substitute independent claim 21. The limitation “wherein the reflector forms a reflective optical cavity around at least one solid state lighting device” further limits the claim’s meaning to the require the reflector to form a reflective optical cavity around at least one solid state lighting device.

With respect to substitute claim 24, original claim 4 has been substituted with a dependent claim from proposed substitute dependent claim 23. In addition to the added limitation of claim 23, the limitation “wherein the diffuser sheet contacts the reflector” further limits the claim’s meaning to the exclusion of interpretations that the diffuser sheet is on the reflector via intervening elements.

With respect to substitute claim 25, original claim 5 has been substituted with a dependent claim from proposed substitute independent claim 21. The limitation “wherein the reflector forms one or more reflective optical cavities around at least one solid state lighting device” further limits the claim’s meaning to the require the reflector to form one or more reflective optical cavity around at least one solid state lighting device.

Patent Owner submits that the proposed amendments recited in substitute

claims 21, 22, 23, 24 and 25 further narrow the scope of original challenged claims 1-5, and therefore comply with the statutory and regulatory requirements of 35 U.S.C. § 316(d)(3) and 37 C.F.R. § 42.121(a)(2)(ii).

VII. THE PROPOSED AMENDMENTS DO NOT INTRODUCE NEW SUBJECT MATTER

Under 35 U.S.C. § 316(d)(3) and 37 C.F.R. § 42.121(a)(2)(ii), a motion to amend may not introduce new subject matter. Patent Owner submits this requirement is satisfied because the claim limitations recited in proposed substitute claims 21, 22, 23, 24 and 25 find support in the specification of the '835 Patent.

A. Proposed Substitute Claim 21 Is Supported by the Specification of the '835 Patent

Support for the amendment in this proposed substitute claim can be found in the '835 Patent at Figs. 5A and 7; 11:43-47; and 11:49-51. The '835 Patent's inventions are not limited to a flat reflector, instead as seen in the Figures, the reflector 50 is extended and angled with respect to surface of substrate 10.

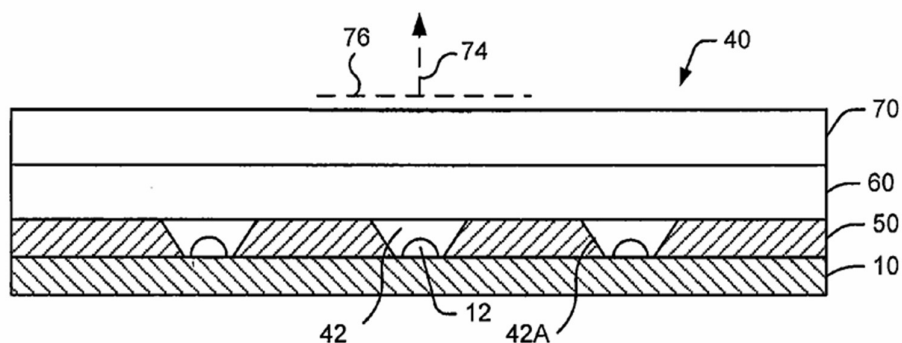


FIGURE 5A

B. Proposed Substitute Claims 22 and 24 are Supported by the

Specification of the '835 Patent

Proposed substitute claims 22 and 24 include all of the limitations of original claim 1, the additional limitation of claim 21, and the addition of the claim limitation “wherein the diffuser sheet contacts the reflector.” Support for the amendment in claims 22 and 24 can be found in the '835 Patent at Figs. 5A, 5B, 7; 6:66-7:12; 11:52-54; and 12:2-3. Specifically, the '835 Patent demonstrates that the diffuser sheet contacts the reflector without the need for any intervening elements therebetween.

C. Proposed Substitute Claims 23, 24, and 25 are Supported by the Specification of the '835 Patent

Proposed substitute claim 23 which depends from proposed substitution claim 21 includes the added limitation in claim 21 as well as the claim limitation “wherein the reflector forms a reflective optical cavity around at least one solid state lighting device.” Support for the additional limitation in claim 23 can be found in the '835 Patent at Figs. 5A, 7; 3:42-51; and 11:35-51. Specifically, the '835 Patent demonstrates that the reflector can form at least one reflective optical cavity around at least one solid state lighting device. This disclosure also supports the limitation added in dependent claim 25. As claim 24 depends from claim 23, this disclosure also supports claim 24.

VIII. THE PROPOSED SUBSTITUTE CLAIMS 21-25 ARE PATENTABLE

A. Claim 21 Compared to Mok, Holman, Lamb, Epstein, Ko and Kretman

Mok is a published U.S. Patent application titled “Light Emitting Panel.” Mok is directed to a light emitting panel including a plurality of light emitting elements

and “one or more lighting conditioners... receive and condition light produced by the light emitting elements.” Mok, Abstract.

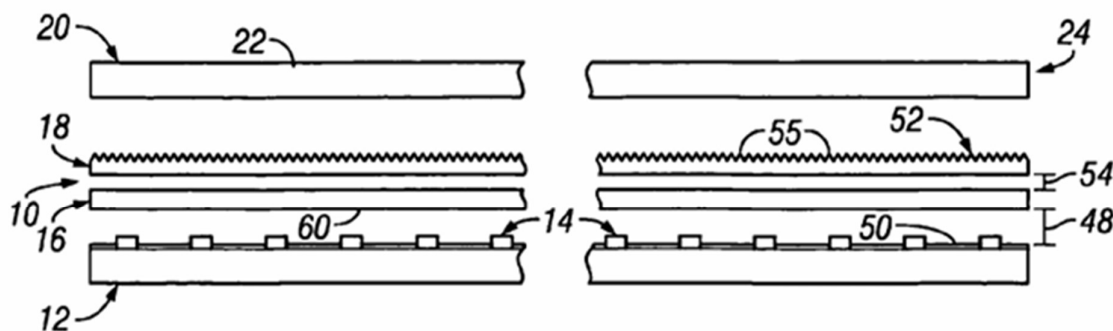


FIG. 1

As shown in Fig. 1 above, Mok discloses a “reflective surface 50” provided on the base panel 12. EX 1005 at ¶0021.

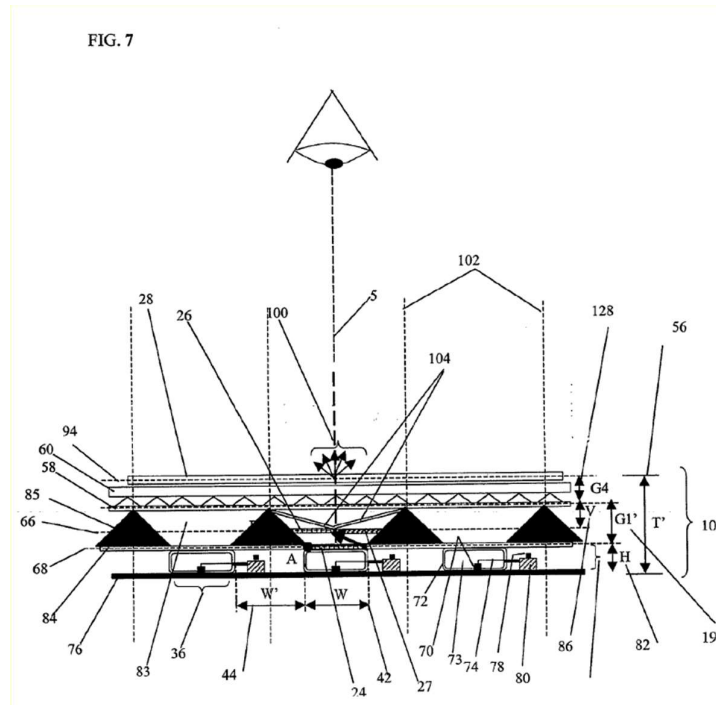
Mok is silent about a reflector that is angled with respect to the base panel. EX 2006 at ¶ 48. As shown in Fig. 1 above, the reflector surface 50 is only shown as being flat or parallel with respect to the base panel 12. *Id.*

This is the exact opposite of the inventions of the ’835 Patent, wherein the reflector 50 is angled and extended with respect to the substrate 10. *Id.*

Patent Owner submits that Mok, by being wholly silent on the reflector being angled and extending with respect to the base panel 12, does not render obvious proposed substitute claim 21, which specifically recites those elements.

Holman is a published international application titled “Uniform Illumination System.” Holman is directed to multi-layered LED light source array the employs

reflectors, elevated prismatic films, and polarization converting films to collimate light for optical illumination of an LCD Panel.



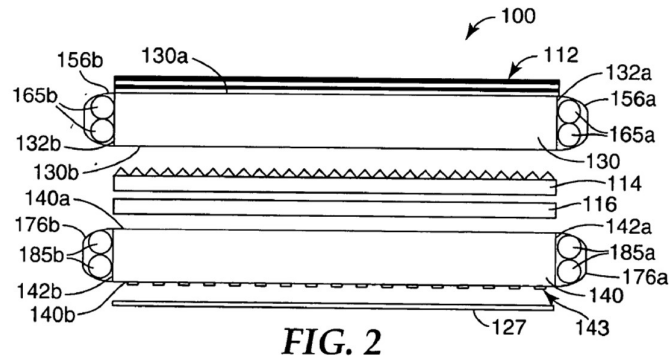
As shown in Fig. 7 above, Holman discloses a “reflecting layer 76.” EX 1006 at pp. 37-38.

Holman is silent about a reflector that is angled with respect to the base panel. EX 2006 at ¶ 41. As shown in Fig. 7 above, the reflecting layer 76 is only shown as being flat. *Id.* This is the exact opposite of the invention of the ’835 Patent, wherein the reflector 50 is angled and extended with respect to the substrate 10.

Patent Owner submits that *Holman*, by being wholly silent on the reflect sheet being angled, does not render obvious proposed substitute claim 21, which specifically recites those elements.

Lamb is a published U.S. Patent application titled “Multiple Lightguide

Backlight.” Lamb is directed to a side lighting or edge lighting systems using cold cathode fluorescent lamps. EX 1007 at ¶ [0034].



As shown in Fig. 2 above, Lamb discloses that the backlight system 100 includes a “diffuser sheet 116 and a reflector sheet 127.” *Id.* at ¶ 0048.

First, Lamb does not teach a reflector mounted to a substrate. EX 2006 at ¶ 42. Second, Lamb does not describe a reflector that is extended or angled with respect to a substrate. *Id.* As shown in Fig. 2 above, reflector sheet 127 is only shown as being flat. To the extent that one would argue that Fig. 1 (shown below) discloses the proposed amendment, Patent Owner argues that the shaped reflector 17 is not angled and extended with respect to a substrate.

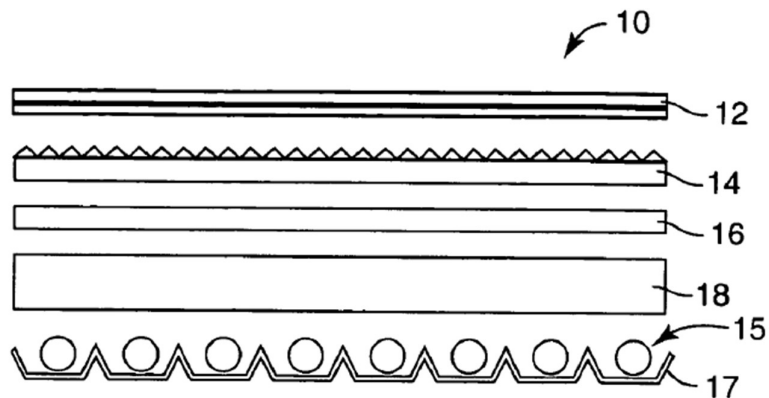


FIG. 1
PRIOR ART

This is the exact opposite of the invention of the '835 Patent, wherein the reflector 50 is angled and extended with respect to the substrate 10. Patent Owner submits that Lamb, being wholly silent on the reflector being angled and extending with respect to a substrate does not render obvious proposed claim 21, which specifically recites those elements.

Epstein is a published U.S. Patent application titled "LED Array Systems." Epstein is directed to an array of LEDs on a substrate over which an intermediate layer and a guiding layer are arranged. EX 1008 at ¶0005.

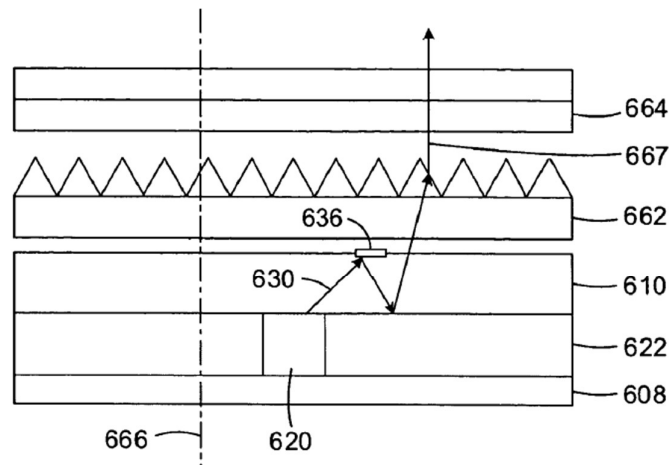


FIG. 11

As shown in Fig. 1 above, Epstein discloses an “intermediate layer 622, which may be a reflecting film” provided on the substrate 608. *Id.* at ¶0067.

Epstein is silent about a reflector that is angled with respect to the base panel. EX 2006 at ¶ 39. As shown in Fig. 11 above, the intermediate layer 622 is not shown to be angled and extended with respect to substrate 608. *Id.* This is the exact opposite of the invention of the ’835 Patent, wherein the reflector 50 is angled and extended with respect to the substrate 10. Patent Owner submits that Epstein by being wholly silent on the reflect sheet being angled and extending with respect to substrate 608 does not render obvious proposed substitute claim 21, which specifically recites those elements.

Ko is a published U.S. Patent application titled “Direct-Lit Liquid Crystal Displays with Laminated Diffuser Plates.” Ko is directed to an LCD directly illuminated from behind employing cold cathode fluorescent lamps (CCFLs) as a light source mounted above. EX 1009 at ¶ 0003 and Fig. 1.

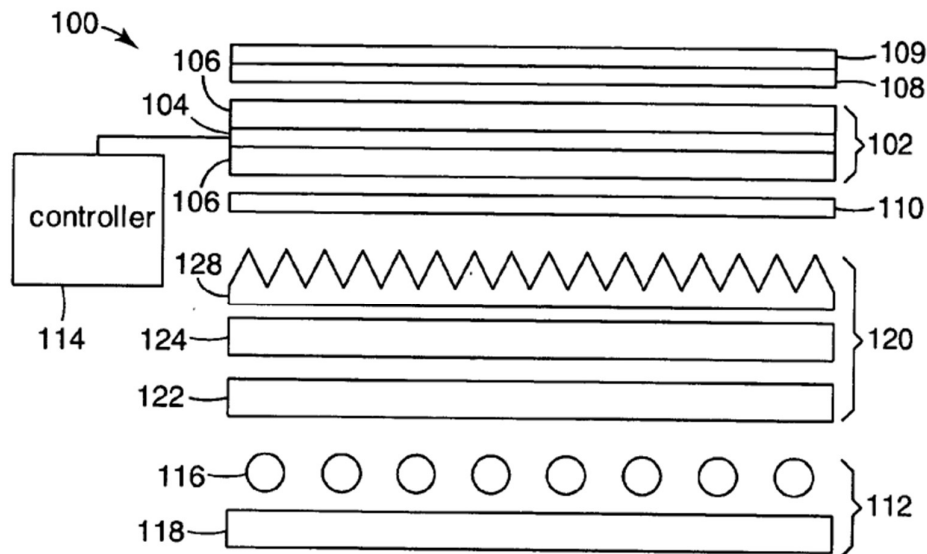


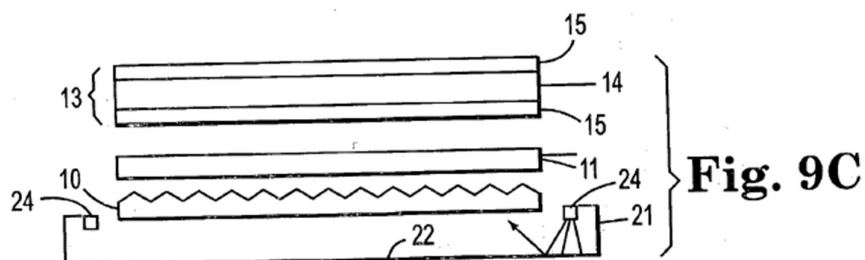
FIG. 1

As shown in Fig. 1 above, Ko discloses “a reflector 118, which may be a specular reflector or may be a diffuse reflector for reflecting light.” EX 1009 at ¶0043.

Ko is silent about a reflector that is angled with respect to the base panel. As shown in Fig. 1 above, reflector 118 is only shown as being flat or parallel. Additionally, the reflector is not angled or extended with respect to another substrate. This is the exact opposite of the inventions of the '835 Patent, wherein the reflector 50 is angled and extended with respect to the substrate 10. Patent Owner submits that Ko, by being wholly silent on the reflector being angled and extending with respect to a substrate, does not render obvious proposed substitute claim 21, which specifically recites those elements.

Kretman is a published U.S. Patent application titled “Diffuse Reflective Articles.” Kretman is directed to a diffuse reflective article employed in a CCFL

side light, edge lighting or light back scattering arrangement. EX 1010 at ¶ 0085 and Figs. 9A-9E



As shown in Fig. 9C above, Kretman discloses “[an] diffuse reflector 22” EX 1010 at ¶0087. Kretman is silent about a reflector that is angled with respect to the base panel. As shown in Fig. 1 above, reflector 118 is only shown as perpendicular or parallel, and never angled with respect to a substrate. This is the exact opposite of the inventions of the ’835 Patent, wherein the reflector 50 is angled and extended with respect to the substrate 10. Patent Owner submits that Kretman, by being wholly silent on the reflector being angled and extending with respect to a substrate, does not render obvious proposed substitute claim 21, which specifically recites those elements.

Additionally, the prior art cited in Grounds 1-3 in combination does not render proposed amended claim 21 obvious as none of the prior art discloses or suggests the proposed amendment.

B. Claim 22 and 23 Compared to Mok, Holman, Lamb, Epstein, Ko and Kretman

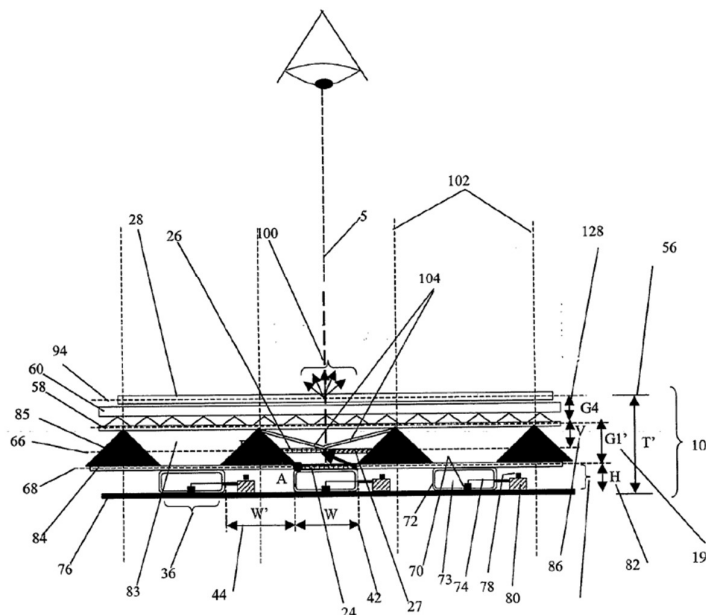
Mok is discussed above, and the summary previously provided is incorporated

by reference. Mok specifically describes that “[t]he diffuser 16 is positioned in spaced-apart relation to the base panel 12 so that it received and diffuses light produced by the light emitting elements 14 as well as light that may be reflected by the reflective surface 5. The diffuser 16 may be mounted in front of the base panel 12 and separated therefrom by a spaced-distance 48.” EX 1005 at ¶¶ 0022 - 0023. Further, and as shown in Fig. 1, the diffuser 16 is positioned apart from the base panel 12, so it will not contact the reflector surface 50. EX 2006 at ¶ 38.

Patent Owner submits that because Mok discloses only a diffuser being spaced away from the base panel 12, this does not render obvious proposed substitute claims 22 and 24, which specifically recite that the diffuser sheet contacts the reflector.

Holman is discussed above, and the summary provided is incorporated by reference.

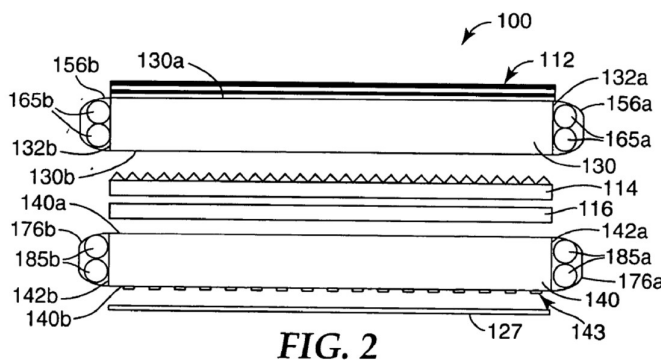
FIG. 7



As shown in Fig. 7 above, *Holman* discloses a “reflecting layer 76.” EX 1006 at pp. 37-38. It also discloses a “diffusively scattering layer 68.” *Id.* at pp. 44.

Holman is silent about the diffusively scattering layer 68 contacting the reflective layer 76. EX 2006 at 21. This is the exact opposite of the inventions of the ’835 Patent, wherein the diffuser sheet contacts the reflector. Patent owner submits that *Holman*, by being wholly silent on the diffuser sheet contacting the reflector, does not render obvious proposed substitute claims 22 and 24, which specifically recite those elements.

Lamb is discussed above, and the summary provided is incorporated by reference.



As shown in Fig. 2 above, Lamb discloses that the backlight system 100 includes a “diffuser sheet 116 and a reflector sheet 127.” Further, “The diffuser sheet primarily serves to increase the spatial uniformity of the light exiting the second lightguide [through side 140a] 140... The reflector sheet 127 may further increase efficiency of the backlighting system 100 by reflecting back light that escapes through the side

140b of the lightguide 140,” EX 1008 at ¶ [0048].

Lamb illustrates that diffuser sheet 116 and reflector sheet 127 are separated. EX 2006 at ¶ 43. As shown in Fig. 2 above, diffuser sheet 116 is intended to receive light from the lightguide at side 140a, and the reflector sheet 127 is intended to receive light from the lightguide at side 140b. This is the exact opposite of the inventions of the '835 Patent, wherein the diffuser sheet contacts the reflector.

Patent Owner submits that Lamb by teaching the diffuser sheet 116 and reflector sheet 127 to be on opposite sides of the lightguide 140 does not render obvious proposed substitute claims 22 or 24, which specifically recite that the diffuser sheet contacts the reflector.

Epstein is discussed above, and the summary provided is incorporated by reference. Epstein describes that “[a] diffuser 1902, such as a volume diffuser, is positioned on the far side of the guiding layer 20 from the LED 620. Where the diffuser is a volume diffuser, the volume diffuser may be located within the guiding layer 610. The diffuser 1902 is used to reduce the amount of light that passes directly through the guiding layer 610.” EX 1008 at ¶ [0084].

Epstein distinguished between the diffuser 1902 and the guiding layer 610. As shown in Fig. 19A below, the diffuser 1902 is on top or above of the guiding layer 610. Epstein does not identify or disclose the guiding layer 610 as a diffuser. EX 2006 at ¶ 39. For example, it states “The guiding layer 410 is typically transparent to the light emitted by the LED 420 and may be formed, for example, from a transparent polymer...” EX 1008 at ¶ [0047].

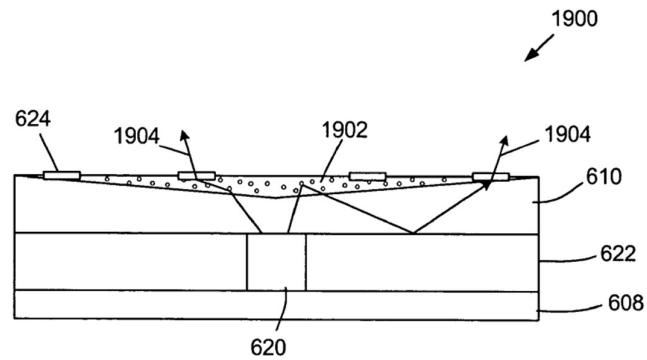


FIG. 19A

This is the exact opposite of the invention of the '835 Patent, wherein the diffuser sheet contacts the reflector.

Patent Owner submits that Epstein, by only contemplating the diffuser being on top of the guiding layer 610, does not render obvious proposed substitute claims 22 and 24, which specifically recite that the diffuser sheet contacts the reflector.

Ko is discussed above, and the summary provided is incorporated by reference.

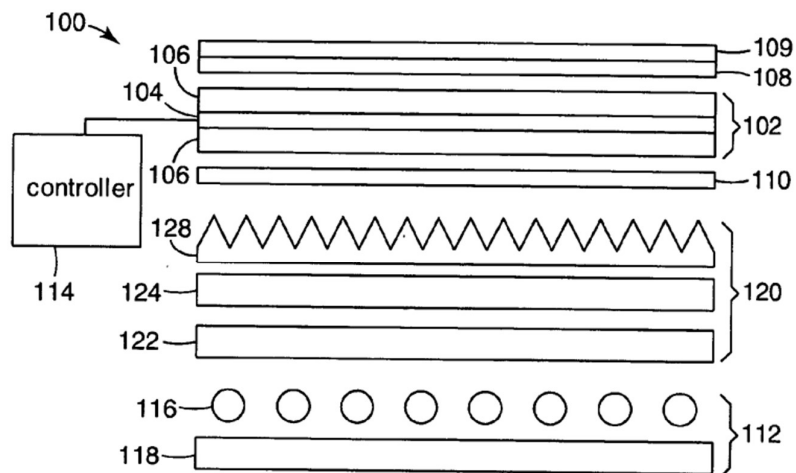
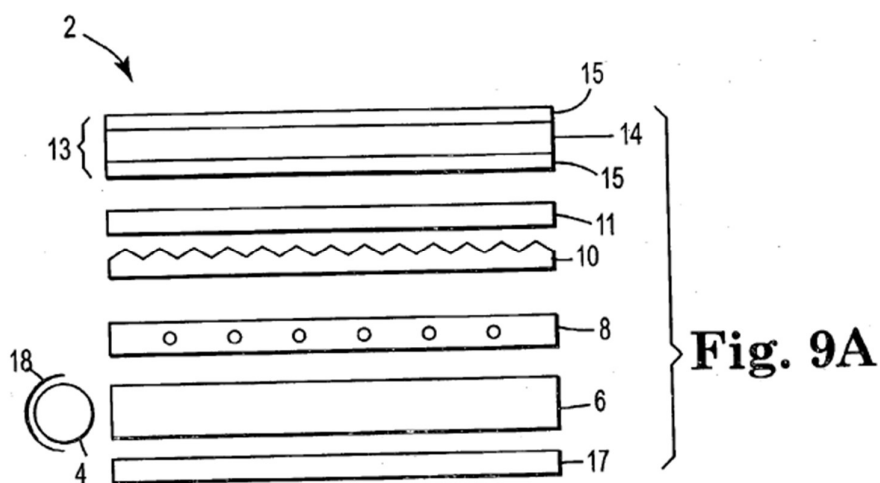


FIG. 1

As shown in Fig. 1 above, Ko discloses a diffuser plate 122 EX 1009 at ¶0044.

Ko is silent about the diffuser plate 122 contacting the reflector 118. As shown in Fig. 1, the two elements are spaced apart. This is the exact opposite of the inventions of the '835 Patent, wherein the diffuser sheet contacts the reflector. Patent Owner submits that Ko, by being wholly silent on the diffuser sheet contacting the reflector, does not render obvious proposed substitute claims 22 and 24, which specifically recite those elements.

Kretman is discussed above, and the summary provided is incorporated by reference.



As shown in Fig. 9A above, Kretman discloses a diffuser 8 EX 1010 at ¶0080.

Kretman is silent about the diffuser 8 contacting the reflector 18 referenced in Fig. 9A or the diffuser 80 contacting the reflector polarizing sheets 38 referenced in Fig. 9F. As shown in Figs. 9A and 9F, the two elements are spaced apart. This is the exact opposite of the inventions of the '835 Patent, wherein the diffuser sheet contacts the reflector. Patent owner submits that Kretman, by being wholly silent on the

diffuser sheet contacting the reflector, does not render obvious proposed substitute claims 22 and 24, which specifically recite those elements.

Additionally, the prior art cited in Ground 1-3 in combination does not render proposed amended claims 22 or 24 obvious as none of the prior art discloses or suggests the proposed amendments.

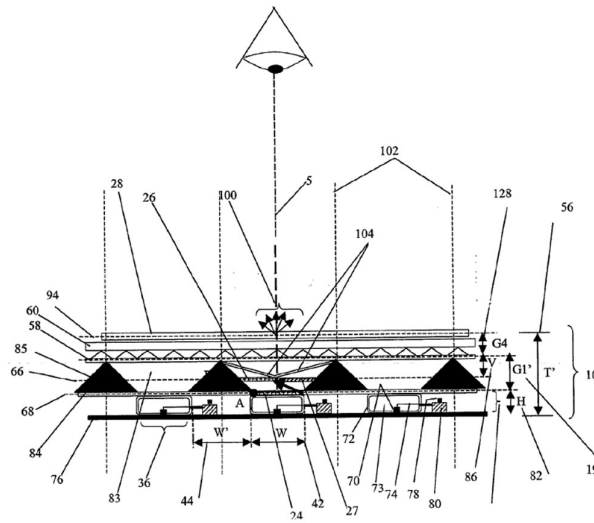
C. Claims 23, 24, and 25 Compared to Mok, Holman, Lamb, Epstein, Ko and Kretman

Mok is discussed above, and the summary provided is incorporated by reference. Mok is silent about the reflector forming reflective optical cavities. EX 2006 at ¶ 38. In Fig. 1 of Mok, the light emitting elements 14 protrude above the flat reflector 50. However, Fig. 5A of the '835 Patent illustrates an optical cavity 42 around the lighting element.

Patent Owner submits that Mok does not demonstrate optical cavities as taught by the '835 Patent, and therefore does not render obvious proposed substitute claims 23, 24, or 25, which specifically recite that the reflector forms one or more optical cavities around at least one solid state lighting device.

Holman is discussed above, and the summary provided is incorporated by reference.

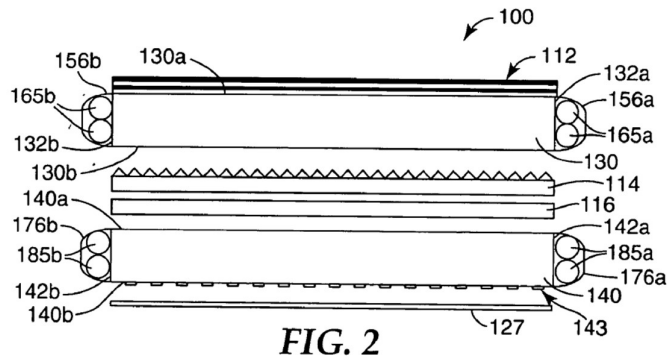
FIG. 7



As shown in Fig. 7 above, Holman discloses a “reflecting layer 76.” EX 1006 at pp. 37-38. Holman is silent about the reflecting layer 76 forming reflective optical cavities. EX 2006 at ¶ 41. As shown above, the reflecting layer 76 is flat and is not around the light elements. *Id.* For clarity, the confining structure 72 is not a part of the reflecting layer and is a separate component. *Id.*

Patent Owner submits that Holman does not demonstrate optical cavities as taught by the '835 Patent, and therefore does not render obvious proposed substitute claims 23, 24, or 25, which specifically recite that the reflector forms one or more optical cavities around at least one solid state lighting device.

Lamb is discussed above, and the summary provided is incorporated by reference.



As shown in Fig. 2 above, Lamb discloses that the backlight system 100 comprises “a reflector sheet 127.” EX 2008 at ¶ 0048.

Lamb is silent about the reflector sheet 127 forming reflective optical cavity(s), as it is flat and is not around the light element as demonstrated in the ’835 Patent. EX 2006 at ¶ 43.

Patent Owner submits that Lamb does not demonstrate optical cavities as taught by the ’835 Patent, and therefore does not render obvious proposed substitute claims 23, 24, or 25, which specifically recite that the reflector forms one or more optical cavities around at least one solid state lighting device.

Epstein is discussed above, and the summary provided is incorporated by reference.

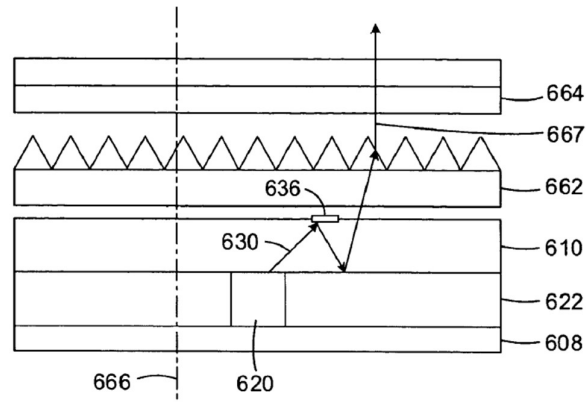


FIG. 11

As shown above in Fig. 11, Epstein discloses an intermediate layer with an LED inserted within. Epstein further teaches that guiding layer includes “apertures 423, also referred to as vias,” EX 1008 at ¶0048. However, an aperture is not equivalent to the optical cavities as taught by the ‘835 Patent. EX 2006 at ¶ 39. For example, Fig. 5A of the ‘835 Patent illustrates a reflector that forms an optical cavity around at least one solid state lighting device.

Patent Owner submits that Epstein by only contemplating apertures in the intermediate layer, does not render obvious proposed substitute claims 23, 24, or 25, which specifically recite that the reflector forms one or more optical cavities around at least one solid state lighting device.

Ko is discussed above, and the summary provided is incorporated by reference.

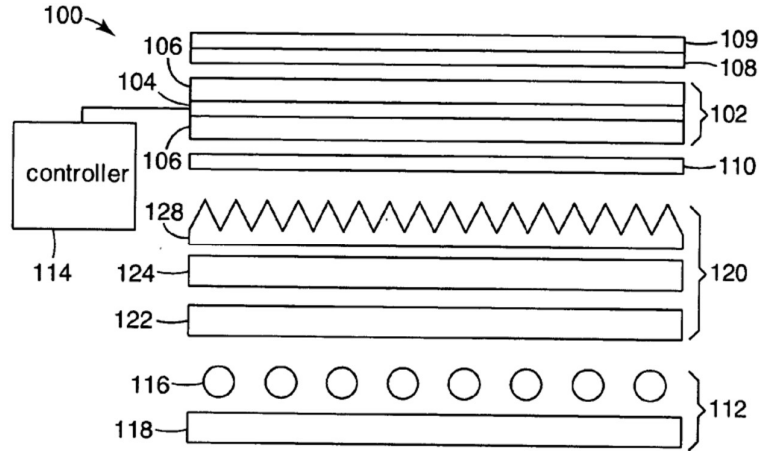


FIG. 1

As shown in Fig. 1 above, Ko discloses “a reflector 118, which may be a specular reflector or may be a diffuse reflector for reflecting light” EX 1009 at ¶0043.

Ko is silent about the reflector 118 forming reflective optical cavity(s), as it is flat and is not around the light element as demonstrated in the '835 Patent. Patent Owner submits that Ko does not demonstrate optical cavities as taught by the '835 Patent, and therefore does not render obvious proposed substitute claims 23, 24, or 25, which specifically recite that the reflector forms one or more optical cavities around at least one solid state lighting device.

Kretman is discussed above, and the summary provided is incorporated by reference. In Fig. 9C of Kretman, the light emitting elements 24 are at the topmost edge of the optical cavity. However, Fig. 5A of the '835 Patent illustrates an optical cavity 42 around the lighting element. Patent Owner submits that Kretman does not demonstrate optical cavity(s) around at least one solid state lighting device as taught by the '835 Patent, and therefore does not render obvious proposed substitute claims

23, 24, or 25, which specifically recite that the reflector forms one or more optical cavities around at least one solid state lighting device.

Additionally, the prior art cited in Grounds 1-3 in combination does not render proposed amended claims 23, 24 or 25 obvious as none of the prior art discloses or suggests the proposed amendments.

D. The Advantages of the Amendments Recited in Proposed Substitute Claims 21, 22, 23, 24 and 25

There are many advantages to the features recited in the amendments set forth in this Motion. For example:

- One significant advantage of the amendment recited in claim 21 is that the reflector being angle and extended with respect to the substrate better disperses incident light so that it is reflected randomly, which ultimately improves light uniformity of the lighting panel. (*See*, '835 Patent at 11:43-47)
- One significant advantage of the amendments recited in claims 23 and 24 is that the diffuser sheet contacting the reflector results in an overall thinner panel. EX 2006 at ¶ 48.
- One significant advantage of the amendment recited in claims 23, 24, and 25 is that the optical cavities help reflect all the light emitted from the solid state lighting device, which ultimately helps improve light recycling and uniformity. *Id.* at ¶ 38.

IX. PRIORITY

All of the proposed substitute claims contain subject matter included in and

supported by the original disclosure of the '835 Patent and, therefore, claim priority to the original disclosure.

X. REQUEST FOR PRELIMINARY GUIDANCE

As discussed in the call with the Board, Patent Owner requests preliminary guidance from the Board. Patent Owner understands this will be provided by a date four weeks after Due Date 2.

XI. CONCLUSION

For the reasons set forth herein, Patent Owner submits that proposed substitute claims 21, 22, 23, 24, and 25 satisfy all of the statutory requirements for a motion to amend set forth in paragraphs (1) and (3) of 35 U.S.C. § 316(d) and paragraphs (a)(1), (a)(2), (a)(3), (b)(1) and (b)(2) of 37 C.F.R. § 42.121 and respectfully requests the Motion be granted contingent upon a finding that the challenged claims 1-5 are unpatentable.

Respectfully Submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that the above-captioned Mandatory Notice was served on counsel of record for the Petitioner by filing this document through the Patent Review Processing System as well as by delivering a copy via electronic mail to:

MFerrario@kilpatricktownsend.com (Lead Counsel)
MMorlock@kilpatricktownsend.com (Back-Up Counsel)

Dated April 23, 2024

/Neal Massand/
Neal Massand (Reg. No. 54,296)

APPENDIX A

(Proposed Amendments)

1.(original) A lighting panel, comprising:

at least one substrate having a first side parallel to a principal plane of the lighting panel;

a plurality of solid state lighting devices arranged on the first side of the at least one substrate and configured to emit light;

a reflector on the first side of the at least one substrate;

a brightness enhancement film on the reflector, wherein the reflector is arranged between the at least one substrate and the brightness enhancement film and the brightness enhancement film is configured to preferentially emit light having a first orientation from the lighting panel and to preferentially reflect light having a second orientation, different from the first orientation, back into the lighting panel, and

a generally planar diffuser sheet between the reflector and the brightness enhancement film, wherein the light having the second orientation that is reflected back into the lighting panel is recycled within at least the diffuser sheet.

2. (original) The lighting panel of claim 1, wherein the reflector comprises a coating on the substrate that is configured to reflect and scatter light incident thereon.

3. (original) The lighting panel of claim 1, wherein the reflector comprises a reflector sheet that is configured to reflect and scatter light incident thereon.

4. (original) The lighting panel of claim 1, further comprising at least one additional layer on the brightness enhancement film configured to diffuse, polarize, collimate and/or reflect light.

5. (original) The lighting panel of claim 3, wherein the reflector sheet includes a plurality of apertures therethrough, wherein respective ones of the plurality of apertures aligned with corresponding ones of the plurality of solid state lighting devices.

21. (proposed substitute for Claim 1) A lighting panel, comprising:

at least one substrate having a first side parallel to a principal plane of the lighting panel;

a plurality of solid state lighting devices arranged on the first side of the at least one substrate and configured to emit light;

a reflector on the first side of the at least one substrate, wherein the reflector is extended and angled with respect to the surface of the substrate;

a brightness enhancement film on the reflector, wherein the reflector is arranged between the at least one substrate and the brightness enhancement film and the brightness enhancement film is configured to preferentially emit light having a first orientation from the lighting panel and to preferentially reflect light having a second orientation, different from the first orientation, back into the lighting panel, and

a generally planar diffuser sheet between the reflector and the brightness enhancement film, wherein the light having the second orientation that is reflected back into the lighting panel is recycled within at least the diffuser sheet.

22. (proposed substitute for Claim 2) The lighting panel of claim 1, ~~wherein the reflector comprises a coating on the substrate that is configured to reflect and scatter light incident thereon~~ wherein the diffuser sheet contacts the reflector.

23. (proposed substitute for Claim 3) The lighting panel of claim 1, ~~wherein the reflector comprises a reflector sheet that is configured to reflect and scatter light incident thereon~~ wherein the reflector forms a reflective optical cavity around at least one solid state lighting device.

24. (proposed substitute for Claim 4) The lighting panel of claim 23, ~~further comprising at least one additional layer on the brightness enhancement film configured to diffuse, polarize, collimate and/or reflect light,~~ wherein the diffuser sheet contacts the reflector.

25. (proposed substitute for Claim 5) The lighting panel of claim 1 3, wherein the reflector forms at least one reflective optical cavity around at least one solid state lighting device.