

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION**

MAXELL, LTD.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 5:24-cv-00088
	)	
CORETRONIC CORP., OPTOMA CORP.,	)	JURY TRIAL DEMANDED
	)	
Defendants.	)	
_____	)	

DEFENDANTS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

TABLE OF CONTENTS

I.	Introduction.....	1
II.	Legal Standard	1
III.	Level of Ordinary Skill	3
IV.	The Court Should Adopt Defendants’ Proposed Constructions	3
A.	The ’988 Patent (Dkt. 84-7).....	3
	1. “projection optical unit [for]”; “a first projection optical unit [for]”; and “a second projection optical unit”	3
	a) Section 112 ¶6 Applies	3
	b) Plaintiff’s Proposed Construction Should be Rejected.....	6
B.	The ’580 Patent (Dkt. 84-8).....	8
	1. “light separation optic system”.....	8
	a) Section 112 ¶ 6 Applies	8
	b) Because Section 112 ¶ 6 Applies, Defendants’ Proposed Function and Structure Should be Adopted.....	10
	c) Plaintiff’s Proposed Construction Should be Rejected.....	11
	2. “light modulation means”.....	12
	a) Defendants’ Proposed Function Should be Adopted.....	12
	b) Defendants’ Proposed Structure Should be Adopted.....	13
	3. “separation mirror”	15
	4. “light flux capturing means”	15
	a) Defendants’ Proposed Function Should be Adopted.....	15
	b) Defendants’ Proposed Structure Should be Adopted.....	16
C.	The ’226 Patent (Dkt. 84-9).....	18
	1. “an emission side of the excitation light relative to the fluorescent material”	18

a)	The Disputed Phrase is Nonsensical and Indefinite.....	18
b)	If not Indefinite, Defendants’ Construction Should be Adopted as Being Consistent with the Claim Language and Specification	19
2.	“the optical member has a curvature that is set such that a light- condensing position of the excitation light of positioned on an emission side of the excitation light relative to the fluorescent material”	22
3.	“a front side of the fluorescent material”	24
D.	The ’388 Patent (Dkt. 84-10)	25
1.	“Retinex processing unit”	25
a)	Section 112(f) Applies	25
b)	The Disputed Claim Term Should be Found Indefinite as the Specification Fails to Disclose Sufficient Structure	27
2.	“video composing unit”	28
a)	Section 112(f) Applies	28
b)	The Disputed Claim Term Should be Found Indefinite as the Specification Fails to Disclose Sufficient Structure	29
V.	Conclusion	30

TABLE OF AUTHORITIES

	Page(s)
Cases	
<i>Align Tech., Inc. v. 3Shape A/S</i> , No. 17-1648-LPS, 2021 WL 2320139 (D. Del. June 7, 2021).	10
<i>Biodex Corp. v. Loredan Biomedical, Inc.</i> , 946 F.2d 850 (Fed. Cir. 1991).....	18
<i>Blitzsafe Texas, LLC v. Subaru Corp.</i> , No. 2:17-CV-00421-JRG-RSP, 2018 WL 6504174 (E.D. Tex. Dec. 11, 2018).....	9
<i>Canon, Inc. v. TCL Elecs. Holdings Ltd.</i> , No. 2:28-cv-546-JRG, 2020 WL 2098197 (E.D. Tex. May 1, 2020).....	5, 6
<i>Cellular Commc’n. Equip. LLC v. HTC Corp.</i> , No. 6:13-cv-507, 2015 WL 10741012 (E.D. Tex. Mar. 9, 2015).....	2
<i>Chef Am., Inc. v. Lamb-Weston, Inc.</i> , 358 F.3d 1371 (Fed. Cir. 2004).....	18
<i>Diebold Nixdorf, Inc. v. Int’l Trade Comm’n</i> , 899 F.3d 1291 (Fed. Cir. 2018).....	2
<i>Dionex Softron GmbH v. Agilent Techs., Inc.</i> , 811 F. App’x 630 (Fed. Cir. 2020)	2
<i>Intell. Ventures I, LLC v. Canon Inc.</i> , No. 13-473-SLR, 2015 WL 1458035 (D. Del. Mar. 27, 2015)	26
<i>Intellect Wireless, Inc. v. Kyocera Commc’ns, Inc.</i> , No. 08 C 1350, 2010 WL 2680538 (N.D. Ill. Jun. 29, 2010)	21
<i>Interval Licensing LLC v. AOL, Inc.</i> , 766 F.3d 1364 (Fed. Cir. 2014).....	11, 12
<i>Joao Control & Monitoring Sys., LLC v. Protect Am., Inc.</i> , No. 1-14-CV-134-LY, 2015 WL 4937464 (W.D. Tex. Aug. 18, 2015).....	2, 26
<i>Lennon Image Techs., LLC v. Macy’s Inc.</i> , No. 2:13-CV-235-JRG, 2014 WL 3830136 (E.D. Tex. Aug. 1, 2014).....	13, 14, 16
<i>Littelfuse, Inc. v. Mersen USA EP Corp.</i> , 29 F.4th 1376 (Fed. Cir. 2022)	20

<i>Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.</i> , 248 F.3d 1303 (Fed. Cir. 2001).....	2
<i>MTD Prods. Inc. v. Iancu</i> , 933 F.3d 1336 (Fed. Cir. 2019).....	9
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005).....	18, 21
<i>Saint Lawrence Commc’ns LLC v. ZTE Corp.</i> , No. 2:15-cv-349-JRG, 2016 WL 6275390 (E.D. Tex. Oct. 25, 2016)	2
<i>Synchronoss Techs., Inc. v. Dropbox, Inc.</i> , 987 F.3d 1358 (Fed. Cir. 2021).....	19
<i>Trs. of Columbia Univ. v. Symantec Corp.</i> , 811 F.3d 1359 (Fed. Cir. 2016).....	19
<i>Typhoon Touch Techs., Inc. v. Dell, Inc.</i> , 659 F.3d 1376 (Fed. Cir. 2011).....	30
<i>Vulcan Eng’g Co., Inc. v. Fata Aluminium, Inc.</i> , 278 F.3d 1366 (Fed. Cir. 2002).....	15
<i>Williamson v. Citrix Online, LLC.</i> , 792 F.3d 1339 (Fed. Cir. 2015).....	1, 2
<i>WSOU Invs. LLC v. Google LLC</i> , No. 2022-1064, 2023 WL 6531525 (Fed. Cir. Oct. 6, 2023).....	26, 27
Statutes	
35 U.S.C. § 112.....	<i>passim</i>
Other Authorities	
Fed. R. Evid. 702	21

I. Introduction

Each of Defendants’ proposed constructions is supported by and consistent with the law and the language of the claims and specification. Plaintiff’s proposed constructions, however, which largely ask the Court to adopt the “plain and ordinary meaning” of the disputed terms, are not only unsupported by the intrinsic evidence but also ignore that many of those claim terms include nonce words which lack any plain and ordinary meaning. Indeed, Plaintiff criticizes Defendants’ position that several of the disputed terms should be construed as means-plus-function (“MPF”) terms subject to 35 U.S.C. §112 paragraph 6 (hereinafter, “Section 112 ¶ 6”), but Defendants’ proposed MPF constructions make perfect sense given the patentees’ decision to use nonce terms—*e.g.*, “unit” and “system”—that inherently lack any structure. Accordingly, even though many of the disputed terms do not use the term “means,” the nonce terms chosen by the patentee similarly amount to a black box that captures any and all structures that fulfill the recited function. In such circumstances, it is appropriate and, in fact, required, that the Court apply Section 112 ¶ 6. The Court should therefore adopt Defendants’ proposed constructions.

II. Legal Standard

While the absence of the term “means” has been found to create a presumption that the term is not a MPF term subject to Section 112 ¶ 6, that presumption is rebuttable and may be, and regularly is, overcome. *Williamson v. Citrix Online, LLC.*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). To do so, Defendants must show “that the claim term fails to ‘recite sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.*

There are certain terms referred to as “nonce” words that, without more, are recognized as inherently lacking structure. The words “unit” and “system” are two such terms. Courts have regularly recognized (and the USPTO has stated) that the words “unit” and “system” are generic terms that reflect nothing more than verbal constructs used in a claim in a manner that is

tantamount to using the word “means.” *E.g., Diebold Nixdorf, Inc. v. Int’l Trade Comm’n*, 899 F.3d 1291, 1297-99 (Fed. Cir. 2018) (finding “cheque standby unit” subject to Section 112 ¶ 6 and holding claim indefinite for lack of corresponding structure); *Dionex Softron GmbH v. Agilent Techs., Inc.*, 811 F. App’x 630, 632 (Fed. Cir. 2020) (finding claims indefinite for failing to disclose sufficient structure linked to the function in MPF term, “control unit”); *Cellular Commc’n Equip. LLC v. HTC Corp.*, No. 6:13-cv-507, 2015 WL 10741012, at *13 (E.D. Tex. Mar. 9, 2015) (finding “the designating unit” term subject to Section 112 ¶ 6 because the term “only recites the function of designating without any corresponding structure”); *Saint Lawrence Commc’ns LLC v. ZTE Corp.*, No. 2:15-cv-349-JRG, 2016 WL 6275390, at *18-19 (E.D. Tex. Oct. 25, 2016) (finding “spectral shaping unit” subject to Section 112 ¶ 6 because “unit” is a nonce word and the adjective “spectral shaping” provided insufficient structural meaning); *Joao Control & Monitoring Sys., LLC v. Protect Am., Inc.*, No. 1-14-CV-134-LY, 2015 WL 4937464, at *5 (W.D. Tex. Aug. 18, 2015) (finding that “system” was a “nonce word or a verbal construct that is not recognized as the name of structure and is simply a substitute for the term ‘means for’”); *see also* United States Patent and Trademark Office, Manual of Patent Examining Procedure § 2181 (9th ed., rev. Jan. 2024) (identifying “unit for” and “system for” as non-structural generic placeholders that can invoke Section 112 ¶ 6).

Where a term is subject to Section 112 ¶ 6, the Court must engage in a two-step process: (1) determine the function of the MPF limitation; and (2) determine the corresponding structure(s) disclosed in the specification and equivalents thereof. *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). “Structure disclosed in the specification is ‘corresponding’ structure only if the [intrinsic evidence] clearly links or associates that structure to the function recited in the claim.” *Id.*; *Williamson*, 792 F.3d at 1352.

III. Level of Ordinary Skill

A person of ordinary skill in the art (“POSITA”) at the time of filing of the ’988 Patent, 580 Patent, ’226 Patent, and ’388 Patent would have had a Ph.D in electrical engineering, physics, optical sciences, optical engineering, or a related scientific or engineering field, and at least one to two years of work or research experience in optical engineering, optical design, or a related field. Alternatively, a POSITA could have had a Bachelor’s degree in one of the foregoing areas and at least three to four years of work or research experience in optical engineering, optical design, optoelectronics, or a related field.

IV. The Court Should Adopt Defendants’ Proposed Constructions

A. The ’988 Patent (Dkt. 84-7)

1. “projection optical unit [for]”; “a first projection optical unit [for]”; and “a second projection optical unit”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning, for example, an assembly of lenses, mirrors, and/or other optical elements to form an enlarged image.	Governed by pre-AIA Section 112 ¶ 6 <u>Function</u> : to form an enlarged image <u>Structure</u> : a lens group having a positive refractive power

a) Section 112 ¶6 Applies

The term “unit for” is a well-known nonce term that connotes no structure (*see supra* Section II), and, here, the claim language as a whole recites a function without describing any structure(s) to perform that function. So, while the disputed terms do not use the literal word “means,” they are nonetheless properly construed as MPF terms.

The language of the claims themselves describe each of these projection optical units in purely functional terms. For example, in claim 1: “A projection optical unit ***for enlarged projection*** of an image display”; “a first projection optical unit ***for forming a first enlarged image***, said first projection optical unit having positive refractive power”; and “a second projection optical

unit positioned at an enlarged image side of said first projection optical unit ***in order to form a second enlarged image*** by further enlarging the first enlarged image ... said second projection optical unit having positive refractive power. ('988 Patent at 28:41-42, 28:43-45, 28:46-51 (emphasis added).)¹ In each instance, the claims do nothing more than describe the function of the optical projection unit, *i.e.*, to enlarge an image. Significantly, the language “unit for” or “unit in order” could easily be replaced with the term “means for” without any effect on the meaning or scope of the claims. And nothing about these terms or the claim language surrounding them discloses any structure. Rather, the only description of the projection optical unit provided in the claims is its function.

Plaintiff contends that the disputed terms connote sufficient structure because the claims state the “‘projection optical units’ have ‘positive refractive power’ which is a property of a specific class of structures (*i.e.*, an assembly of lenses, mirrors, or other optical elements).” (Dkt. 84 at 11.)² Plaintiff cites nothing from the patent claims or the specification – or even from extrinsic evidence – to try to support its position. (*See id.*) That is because the claims make clear that “positive refractive power” is merely the property necessary to form enlarged images, but the claims, including the language “positive refractive power,” offer no insights into what structure has such power and performs the requisite function of enlarging.

Plaintiff also contends dependent claims 5 and 6 disclose sufficient structure because they describe the first and second projection optical units as including a lens element. (Dkt. 84 at 12.) Claims 5 and 6, however, are dependent claims, not independent claims, and so cannot limit the

¹ Significantly, Plaintiff’s proposed construction concedes that the term “projection optical unit” amounts to functional claiming because that construction describes that term in every instance in a purely functional manner, *i.e.*, “to form an enlarged image.”

² Where the page numbers in the footer and ECF docket header differ, this brief cites to the latter.

scope of either “the first projection optical unit” or “the second projection optical unit” of independent claim 1. Moreover, providing a single example for a broad term like “unit for enlarging” does not provide sufficiently definite structure. *See Canon, Inc. v. TCL Elecs. Holdings Ltd.*, No. 2:28-cv-546-JRG, 2020 WL 2098197, at *25 (E.D. Tex. May 1, 2020) (finding “communication unit” and “connection unit” did not impart sufficient structure and explaining “[t]hat the patent specification discloses an example of a communication unit or a connection unit in the specification (such as a USB connector or a USB host controller) does not by itself impart structural significance to the nonce ‘unit’ terms”) (citing *MTD Prods. Inc. v. Iancu*, 933 F.3d 1336, 1344 (Fed. Cir. 2019)).

Because the disputed claim terms do not disclose any structure, much less sufficient structure, Section 112 ¶ 6 governs, and so the next step is to determine the claimed function. Defendants’ proposed function—to form an enlarged image—is directly supported by the claim language, and at least implicitly conceded by Plaintiff in its proposed construction and should therefore be adopted. (’988 Patent at 28:41-42, 28:43-45, 28:46-51.)

Looking to the specification to determine the structure associated with the claimed function, it is clear that the corresponding structure is a lens group having a positive refractive power. First, the Abstract describes a “projection optical unit” as having “two lens groups,” just as Defendants’ propose. (*Id.* at Abstract.) The Summary of the Invention references “the lens elements that constitute the first projection optical unit” and “the lens elements that constitute the second projection optical unit.” (*Id.* at 3:19-24.) The Detailed Description of Preferred Embodiments similarly states: “***In the present invention, the projection optical unit for providing an enlarged projection of the images displayed by image display elements is divided into two lens groups. One of the lens groups constitutes a first projection optical unit that forms a first enlarged***

image, and ***the other lens group constitutes a second projection optical unit*** that forms a second enlarged image ... the second projection optical unit having positive refractive power.” (*Id.* at 7:6-14.) And the Summary of the Invention confirms this. (*See also id.* at 2:40-52.)

Defendants’ proposed structure is pulled directly from the specification, the entirety of which—including Abstract, Summary, Detailed Description, and Figures—describes the first and second projection optical units as being lens groups and is consistent with the claims which describe the first and second projection optical units as having positive refractive power. The Court should adopt Defendants’ proposed construction.

b) Plaintiff’s Proposed Construction Should be Rejected

Even if the disputed terms are found not to be governed by Section 112 ¶ 6, Plaintiff’s construction cannot stand for at least the reasons set forth below, and so Defendants’ proposed structure (a lens group having a positive refractive power) should be adopted as the construction of the disputed terms.

Plaintiff’s proposed construction is flawed because it would have the disputed terms mean “an assembly of lenses, ***mirrors, and/or other optical elements*** to form an enlarged image.” (emphasis added.) But, as explained above, both the “first projection optical unit” and the “second projection optical unit” are expressly described in the specification as being just a “lens group” with no mention of any mirrors or other optical elements. (’988 Patent at 7:6-14.) And the claim language requires that the “first optical projection unit” and the “second optical projection unit” have positive refractive power. (*Id.* at cl. 1.) Neither mirrors nor prisms have positive refractive power. Indeed, it is commonly known that a mirror works by reflection, not refraction.

Plaintiff argues that the specification supports that a mirror and other optical elements should be included as part of the optical projection unit, citing to column 1, lines 46-53. (Dkt. 84 at 12.) But that portion of the specification is discussing ***prior art projection optical units***: “the

projection optical unit described in **Patent document 3** includes a first refractive lens systems that has a positive power, a second refractive lens systems that has a negative power, and an optical path folding mirror.” (’988 Patent at 1:22-28 (describing Patent documents 1-3 as prior art), 1:46-53 (emphasis added), 1:54-57 (describing projection optical units in Patent documents 1-3 as conventional technology).) That portion of the specification is not describing the “projection optical unit,” the “first projection optical unit,” or the “second projection optical unit” of the claimed invention and is wholly inconsistent with the express language of the specification regarding the claimed invention, viz., that the first and second projection optical units are lens groups, not mirrors or prisms.

Plaintiff also argues that the specification details embodiments that include a prism or mirror as part of the “projection optical unit,” citing to column 3, lines 11-48. (Dkt. 84 at 12.) Contrary to Plaintiff’s argument, however, those embodiments actually describe the “first projection optical unit” and the “second projection optical unit” as being “constitute[d]” of “lens elements.” (’988 Patent at 3:19-24.) While those embodiments do describe an “optical path folding means” (e.g., a prism) **between** the lens elements, they do not describe the “optical path folding means” as being **part** of the “first projection optical unit” or the “second projection optical unit” as it does with respect to the lens elements. (*Id.*; see also, *id.* at 3:11-18 (describing the prism as being located **between**—and not a part of—the “second projection optical unit” and the “field lens group”).) Those embodiments are therefore consistent with Defendants’ proposed structure (which should be adopted as the construction of the disputed terms if the Court finds they are not subject to Section 112 ¶ 6).

B. The '580 Patent (Dkt. 84-8)

1. “light separation optic system”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning, for example, collection of one or more optic units configured to separate light into different colors.	<p>Governed by pre-AIA Section 112 ¶ 6</p> <p><u>Function:</u> to separate white light from a light source configured to emit white lights including a light emitting from a fluorescent substance into blue-color light, green-color light, and red-color light.</p> <p><u>Structure:</u> two (2) dichroic mirrors and one (1) reflection mirror statically oriented and position relative to each other as shown in Fig. 1, wherein dichroic mirror 31 reflects the blue light and transmits the green light and the red light, dichroic mirror 32 receives the separated light from the dichroic mirror 31 and reflects the green light and transmits the red light, and reflection mirror 33 reflects the blue light reflected by dichroic mirror 31.</p>

a) Section 112 ¶ 6 Applies

The term “system” is a well-recognized nonce term, meaning the dispute between the parties centers on whether the modifier “light separation optic” and relevant claim language describe sufficiently definite structure. The answer to that question is “no”—the modifier “light separation optic” imparts no structure and the claim language only describes the function of the “light separation optic system,” not the structure thereof.

The language of the claims recites no structure for the “light separation optic system”; instead, this term is claimed using functional language that recites what it does, not what it is, *i.e.*, “a light separation optic system, **configured to** separate the white lights from said light source into red-color (R), green-color (G) and blue-color (B).” (’580 Patent at cls. 1, 10, 32 (emphasis added).) The specification similarly describes the “light separation optical system” in functional terms, *e.g.*,: “the light separation optic system 30 **separates the nearly white light emitted from the lighting optic system 100 into the three (3) primary colors of the lights**, *i.e.*, B-light (the light of a blue color band), G-light (the light of a green color band) and R-light (the light of a red color band)” (*Id.* at 6:3-7 (emphasis added).) Even though the specification describes the structure

of “light separation optic system 30,” a POSITA would not necessarily understand the claim term to have that specific structure. *MTD Prods.*, 933 F.3d at 1344 (“That the specification discloses a structure corresponding to an asserted means-plus-function claim term does not necessarily mean that the claim term is understood by persons of ordinary skill in the art to connote a specific structure or a class of structures.”).

Plaintiff argues that “[t]he addition of ‘light separation’ to ‘optic system’ is an additional ‘adjectival qualification, which further identify sufficient structure to perform the claimed functions to one of ordinary skill in the art.” (Dkt. 84 at 16.) But it offers nothing from the intrinsic record to support this contention, relying only on its own *ipse dixit*. (*Id.*)³ And, the plain language contradicts Plaintiff’s position because the adjective “light separation” is merely a function to be performed by an “optic system.” “Light separation” is simply the noun form of “separating light” and provides no guidance as to the structure needed to perform the claimed function of separating the white lights from said light source into red-color (R), green-color (G) and blue-color (B). Indeed, Plaintiff’s own arguments confirm the same and confirm that the claim language does not disclose sufficient structure. Plaintiff argues “[t]he claims themselves also connate structure, as ‘light separation optic system’ is part of a projection-type display apparatus, and the claims ***describe its operation (separate light)***, in terms of its input (light) and output (colors).” (Dkt. 84 at 16 (emphasis added).) That the claims describe the operation of “light separation optic system” only confirms Defendants’ position that the disputed term is functional. And, that the “‘light separation optic system’ is part of a projection-type display apparatus” or that it receives inputs of

³ The case cited by Plaintiff (Dkt. 84 at 16), *Blitzsafe Texas, LLC v. Subaru Corp.*, stands for the unremarkable proposition that an adjective can endow a generic term such as “system” with a physical or structural component. No. 2:17-CV-00421-JRG-RSP, 2018 WL 6504174, at *24 (E.D. Tex. Dec. 11, 2018) (addressing claim term “integration subsystem”). This is not the case here.

light and outputs colors does not provide any insight into the structure(s) needed to perform the claimed function.

The *Align Tech., Inc. v. 3Shape A/S.*, cited by Plaintiff, does not support finding otherwise. (Dkt. 84 at 15.) There, while the district court found the term “optical system” was not subject to Section 112 ¶ 6, the ITC in its investigation found the opposite, *i.e.*, “optical system” was properly treated as a MPF term. *Certain Intraoral Scanners and Related Hardware and Software*, Inv. No. 337-TA-1090, USITC Order No. 32, 26-27 (Sept. 25, 2028). Significantly, the ITC held that “[s]ystem,’ like ‘unit,’ is a known nonce term” and the term “optical system” is not a term of art that refers to any particular system(s). *Id.* This is consistent with other cases cited by Defendants and the United States Patent and Trademark Office’s Manual of Patent Examining Procedure. (See *supra* Section II.)

b) Because Section 112 ¶ 6 Applies, Defendants’ Proposed Function and Structure Should be Adopted

Both Defendants’ proposed function and Defendants’ proposed structure are pulled directly from the intrinsic record.

First, Defendants’ proposed function aligns with the plain language of the claims:

Defendants’ Proposed Function	Claims 1, 10, and 32
to separate white light from a light source configured to emit white lights including a light emitting from a fluorescent substance into blue-color light, green-color light, and red-color light	a light separation optic system, configured to separate the white lights from said light source into red-color (R), green-color (G) and blue-color (B)

Defendants’ proposed function also aligns with the specification, which explains that the “light separation optic system” separates the white color light into three prime colors. (See ’580 Patent at 5:31-35, 6:3-23.)

Second, Defendants’ proposed structure is consistent with the structure described in the specification. Defendants’ proposed structure includes two (2) dichroic mirrors and one (1)

reflection mirror. This exactly what the specification of the '580 Patent describes. ('580 Patent at 5:31-35, 6:3-23.) Similarly, the remainder of Defendants' proposed structure (that the 2 dichroic mirrors and 1 reflection mirror be statically oriented and position relative to each other as shown in Figure 1, wherein dichroic mirror 31 reflects the blue light and transmits the green light and the red light, dichroic mirror 32 receives the separated light from the dichroic mirror 31 and reflects the green light and transmits the red light, and reflection mirror 33 reflects the blue light reflected by dichroic mirror 31) is also consistent with the description in the specification of the structure that corresponds to the claimed function. (*Id.* at 6:3-23, Fig. 1.) Plaintiff does not dispute that Defendants' proposed structure is consistent with the specification. Instead, it claims that Defendants' proposed construction injects features unnecessary to perform the light separation operations. (Dkt. 84 at 17.) Importantly, however, Plaintiff's arguments are devoid of citations to the specification. (*Id.* at 17-18.) In other words, Plaintiff points to no disclosure in the specification that is inconsistent with Defendants' proposed structure and no embodiment that would be excluded by Defendants' proposed construction. (*Id.*)

c) Plaintiff's Proposed Construction Should be Rejected

Separately, Plaintiff's proposed construction should be rejected as not just unsupported by, but also wholly inconsistent with, the specification. Significantly, Plaintiff's proposed construction would allow a single optic unit to be used to separate the white light into each of the three claimed colors red, green, and blue. (Dkt. 84 at 18 (citing '580 Patent at 5:31-35).) But the portion of the patent cited by Plaintiff does not support Plaintiff's position; instead, it describes multiple optic elements necessary to separate light—2 sets of dichroic mirrors and a reflection mirror. ('580 Patent at 5:31-35.) This disclosure is consistent with Defendants' proposed structure, not Plaintiff's. Indeed, Plaintiff's proposed construction appears cut from whole cloth, with no identifiable support in the specification, and therefore improper. *See, e.g., Interval Licensing LLC*

v. AOL, Inc., 766 F.3d 1364, 1374 (Fed. Cir. 2014) (“Claim language must be viewed in light of the specification, which is ‘the single best guide to the meaning of a disputed term.’”).

Finally, in the event that the Court finds this term is not subject to Section 112 ¶ 6, Plaintiff’s proposed construction should still be rejected because it is inconsistent with the specification and Defendants’ proposed structure adopted as the Court’s construction.

2. “light modulation means”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Governed by pre-AIA Section 112 ¶ 6 <u>Function</u> : making light-modulation on a respective one of the lights of the R, G and B separated, depending on a video signal <u>Structure</u> : image display element such as a liquid crystal panel or a digital mirror device, and equivalents thereof	Governed by pre-AIA Section 112 ¶ 6 <u>Function</u> : to change the intensity of each of the separated blue-color light, green-color light, and red-color light <u>Structure</u> : a set of three panels, one of each separated color light, each of which is a transmission-type liquid crystal panel, a reflection-type liquid crystal panel, or a digital mirror device made by aligning plural number of micro-mirrors

While the parties agree that this term is governed by Section 112 ¶ 6, they dispute the proper function and structure. Defendants’ proposed function and structure is directly supported by the claim language and the specification, whereas Plaintiff’s is not. Indeed, the specification only describes a single embodiment of this element, and Defendants’ proposed construction is the only proposed construction that is consistent with that embodiment.

a) Defendants’ Proposed Function Should be Adopted

Each of the relevant independent claims is directed to “a light modulation means, configured to make light-modulation on a respective one of the lights of the R, G and B separated, depending on a video signal.” (’580 Patent at cls. 1, 10, 32.) Plaintiff’s proposed construction essentially takes this language verbatim but offers no guidance to the jury as to what “light modulation” means or what is covered by the claims. Conversely, Defendants’ proposed construction is not only consistent with the claim, but also explains the term in a way that will help

the jury understand the scope of the claim. *See Lennon Image Techs., LLC v. Macy's Inc.*, No. 2:13-CV-235-JRG, 2014 WL 3830136, at *9 (E.D. Tex. Aug. 1, 2014) (explaining the Court's construction should assist the jury in understanding what is covered by the claims). In particular, Defendants' proposed construction will help the jury understand that "light modulation" refers to the changing of light intensity, something Plaintiff's proposed construction fails to do. (*See* '580 Patent at 1:11-19 ("The present invention relates to a projection-type display apparatus of projecting an optical image, **which is formed by modulating light intensity of lights from a light source** depending on a video signal") (emphasis added); *see also id.* at 4:40-46.)

b) Defendants' Proposed Structure Should be Adopted

The principal difference between Plaintiff's and Defendants' proposed structures is that Plaintiff's proposed structure calls for only a single image display element for all three separated colors, while Defendants' proposed structure has a set of three, one for each separated color. And as the specification clearly and unambiguously shows, it is Defendants' proposed structure that is correct.

The second step of a proper MPF inquiry is to determine the structure disclosed in the specification that is clearly linked to the function recited in the claim. (*See supra* Section II.) Here, irrespective of which proposed function is adopted, the specification links that function to a set of **three** panels, one for each separated color light. For example, the specification describes "**the present invention**" as being "a projection-type display apparatus, comprising: a light source unit, which is configured to emit a white-color light therefrom; a light separation optic system, which is configured to separate the white color light from said light source unit into three primary color lights, R (red-color), G (green-color) and B (blue-color); **R, G and B light modulating portions, each of which modulates each of R, G and B polarized lights separated, depending on a video signal, respectively.**" ('580 Patent at 3:1-10 (emphasis added).) Similarly, in describing Figure 1,

the specification explains that the claimed system comprises “a lighting optic system 100, a light separation optic system 30, a relay optic system 40, three (3) sets of field lenses 29 (29R, 29G and 29B), **three (3) sets of transmission-type liquid crystal panels 60 (60R, 60G and 60B)**, a light composing prism 200 as a light composing means, and a projection lens 300 as a projecting means.” (*Id.* at 5:2-8 (emphasis added).) Even the language identified by Plaintiff supports Defendants’ position as it recognizes that “each” of the red, green, and blue light modulating portions modulates the corresponding “R, G, and B polarized lights separated from the white light” (*Id.* at 3:42-50.)

Separately, Plaintiff mischaracterizes the specification to try to broaden the scope of the claims. In particular, Plaintiff claims that “while a three-paneled configuration appears as one disclosed embodiment, the specification plainly provides that ‘the present invention should not be limited to this.’” (Dkt. 84 at 19 (citing ’580 Patent at 7:41-48).) But the cited portion of the specification is actually addressing the fact that the three panels need not be limited to a specific type of panel; instead, the three panels could be transmission-type liquid crystal panels, reflection-type liquid crystal panels, a DMD made by aligning plural numbers of micro mirrors, or even some other type of panel:

[I]n the embodiment mentioned above, [] there is shown the example of building up the light intensity modulator portion with three (3) transmission-type liquid crystal panels 60 (60R, 60G and 60B); however, the present invention should not be limited to this, and that light intensity modulator portion may be constructed with the reflection-type liquid crystal panels, or the digital mirror device (DMD) aligning plural numbers of micro mirrors, etc.

(’580 Patent at 7:41-48.) In other words, the “this” being referred to is the type of panel, not the number of panels, and so the specification is simply stating that the panels that make up the light intensity modulator portion can be something other than a transmission-type liquid crystal panel.

Moreover, even accepting *arguendo* Plaintiff’s interpretation of the phrase “the present invention should not be limited to this,” Plaintiff does not point to any **single** image display element in the specification that can perform the function recited in the claim. Plaintiff’s proposed construction therefore cannot be correct. See *Vulcan Eng’g Co., Inc. v. Fata Aluminium, Inc.*, 278 F.3d 1366, 1373 (Fed. Cir. 2002) (MPF terms are limited to the corresponding structure(s) in the specification and equivalents thereof).

Since the specification directly links Defendants’ proposed three panel structure to the claimed function, Defendants’ proposed structure should be adopted.

3. “separation mirror”

Defendants no longer contend that this term is governed by pre-AIA Section 112 ¶ 6 and so agree the plain and ordinary meaning applies.

4. “light flux capturing means”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Governed by pre-AIA Section 112 ¶ 6	Governed by pre-AIA Section 112 ¶ 6
<u>Function</u> : capturing light flux	<u>Function</u> : to direct white light emitted from the light source
<u>Structure</u> : a lens, a mirror, or a combination of lenses and/or mirrors that captures at least some portion of light, and equivalents thereof	<u>Structure</u> : a reflection surface, such as a mirror, having a focus point

Defendants’ proposed function and structure are supported by both the claims and the specification and should therefore be adopted.

a) Defendants’ Proposed Function Should be Adopted

Plaintiff takes issue with Defendants’ proposed function because it uses the words “direct white light” instead of just inverting the words of the claim term. But Defendants’ proposed construction is consistent with the claim language and explains it in a manner that should help the jury understand what is covered by the claim, which is the intended result of the claim construction

process. *Lennon Image Techs., LLC*, 2014 WL 3830136, at *9. First, claims 7, 16, and 37, in combination with their independent claims, describe that white light is emitted from a light source and that it is the white light that is captured by a “light flux capturing means.” (’580 Patent at cls. 1, 7, 10, 16, 32, 37.) In other words, “light flux” means “light emitted from the light source” and that light must be white light according to the claims. Second, the claims also confirm that “capturing” light flux means “directing” the white light emitted from the light source. In particular, the claims describe that the “light flux capturing means” is a reflection surface with a focus point. (*Id.* at cls. 7, 16, 37.) That reflection surface (i.e., a mirror) with a focus point acts to direct the white light. Defendants’ proposed construction is confirmed by the specification which explains that white light is emitted from the light source and that the reflector 130 defines **a reflection mirror (surface) 131 having a parabolic surface**, the purpose of which is to direct light. (’580 Patent at 3:17-24, 8:51-65; *see also*, Fig. 2.) Defendants’ proposed function is consistent with the claims and the purpose described in the specification, directing white light.

Plaintiff’s proposed “function” merely inverts the literal words of the claims and so fails to provide any meaning to the phrase “light flux capturing” as used in the ’580 patent. The word “capturing,” for example, generally means to take into possession by force. This makes no sense in the context of a projector. Plaintiff’s proposal should be rejected at least because it will not help the jury understand the scope of the asserted claim(s).

b) Defendants’ Proposed Structure Should be Adopted

Defendants’ proposed structure is supported by the plain language of the claims. Each of the relevant claims requires that the “light flux capturing means” be “made up with a reflection surface having a focus point.” (’580 Patent at cls. 7, 16, 37.) Defendants’ proposed construction aligns with this claim language and includes an example, consistent with the specification, of what constitutes a reflection surface having a focus point, i.e., a mirror. (*Id.* at cls. 7, 16, 37, 8:51-65.)

Plaintiff argues that Defendants' proposed construction cannot be correct because the specification "discloses the use of two mirrors (*e.g.*, a separation mirror and a reflection mirror) to capture light flux." (Dkt. 84 at 22.) Plaintiff's characterization of the specification, however, is incorrect – the Figures, for example, clearly show that only the reflection mirror 130 is the "light flux capturing means," not the separation mirror 120. (*See* '580 Patent at Fig. 2.) Moreover, claims 7, 16, and 37 each require that the "light flux capturing means" have a reflective surface with a focal point (*id.* at claims 7, 16, 37), and the specification shows that only the reflection mirror 130 has the necessary parabolic shape to provide the focus point required by the claims. (*Id.* at Fig. 2, 7:59-8:8.) Separation mirror 120 is flat (*id.* at Fig. 2) and therefore has no focus point. Consequently, separation mirror 120 cannot be the claimed light flux capturing means or even a part thereof.

Defendants' proposed structure is the only one that is consistent with the claims and specification. Plaintiff's proposed structure, on the other hand, is directly contrary to the requirements of the relevant claims and unsupported by the specification. More specifically, Plaintiff proposes a claimed structure that includes at least one lens, arguing that a reflection surface is not the only structure capable of capturing light and that a lens system can also capture light. (Dkt. 84 at 23.) But each claim that includes this term also expressly requires that the "light flux capturing means" have **a reflection surface with a focus point**. ('580 Patent at cls. 7, 16, 37.) So, irrespective of whether a lens can "capture" light, a lens cannot be a part of the claimed structure because that would be inconsistent with the claims' requiring the structure to have a reflection surface. Plaintiff points to nothing in the intrinsic record to suggest that the claimed structure includes at least one lens. Indeed, the only alleged evidence Plaintiff cites is a dictionary definition of "light flux." But that dictionary definition merely recognizes that, generally speaking,

light can pass through a lens system. (Dkt. 84 at 23.) It says nothing about whether a lens can function as the “light flux capturing means” recited in the claims, and the law is clear that MPF terms “encompass **only** the disclosed structure and its equivalents.” *Biodex Corp. v. Loredan Biomedical, Inc.*, 946 F.2d 850, 863 (Fed. Cir. 1991) (emphasis added).

Moreover, given the clear requirement that the “light flux capturing means” of the claims must have a reflection surface with a focus point, a lens cannot serve as the claimed “light flux capturing means.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1322-23 (Fed. Cir. 2005) (dictionaries may be used so long as it does not contradict definitions ascertained by reading the patent).

Plaintiff’s proposed structure cannot be squared with the language of the relevant claims, whereas Defendants’ proposed structure is completely consistent with those claims and with the specification. The Court should therefore adopt Defendants’ proposed structure as well as function.

C. The ’226 Patent (Dkt. 84-9)

1. “an emission side of the excitation light relative to the fluorescent material”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning, for example, an excitation light’s exit side of the fluorescent material that faces away from the excitation light source.	If the Court determines this term is amenable to construction, then Defendants propose: The surface of the fluorescent material on the side facing the excitation light source.

a) The Disputed Phrase is Nonsensical and Indefinite

It is well-settled that Courts must construe a claim as it is written, “not as the patentees wish they had written it.” *Chef Am., Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1374 (Fed. Cir. 2004) (noting the Federal Circuit “repeatedly and consistently has recognized that courts may not redraft claims, whether to make them operable or to sustain their validity.”). This is true even if the result is nonsensical. *Id.*

Here, the disputed term, as written, is nonsensical and so must be found invalid under 35 U.S.C. § 112. More specifically, claim 8 refers to “an emission side *of the excitation light*.” (’226 Patent at cl. 8.) But it is undisputed that light itself does not and cannot emit anything. Rather, it is *a light source* that emits light. (*E.g.*, *id.* at Figs. 1-2 and 6, 2:30-31, 4:27-32; Ex. A at 21:16-22:13; Ex. B at 108:11-109:25, 125:3-126:8.) This is confirmed by the claim language itself, *i.e.*, “an excitation light source for emitting excitation light.” (’226 Patent at cl. 8.) Because excitation light itself emits nothing, claim 8 as written is nonsensical and, indeed, impossible—there is no such thing as “an emission side of the excitation light.” Accordingly, the Court should find claim 8 invalid. *E.g.*, *Synchronoss Techs., Inc. v. Dropbox, Inc.*, 987 F.3d 1358, 1364, 1366-67 (Fed. Cir. 2021) (affirming finding of indefiniteness where claims contained an impossibility and declining to rewrite the claims based on a POSITA’s understanding to preserve their validity); *Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1367 (Fed. Cir. 2016) (affirming judgment of indefiniteness where claims were nonsensical).

b) If not Indefinite, Defendants’ Construction Should be Adopted as Being Consistent with the Claim Language and Specification

Defendants’ proposed construction is supported by the claim language and specification while Plaintiff’s construction is contradicted by the language of the claims and specification. If claim 8 is not found indefinite, the Court should adopt Defendants’ proposed construction.

Plaintiff contends that the “emission side of the excitation light relative to the fluorescent material” means an “excitation light’s exit side of the fluorescent material that faces away from the excitation light source.” The annotated diagram produced by Plaintiff’s witness (“Lebby”) and attached hereto as Exhibit C illustrates Plaintiff’s position. (Dkt. 84-4 at ¶ 53.) But, as described below, Plaintiff’s proposed construction directly conflicts with both dependent claim 10 and the specification.

The disputed claim term is found in independent claim 8. Claim 10 is directly dependent on independent claim 8, and (as Lebby admits) recites:

wherein at least either one of the convex lens and the concave lens has a curvature that is set so as to allow the ***excitation light to be made incident on the fluorescent material at a front side of the fluorescent material as a light-condensing position.***

(See Ex. A at 83:11-84:4 (emphasis added)). As can be seen from the passage reproduced above, claim 10 requires that the light-condensing position be at the front side of the fluorescent material. And, because claim 10 depends from independent claim 8, claim 8 must necessarily have a scope that includes a light-condensing position that is located at a front side of the fluorescent material. (See '226 Patent at cls. 8, 10.) But, as shown in the annotated figure in Exhibit C, Plaintiff's proposed construction precludes the light-condensing positions from being located at a front side of the fluorescent material. Consequently, Plaintiff's proposed construction is directly contrary to the language of dependent claim 10 because Plaintiff's proposed construction requires the light-condensing position to be located on the ***rear side*** (emission side) of the fluorescent material and therefore precludes the light-condensing position from ever being located on the *front side* of the fluorescent material as required by dependent claim 10. (Dkt. 84 at 25; Dkt. 84-4 at ¶ 52.)

To try to support its proposed construction, Plaintiff differentiates the front side of the fluorescent material from an imaginary emission side (rear side) of the fluorescent material on which a focal point or light-condensing position is allegedly formed with nonexistent excitation light. (Dkt. 84 at 25.) But, as described above, this proposed construction impermissibly results in an independent claim (claim 8) failing to include the features recited in one of its dependent claims (claim 10). Such a construction cannot be correct. *Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022).

When confronted with this internal inconsistency during his deposition, Lebby was forced

to admit that he had failed to even consider dependent claim 10 when formulating his opinion as to the meaning of the term “an emission side of the excitation light relative to the fluorescent material.” (Ex. A at 88:20-89:2.)⁴ While this failure renders his opinion fatally flawed, and inadmissible under Fed. R. Evid. 702, it may explain why both his opinion and Plaintiff’s proposed construction are wholly inconsistent with claim 10.

Plaintiff’s proposed construction is also inconsistent with ’226 Patent’s specification. More specifically, that specification includes a portion entitled “Means for Solving the Problems” which, as the name implies, describes how the claimed invention purports to solve the problems presented by the prior art. Lebbly conceded at his deposition that this section describes the “Means for Solving the Problem” as “[t]he optical member has a curvature that is set so as **to allow the excitation light** that has passed through the optical member **to be made incident on the fluorescent material at a front side of the fluorescent material as a light-condensing position.**” (Ex. A at 89:19-90:5 (quoting ’226 Patent at 1:51-55) (emphasis added).) This portion of the specification, however, much like dependent claim 10, requires the light-condensing position be at a **front side** of the fluorescent material and therefore directly contradicts Plaintiff’s proposed construction and Lebbly’s opinion. Plaintiff’s proposed construction therefore cannot be correct because it requires the light-condensing position to be on a **rear side** (emission side) of the fluorescent material, and so precludes it from being located on the **front side** of the fluorescent material as required by dependent claim 10 and as explicitly described in the specification.

⁴ Lebbly’s opinion should be disregarded in its entirety and given no weight. He admittedly failed to consider the entire intrinsic record in reaching his opinion, rendering his methodology and opinions unreliable. Fed. R. Evid. 702; *Phillips*, 415 F.3d at 1313 (explaining claim construction is determined based on how a POSITA would understand the claim term based on the entire intrinsic record); *see also Intellect Wireless, Inc. v. Kyocera Commc’ns, Inc.*, No. 08 C 1350, 2010 WL 2680538, *8 (N.D. Ill. Jun. 29, 2010) (rejecting expert’s testimony on claim scope where the court found that expert’s opinion contradicted the intrinsic evidence).

In contrast to Plaintiff’s proposed construction, Defendants’ proposed construction is consistent with the language of the claims as well as with the description in the specification since it places the emission side on the same side as the front side of the fluorescent material as shown in the drawing attached hereto as Exhibit D. (Dkt. 84-4 at ¶ 72.) This is precisely the configuration that is required by the language of dependent claim 10.

Defendants’ proposed construction is also consistent with the plain language of claim 8, which requires “a light-condensing position of the excitation light is positioned on an emission side of the excitation light relative to the fluorescent material.” (’226 Patent at 9:23-25.) According to Defendants’ proposed construction, the “emission side of the excitation light relative to the fluorescent material” means “the surface of the fluorescent material on the side facing the excitation light source.” This recognizes that excitation light 10 is emitted from light source 1, as shown in the Figures, and logically places the light condensing position on the side that faces where that light is being emitted from.

Because Defendants’ proposed construction is supported by the language of the claims 8 as well as the description in the specification, it should be adopted.

2. “the optical member has a curvature that is set such that a light-condensing position of the excitation light of positioned on an emission side of the excitation light relative to the fluorescent material”

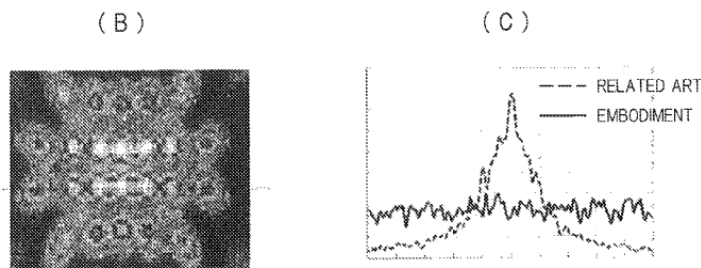
Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning, for example, the optical member has a curvature that causes a light-condensing position of the excitation light to be positioned on an excitation light’s exit side of the fluorescent material that faces away from the excitation light source.	If the Court determines that this term is amenable to construction, then Defendants propose that “a light-condensing position” be construed to mean: An illumination region formed by converging light rays.

Construction of this term essentially distills down to resolving the parties’ disputes over where the “light-condensing position” is located and whether that position is a point or a region.

With respect to the first dispute, the parties disagree as to the location of the “light-

condensing position.” Plaintiff’s proposed construction, which does not place the light condensing position on the front side of the fluorescent material, fails for at least the reasons described above in connection with the disputed term “an emission side of the excitation light relative to the fluorescent material.” (*See supra* Section IV(C)(1).)

Second, the parties dispute whether the light-condensing position is a single point or a region. Defendants’ proposed construction—an illumination region formed by converging light rays—is supported by the intrinsic evidence. For example, in contrasting the embodiment of Figure 1 with prior art device disclosed in Figure 6, the specification explains that in Figure 1(A) the “the excitation light 10 that has passed through the condenser lens 6 is made incident on the fluorescent material 7 at the front side of the fluorescent material 7 as a light-condensing position (such that the light-condensing position is positioned on the emission side of the excitation light 10 relative to the fluorescent material 7).” (’226 Patent at 3:45-51.) It goes on to explain that “FIG. 1 (B) and FIG. 1(C) show an irradiation region 8 of the excitation light 10 on the fluorescent material 7, FIG. 1(B) is a two-dimensional distribution drawing of excitation light, and FIG. 1(C) shows a luminance distribution on one cross-section. ***In this case, in the irradiation region 8, a plurality of excitation light rays are irradiated not onto one portion, but onto positions that are substantially scattered evenly....***” (*Id.* at 3:60-4:1.) This description, along with Figures 1(B) and 1(C), reproduced below, makes clear that the light is condensing on the fluorescent material, not at a single point, but across a region:



Lebby's declaration supports Defendants' proposed construction. It states that prior art devices "were designed to have the excitation light irradiated onto only a concentrated portion of fluorescent material" as disclosed by Figure 6 in the '226 Patent. (Dkt. 84-4 at ¶ 38; *see also, id.* at ¶ 40 (noting that prior art devices had high luminance in the center of the irradiation region which caused the fluorescent material to generate excessive heat and so reduced their efficiency and lifespan).) Lebby goes on to explain that to solve this problem the claimed invention discloses ***"making adjustments in the luminance distribution of excitation light that is irradiated onto the fluorescent material. By increasing the area of where the excitation light is irradiated onto the fluorescent material, which in turn distributes the light more evenly across the fluorescent material,*** as shown for example in Fig. 1(C), the temperature of the fluorescent material will be lowered." (*Id.* at ¶ 41 (emphasis added and internal citations omitted).) And Lebby testified at his deposition that the claimed invention of the '226 Patent increases the area of the light-condensing position as compared to the prior art shown in Figure 6(A), stating that ***"the light-condensing position is changed so that the light is more evenly distributed on the fluorescent material*** thereby eliminating hot spots or areas wherein the fluorescent material can degrade." (Ex. A at 33:21-34:11.)⁵

The intrinsic evidence and Lebby's own admissions, particularly during his deposition, support Defendants' proposed construction. The Court should adopt Defendants' construction.

3. "a front side of the fluorescent material"

Plaintiff has agreed to Defendants' alternative construction of "[t]he surface of the fluorescent material on the side facing the excitation light source."

⁵ This same testimony from Lebby also supports Defendants' proposed construction of "an emission side of the excitation light relative to the fluorescent material" because Lebby admits that the light-condensing position is on the fluorescent material and is not at some imaginary point on a rear side of that material as proposed by Plaintiff.

D. The '388 Patent (Dkt. 84-10)

1. “Retinex processing unit”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning, for example, one or more processors that are capable of executing a Retinex process or one or more processors that are capable of executing a processing to control definition of a video and/or to control visibility of a video.	Governed by 35 U.S.C. 112(f) <u>Function</u> : perform a Retinex process <u>Structure</u> : None disclosed

As described above, the word “unit” is a nonce term, (*see supra* Section II) and the phrase “Retinex processing” is a statement of function, not a description of structure, and the remainder of the relevant claims likewise offers no structural description. This term should therefore be governed by 35 U.S.C. 112(f) and be found indefinite for failure to disclose sufficient structure.

a) Section 112(f) Applies

Claims 4, 6, 16, and 18, each of which includes the disputed term “Retinex processing unit,” describe that element in a purely functional manner:

a first Retinex processing unit ***which performs a first Retinex process*** on a video input from the video input unit;

a second Retinex processing unit ***which performs a second Retinex process***, which is different from the first Retinex process, on the video input from the video input unit;

...

(’388 Patent at cl. 4 (emphasis added); *see also, id.* at cls. 6, 16, 18.) This functional language, *i.e.*, that a Retinex processing unit performs a Retinex process, tells a POSITA nothing about the structure of that Retinex processing unit. Moreover, the fact that a Retinex process is performed on a video input from the video input unit merely tells a POSITA what data is being subjected to a Retinex process, but it does not inform a POSITA as to the structure needed to perform a Retinex Process on that data.

Plaintiff argues that “Retinex process unit” should not be governed by Section 112(f) because it describes a specific class of structures and courts have found similar “processing unit”

terms to connote a known structure. This argument fails on two fronts.

First, Plaintiff characterizes the disputed term as a “processing unit” that is further modified by the addition of “Retinex.” (Dkt. 84 at 33.) Not so. As the claims make clear, a “Retinex process” is a type of process, and it is the term “Retinex process” that modifies the nonce term “unit.” And adding the modifier “Retinex process” to the nonce term “unit” adds no structure; rather, the modifier “Retinex process” merely repeats the function to be performed.⁶

Second, even accepting, *arguendo*, Plaintiff’s characterization, the Federal Circuit has held that “***there is no categorical rule that ‘processor’ is or is not structural***” *WSOU Invs. LLC v. Google LLC*, No. 2022-1064, 2023 WL 6531525, at *4 (Fed. Cir. Oct. 6, 2023); *see also*, *Joao Control*, 2015 WL 4937464, at *9 (“processing device” as used in the disputed claims was “purely functional drafting of the claims” that lacked sufficient structure); *Intell. Ventures I, LLC v. Canon Inc.*, No. 13-473-SLR, 2015 WL 1458035, at *14 (D. Del. Mar. 27, 2015) (claim term using “processing device” did not disclose sufficient structure because POSITA would not understand “processing device” to be inherently capable of performing the claimed function(s)). Rather, whether “processor” connotes sufficient structure is dependent on the claim language. *See WSOU*, 2023 WL 6531525, at *6-7 (finding “collaborative application management processor” to be functional and ultimately finding the claim indefinite for failure to disclose sufficient structure). And here, as in the *WSOU* case, when one asks what structures are covered, the answer is any structure that can perform a Retinex process—classic functional claiming.

The Court should therefore find “Retinex processing unit” subject to 112(f) because it is a black box that encompasses any structure that can perform a first/second Retinex process.

⁶ For this same reason, the cases cited by Plaintiff are inapposite because they address “processing unit” or “processing module” terms, not just “unit” as used in the ’388 Patent.

b) The Disputed Claim Term Should be Found Indefinite as the Specification Fails to Disclose Sufficient Structure

The specification, like the claims, describes “Retinex processing unit” in connection with its function and fails to disclose any structure that capable of performing a Retinex process, *i.e.*, separating the illumination light component from a video and extracting a reflected light component.⁷ (See, *e.g.*, ’388 Patent at Fig. 2; 3:60-65 (describing the “Retinex processing unit” shown in Figure 2 in functional and result-based terms: “[a] first Retinex processing unit 20 and a second Retinex processing unit 22 perform a video processing on the internal video signal 12 based on a Retinex theory, and output a first correction video signal 21 and a second correction video signal 23”).)

In an effort to overcome this deficiency, Plaintiff argues that the specification describes the inputs for the Retinex process, relationships between those inputs, and the method by which they are applied together. (Dkt. 84 at 34 (citing ’388 Patent at 8:33-42).) But that disclosure is still directed only to function involved (receiving and detecting) and does not identify any structure that is separating the illumination light component from the video and/or extracting a reflected light component, which is what the Retinex process does. Whether the claimed function is performed by a microcomputer or a chip set or particularly circuitry remains unclear.

Because the specification fails to identify a structure corresponding to the claimed function of performing the Retinex process, *i.e.*, separating the illumination light component from the video and extracting a reflected light component, the claim is indefinite.

⁷ The specification explains that “the Retinex theory is a theory on a visual property of human eyes such as color constancy and brightness constancy. By the theory, an illumination light component can be separated from the video, and a reflected light component can be extracted.” (’388 Patent at 3:66-4:3.)

2. “video composing unit”

Plaintiff’s Proposed Construction	Defendants’ Proposed Construction
Plain and ordinary meaning, for example, a portion of one or more processors that composes a video.	Governed by 35 U.S.C. 112(f) <u>Function</u> : compose a video from a video processed by the first Retinex processing unit and a video processed by the second Retinex processing unit in accordance with a feature of the video input from the video input unit <u>Structure</u> : None disclosed

Much as for the “Retinex processing unit” term above, the phrase “video composing” is a statement of function, not a description of structure, and the remainder of the relevant claims offers no structural description (and the word “unit” is a nonce term, (*see supra* Section II)). This term should therefore also be governed by 35 U.S.C. 112(f) and be found indefinite for failure to disclose sufficient structure.

a) Section 112(f) Applies

The plain language of the relevant claims supports Defendants’ position that “video composing unit” should be construed as a MPF limitation since those claims describe the term in purely functional terms. The independent claims, for example, all describe a “video composing unit” as something that “composes a video” (’388 Patent at cls. 4, 6, 16, 18.) Similarly, claims 10 and 22 describe a “video composing unit” in functional terms as something that “changes a composition ratio” (*Id.* at cls. 10, 22.) None describe any structure.

Plaintiff argues that “‘video composing’ imparts structural significance to the term and denotes sufficiently definite structure by stating how the ‘video composing unit’ operates: it composes a video.” (Dkt. 84 at 36.) But Plaintiff’s own argument confirms Defendants’ construction since Plaintiff points to no actual structure but, instead, merely restates the function performed by the “video composing unit.” (*Id.*)

Plaintiff also argues that dependent claim 5 discloses structure because it recites that “a process of the ‘video composing unit’ is changed in accordance with a measurement result of an illuminance sensor.” (*Id.*) But this language also fails to disclose any actual structure. That the “video composing unit” may change based on a measurement made **by a separate element** (an illuminance sensor) does not speak to what the structure of the “video composing unit” is.

Because the term “video composing unit” is not a term of art and does not, in and of itself, disclose any structure, this term should be construed to be a MPF limitation where the function is to “compose a video from a video processed by the first Retinex processing unit and a video processed by the second Retinex processing unit in accordance with a feature of the video input from the video input unit” as recited in the claims.

b) The Disputed Claim Term Should be Found Indefinite as the Specification Fails to Disclose Sufficient Structure

Throughout the specification, the “video composing unit” is described only in functional terms without linking the unit to a specific structure. (’388 Patent at 1:58-2:4 (“a video composing unit that can compose a video processed by the first Retinex processing unit and a video processed by the second Retinex processing unit ...”), 4:52-57 (“video composing unit 26 composes the correction video signal 21 ...”).) Similarly, the “video composing unit” is illustrated in the Figures by nothing but box diagrams, providing no information about the structure of that “video composing unit.” (*Id.* at Figs. 3, 14, 15.)

Plaintiff argues that sufficient structure is disclosed because Figure 3 and its description identify an “algorithm” for how the “video composing unit” operates. (Dkt. 84 at 37.) This argument is flawed in multiple respects. First, Figure 3 is wholly inadequate as an algorithm under the law. A legally sufficient algorithm involves a “step-by-step procedure for accomplishing a given result” to be implemented by a computer. *Typhoon Touch Techs., Inc. v. Dell, Inc.*, 659 F.3d

1376, 1385 (Fed. Cir. 2011). Second, Plaintiff’s purported algorithm requires the use of certain variables— α and β —which are not defined in the specification or disclosed as being conventional in the art.

Plaintiff also argues that sufficient structure is disclosed because the specification explains the role of the “video composing unit” based on its operation and interaction with other components. (Dkt. 84 at 37.) Explaining the “role of the ‘video composing unit’ based on its operation” is, however, nothing more than once again describing its function. And while the specification does describe that the “video composing unit” receives a video control signal, composes the correction video signals, and outputs the correction video signal (’388 Patent at 4:53-57), the specification does not describe any structure(s) that could perform those operations. (*Id.*) In short, this disclosure (and other similar disclosures) amounts to saying that the “video composing unit” needs to be able to receive, compose, and send signals, but without identifying the structure that does the receiving, composing, and sending.

Finally, as Plaintiff implicitly admits, Figure 3 and its description relate to how the “video composing unit” operates, but do not adequately inform a POSITA as to the components or devices needed to perform such operations.

V. Conclusion

For at least the reasons above, the Court should adopt Defendants’ proposed constructions for each of the claim terms in dispute.

Dated: April 8, 2025

Respectfully submitted,

/s/ Donald R. McPhail

Donald R. McPhail (admitted)

MERCHANT & GOULD P.C.

Eric W. Schweibenz (admitted pro hac vice)

John S. Kern, II (admitted pro hac vice)

1900 Duke Street

Alexandria, VA 22314

Tel: (703) 518-4516

Fax: (612) 332-9081

dmcphail@merchantgould.com

eschweibenz@merchantgould.com

jkern@merchantgould.com

Eric R. Chad (admitted pro hac vice)

Paige S. Stradley (admitted pro hac vice)

150 South Fifth Street, Suite 2200

Minneapolis, MN 55402

Tel: (612) 332-5300

Fax: (612) 332-9081

echad@merchantgould.com

pstradley@merchantgould.com

Andy Tindel (Texas State Bar No. 20054500)

MT2 LAW GROUP

MANN | TINDEL | THOMPSON

112 East Line Street, Suite 304

Tyler, Texas 75702

Tel: (903) 596-0900

Fax: (903) 596-0909

Email: atindel@andytindel.com

*Attorneys for Defendants Coretronic
Corporation and Optoma Corporation*

CERTIFICATE OF SERVICE

I hereby certify that on April 8, 2025, a true and correct copy of the foregoing document has been served on all counsel of record via ECF.

/s/ Andy Tindel
Andy Tindel

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION**

MAXELL, LTD.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 5:24-cv-00088
	)	
CORETRONIC CORP., OPTOMA CORP.,	)	JURY TRIAL DEMANDED
	)	
Defendant.	)	
	)	

**DECLARATION OF DONALD R. MCPHAIL IN SUPPORT OF DEFENDANTS’
RESPONSIVE CLAIM CONSTRUCTION BRIEF**

I, Donald R. McPhail, declare as follows:

1. I am an attorney with Merchant & Gould P.C., and I am one of the attorneys of record for Defendants Coretronic Corp. and Optoma Corp. in the above captioned matter.

2. I make this Declaration on my own information, knowledge, and belief in support of Defendants’ Responsive Claim Construction Brief.

3. Attached hereto as Exhibit A is a true and correct copy of excerpts from the transcript of the deposition of Dr. Michael Lebby, dated March 20, 2025.

4. Attached hereto as Exhibit B is a true and correct copy of excerpts from the transcript of the deposition of Dr. Michael Lebby, dated March 30, 2025.

5. Attached hereto as Exhibit C is a true and correct copy of annotated Figure 1(A) from the ’226 Patent prepared by Dr. Michael Lebby and illustrating Plaintiff’s claim construction positions.

6. Attached hereto as Exhibit D is a true and correct copy of annotated Figure 1(A) from the ’226 Patent illustrating Defendants’ claim construction positions.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: April 8, 2025

/s/Donald. R. McPhail
Donald R. McPhail

Exhibit A

Lebby, Dr. Michael S.

March 20, 2025

1

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION

MAXELL, LTD.,

Plaintiff,

CIVIL ACTION

vs.

NO. 5:24-cv-00088

CORETRONIC CORP.,
OPTOMA CORP.,

Defendants.

DEPOSITION

DEPONENT: DR. MICHAEL S. LEBBY

DATE: THURSDAY, MARCH 20, 2025

TIME: 8:00 A.M. EASTERN

LOCATION: VIA ZOOM VIDEOCONFERENCE

REPORTER: Judith Leitz Moran, RPR, RSA,
GA/CCR-B-2312, MI/CCR-1479

JOB NO: 56818

Henderson Legal Services

202-220-4158

www.hendersonlegalservices.com

Lebby, Dr. Michael S.

March 20, 2025

20

1 but what is the function of the excitation light
2 sources 1 as shown in Figure 6(A)?

3 **A The function of light sources 1, as**
4 **indicated in column 2 of the '226 Patent, are there**
5 **to excite the fluorescent material. Fluorescent**
6 **material is there to generate light of the**
7 **different wavelengths.**

8 **Q So basically they emit an excitation**
9 **light, correct?**

10 **A So, as indicated, for example, in claim 8**
11 **of the '226 Patent, the excitation light source is**
12 **used to emit an excitation light, that's correct.**

13 **Q Okay. So, again, with reference to 6(A),**
14 **so do the excitation light sources 1 emit an**
15 **excitation light upwardly through column 8 lenses**
16 **2?**

17 **A Well, certainly lenses 2 are on the path**
18 **of the excitation light that gets sourced from 1**
19 **which are laser sources.**

20 **Q Okay. So, in your opinion, do those**
21 **excitation light sources then have an emission**
22 **side?**

23 **A As far as I'm aware, the '226 Patent**
24 **doesn't teach for the excitation sources or the**
25 **laser sources number 1 having a side.**

Lebby, Dr. Michael S.

March 20, 2025

21

1 **Certainly in the figures certainly show**
2 **that light does emanate from the laser sources and**
3 **that goes in the direction towards the fluorescent**
4 **material.**

5 Q So the side that light emanates from,
6 from the excitation light sources, would you
7 consider that an emission side?

8 MS. KIM: Objection, form.

9 A So as I've just indicated in my previous
10 answer, the patent doesn't teach any details about
11 light sources number 1.

12 **Certainly they have an emission and the**
13 **emission of the light went out of light sources 1**
14 **is directed towards the fluorescent material.**

15 BY MR. KERN:

16 Q Are you generally familiar with
17 excitation light sources or LEDs?

18 A Generally I'm familiar with light sources
19 whether they are lasers or LEDs. But yes, they are
20 devices that have an emission.

21 **And in this case, we can see from Figures**
22 **1 to 4 that the emission is towards the fluorescent**
23 **material.**

24 Q Therefore, is it fair to say that lasers,
25 LEDs, include an emission side from which the light

Lebby, Dr. Michael S.

March 20, 2025

22

1 is emitted?

2 A Well, as you can see following the '226
3 in Figures 1 to 4 and even the conventional setup
4 in Figure 6, light sources number 1 certainly will
5 emit light in the direction of the fluorescent
6 material. And that is depicted in those figures.

7 The '226 doesn't detail anything about
8 light sources or what they look like or how they
9 operate.

10 I'm just looking at the light rays that
11 are shown in Figures 1 to 4 and 6, and it is very
12 clear that there is light that goes in the
13 direction of the fluorescent material.

14 Q I guess my question is more general,
15 Dr. Lebby.

16 With your knowledge of LEDs, such as the
17 excitation light sources 1 shown in at least Figure
18 6, would you agree that light is emitted from an
19 emission side of such device?

20 A Well, that's very hard to tell because in
21 the '226 Patent, it doesn't teach any details about
22 light sources 1.

23 It certainly calls out lasers. I don't
24 recall if it calls out LEDs, but let's just assume
25 for the moment the light source could be a laser or

Lebby, Dr. Michael S.

March 20, 2025

23

1 LED.

2 But certainly it shows in the Figures 1
3 to 4, and even the conventional setup in Figure 6,
4 that there is light depicted by a light ray that
5 goes from emission source 1 towards the fluorescent
6 material.

7 Q I guess, again, my question is a little
8 more general.

9 Outside of the description of the '226
10 Patent, in your experience as an expert, are you
11 familiar with laser light sources such as
12 LEDs/lasers themselves?

13 A I am quite familiar with LEDs and laser
14 sources, but -- oh, no, there's something on the
15 screen here.

16 Sorry, I'll answer the question again.

17 Q Okay.

18 A I am familiar with laser sources and LED
19 sources, but what we really need to talk about here
20 is the '226 Patent.

21 And the '226 Patent doesn't teach any
22 details about laser or LED source 1.

23 But what it does do, it very clearly
24 teaches that there are light rays that -- of light
25 that is -- that emanates from those sources and

Lebby, Dr. Michael S.

March 20, 2025

32

1 Q Okay. Fair enough. I want to move on to
2 Figure 6(C) now.

3 What is shown in Figure 6(C), Dr. Lebby?

4 A As indicated by the '226 Patent, in
5 column 2 lines 58 and 59, the patent teaches that,
6 quote, "Figure 6(C) shows a luminance distribution
7 on one cross-section." End quote.

8 And so it is a cross-section of the light
9 distribution that is on irradiation region 8.

10 Q And again, just to be clear, that's on --
11 that luminance distribution is on the surface of
12 the fluorescent material, correct?

13 A So in Figure 6(A), Figure 6(B) and Figure
14 6(C) is a conventional setup that shows light
15 sources 1 where the light rays are condensed
16 through condenser lens 6 to a light-condensing
17 position which is on the surface of the fluorescent
18 material 8.

19 And Figure 6(C) in particular shows a
20 luminance or a light distribution on one
21 cross-section of that light as it is positioned in
22 the light-condensing position on the surface of the
23 fluorescent material.

24 Q I would like -- I'm sorry, were you done?

25 A I am finished.

Lebby, Dr. Michael S.

March 20, 2025

33

1 Q Okay. I'd like to turn to Paragraph 41
2 now of your declaration. Let me know when you're
3 there.

4 A I'm there.

5 Q Okay. I want to talk about the line --
6 the sentence beginning on line 6 of the 40 -- of
7 your 41st paragraph, but please take a second to
8 review that paragraph and that line in particular.

9 A Okay. I've read that section.

10 Q So as you can see on the screen, the
11 sentence I want to talk about in that paragraph is
12 highlighted. And it reads mostly: "By increasing
13 the area of where the excitation light is
14 irradiated onto the fluorescent material, which in
15 turn distributes the light more evenly across the
16 fluorescent material, as shown for example in
17 Figure 1(C), the temperature of the fluorescent
18 material will be lowered."

19 Do you see that sentence?

20 A I do so that.

21 Q What does the phrase in that sentence "by
22 increasing the area" mean?

23 A The phrase that I use in Paragraph 41,
24 which is part of your question, quote, "by
25 increasing the area," end quote, "where the

Lebby, Dr. Michael S.

March 20, 2025

34

1 excitation light is irradiated onto the fluorescent
2 material," I've actually annotated in Paragraph 53
3 on Page 16 how the area is increased.

4 And really the design of the '226 Patent
5 actually positions a light-condensing position
6 different than what is indicated in Figure 6(A).

7 And so the light-condensing position is
8 changed so that the light is more evenly
9 distributed on the fluorescent material thereby
10 eliminating hot spots or areas wherein the
11 fluorescent material can degrade.

12 Q I want to refer back to Figure 6(A) of
13 the '226 Patent.

14 Does that illumination system, the
15 irradiation system -- I'm sorry, scratch that.

16 Does the irradiation region 8 shown in
17 Figure 6(A) of the '226 Patent have an area?

18 A As we've already indicated on record when
19 we're looking at the '226 Patent, I'm looking at
20 the conventional setup of which the '226 Patent is
21 teaching to improve, the Figure 6(A) shows that the
22 light incident rays that are emitted from light
23 sources 1 are condensed on an irradiation region 8,
24 which I've termed in my declaration to
25 light-condensing position. And that is a problem

Lebby, Dr. Michael S.

March 20, 2025

35

1 that the '226 is solving.

2 The '226, as far as I'm aware, doesn't
3 detail an area per se, but certainly indicates that
4 is a light-condensing position that creates hot
5 spots and -- or reliability and lifetime for the
6 fluorescent material of which the '226 solves by
7 changing the light-condensing position as taught
8 in, for example, Figure 1(A) that I have annotated
9 on Page 16 where the light-condensing position is
10 moved away from the surface of the material,
11 fluorescent material 7, so that the material can be
12 irradiated by incident light more uniformly, and
13 therefore, eliminate hot spots.

14 Q Apologies for the redundancy, but earlier
15 I believe we established that Figure 6(B) is
16 showing a two-dimensional distribution drawing of
17 the excitation light on the fluorescent material
18 surface; is that correct?

19 A And conventional Figure 6 which has three
20 subparts, Figure 6(A) shows you or shows a POSITA,
21 the light rays that emanate from light sources 1
22 that get condensed through condenser -- light
23 condenser 6 onto the surface of the fluorescent
24 material in what the patent teaches is a
25 light-condensing position.

Lebby, Dr. Michael S.

March 20, 2025

82

1 **dependent claim certainly narrows on the**
2 **independent claim.**

3 Q Okay. Fair enough.

4 And did your attorneys explain to you the
5 difference between an independent claim and a
6 dependent claim?

7 A **No, but we may have discussed it.**

8 Q Okay. Does a dependent claim further
9 limit an independent claim according to your
10 understanding?

11 A **My general understanding is, is that**
12 **there is a narrowing and there may be some**
13 **limitations depending on how the claim is set up.**

14 But I'm not an attorney, so I can't give
15 you a legal answer to that.

16 Q Okay. If the purpose of a dependent
17 claim is to narrow an independent claim, then to
18 your understanding must an independent claim cover
19 the broader scope than the dependent claim?

20 A **Well, the first part of the answer I**
21 **should give you is I'm not an attorney. I believe**
22 **that is generally the case, although, I am not an**
23 **expert here.**

24 Typically, my interpretation is, is that
25 a dependent claim is more narrow than an

Lebby, Dr. Michael S.

March 20, 2025

83

1 **independent claim.**

2 **But the exact language that is used I'm**
3 **not an expert at.**

4 Q Did your attorneys discuss this with you
5 at all?

6 MS. KIM: Objection, I'm going to
7 instruct Dr. Lebby to be careful to not reveal any
8 of the privileged discussion that we've had.

9 **A I don't recall any discussion.**

10 BY MR. KERN:

11 Q Could you please turn to dependent claim
12 10 of the '226 Patent and take a read and let me
13 know when you're done.

14 **A I've read claim 10.**

15 Q And do you agree that claim 10 is
16 dependent of independent claim 8 in the '226
17 Patent?

18 **A Claim 10 certainly looks like it's**
19 **dependent on claim 8, so I would interpret it as a**
20 **dependent claim.**

21 Q Okay. And do you agree that claim 10 in
22 the wherein clause states: "Wherein at least one of
23 the convex lens and the concave lens has a
24 curvature that is set so as to allow the excitation
25 lights to be made incident on the fluorescent

Lebby, Dr. Michael S.

March 20, 2025

84

1 material at a front side of the fluorescent
2 material as a light-condensing position"?

3 Is that accurate?

4 **A You've read it accurately.**

5 Q Okay. So dependent claim 10 requires
6 that excitation light to be made incident on the
7 fluorescent material at a front side of the
8 fluorescent material as a light-condensing
9 position, correct?

10 **A Well, certainly you're reading the words**
11 **correctly for claim 10.**

12 Q So according to your proposed -- proposed
13 claim construction of independent claim 1, the
14 light-condensing position should be on a rear or
15 emission side of the fluorescent material; is that
16 correct?

17 **A I don't believe on where that I've used**
18 **the term "rear side." I've certainly used the term**
19 **"emission side" as indicated in Paragraphs 55 to**
20 **58, for example.**

21 Q So perhaps to refresh your recollection,
22 at the top of Page 14 of your declaration, your
23 proposed construction is "an excitation light's
24 exit side of the fluorescent material that faces
25 away from the excitation light source"; is that

Lebby, Dr. Michael S.

March 20, 2025

85

1 correct?

2 **A That's certainly the construction I have**
3 **on Page 14 for Plaintiff Maxell.**

4 **Q Is it possible to have a light-condensing**
5 **position that's both on a front and exit side of**
6 **the fluorescent material?**

7 **A And so I interpret claim 8, which is the**
8 **independent claim, to have the claim element in**
9 **particular as, quote: "the optical member has a**
10 **curvature that is set such that a light-condensing**
11 **position of the excitation light is positioned on**
12 **the emission side of the excitation light relative**
13 **to the fluorescent material." End quote.**

14 **And that claim element I have to**
15 **interpret, as a person of ordinary skill in the**
16 **art, to implement the invention of the '226 and**
17 **improve the performance of the fluorescent material**
18 **by removing the hot spots, and that is clearly**
19 **indicated through the embodiments in Figures 1 to**
20 **4.**

21 **So my interpretation of the spec and the**
22 **figures indicate my understanding of the claim**
23 **element Figure 8.**

24 **I think your question looks at a**
25 **hypothetical of some different scenarios, but to me**

Henderson Legal Services

202-220-4158

www.hendersonlegalservices.com

Lebby, Dr. Michael S.

March 20, 2025

87

1 And I'm sorry, I misspoke, I meant to
2 refer to claim -- independent claim 8.

3 MS. KIM: Objection, form.

4 A So my interpretation of claim 8 is given
5 in my declaration, after I've looked at the spec,
6 the claim elements and the figures. And I've
7 annotated the figures pretty clearly in Page 16 of
8 my declaration.

9 I don't believe I've analyzed claim 10 in
10 my declaration. And so certainly haven't come into
11 this deposition with a -- thinking about claim 10
12 in great detail.

13 But as you've just indicated on record,
14 that claim 10 is dependent on claim 8, so,
15 therefore, it's more restricted.

16 And so I have to look at claim 8 to see
17 how the system's set up to improve the performance
18 of the fluorescent material. And so my
19 interpretation of claim 8 is that I've interpreted
20 that correctly in terms of my annotated figures and
21 to improve the performance of the fluorescent
22 material.

23 BY MR. KERN:

24 Q So do I understand that in interpreting
25 claim 8, you did not take into account dependent

Lebby, Dr. Michael S.

March 20, 2025

88

1 claim 10?

2 A I don't believe I've opined on claim 10
3 in my declaration. So as far as I'm concerned,
4 it's out of scope of Q and A, but I've done my best
5 to answer your questions.

6 Q Do you think claim 10 would inform your
7 decision of the scope of claim 8?

8 A Certainly, as I look at claim 10 now as
9 dependent on claim 8, claim 8 clearly shows the
10 improvement of the '226 invention over conventional
11 Figure 6 with the -- clearly, the annotated figures
12 done of Claim 1(A) plus Figures 1 to 4.

13 I don't see any difference right now, but
14 I'm happy to take a closer look at claim 10 if you
15 wish me to do that.

16 Q But as it stands now, doesn't your
17 proposed construction of independent claim 8 -- I'm
18 sorry, yeah, your proposed construction -- scratch
19 that.

20 But as it stands now, doesn't your
21 construction preclude independent claim 8 from
22 covering the subject matter of dependent claim 10?

23 MS. KIM: Objection, form.

24 A As I've already indicated on record in my
25 declaration, I haven't considered claim 10 and

Lebby, Dr. Michael S.

March 20, 2025

89

1 **opined on claim 10 as it relates to independent**
2 **claim 8.**

3 **What I have done is looked at claim 8 and**
4 **interpreted claim 8 and how claim 8 is used to,**
5 **with the spec and the figures, to improve the**
6 **performance of the fluorescent material.**

7 **But as it stands right now, I don't see**
8 **any major impact of claim 10 to change anything**
9 **that I've opined upon in claim 8.**

10 **I also would like to note that I haven't**
11 **opined on claim 10 in my declaration and I believe**
12 **it's out of scope to go into detail about claim 10**
13 **as it stands right now.**

14 BY MR. KERN:

15 Q Okay. I'd like to go to the
16 specification of the '226 Patent at column 1 line
17 51 through 55.

18 A **I'm at column 1 lines 51.**

19 Q That section of the patent is referred to
20 as Means for Solving the Problem. And I'd like to
21 focus on the sentence that begins at line 51. And
22 it's short, let me read it.

23 "The optical member has a curvature that
24 is set so as to allow the excitation light that has
25 passed through the optical member to be made

Lebby, Dr. Michael S.

March 20, 2025

90

1 incident on the fluorescent material at a front
2 side of the fluorescent material as a
3 light-condensing position."

4 Do you see that sentence?

5 **A I do see the sentence.**

6 **Q** And that sentence is almost identical to
7 the claim language in dependent claim 10, do you
8 agree?

9 **A Well, I would only agree that some of the**
10 **words are used in claim 10, but not all of the**
11 **words, column 1 lines 51 to 55.**

12 **Claim 10 certainly expresses a few of the**
13 **words, but not all of them.**

14 **Q** But would you agree that both dependent
15 claim 10 and the specification in the Means for
16 Solving the Problems section indicate that the
17 light-condensing position is located on a front
18 side of the fluorescent material?

19 **A So as you read the words in column 1**
20 **lines 51 to 55, and the words that you quoted in**
21 **your question, for example, quote: "incident on the**
22 **fluorescent material at a front side of the**
23 **fluorescent material." End quote.**

24 **I think parts of those words are used in**
25 **claim 10. But claim 10 is -- has other words, too.**

Henderson Legal Services

202-220-4158

www.hendersonlegalservices.com

Lebby, Dr. Michael S.

March 20, 2025

91

1 And so, you know, comparing the two is not exactly
2 the same.

3 Q Okay. But referring back to column 1
4 line 51 through 55, is there any ambiguity to a
5 person of ordinary skill in the art that the
6 light-condensing position is located on a front
7 side of the fluorescent material?

8 A Oh, I certainly can't deny that -- that
9 the term "front side of the fluorescent material"
10 is indicated in column 1 lines 51 to 55.

11 But as a person of ordinary skill in the
12 art, I certainly am looking at claim 8 which is
13 where the claim construction is -- is about in
14 terms of this deposition.

15 Claim 10, which you have referred to in
16 previous questions, and the subject is dependent in
17 claim 8, but I've looked at the specification and
18 the figures in the '226 and looked at how to
19 implement the improvements that the '226 teaches in
20 terms of the quality of the fluorescent material.
21 And I've opined on that in my declaration.

22 Q But do you agree that in the Means for
23 Solving the Problem section of the '226 Patent, the
24 patent is teaching to have the light-condensing
25 position on the front side of the fluorescent

Henderson Legal Services

202-220-4158

www.hendersonlegalservices.com

Lebby, Dr. Michael S.

March 20, 2025

95

1 C E R T I F I C A T E

2 Deposition of: DR. MICHAEL S. LEBBY
3 Date of Deposition: MARCH 20, 2025

4 STATE OF GEORGIA:

5
6 I hereby certify that the foregoing
7 transcript was stenographically recorded by me
8 via Zoom as stated in the caption. The deponent
9 was duly sworn to tell the truth, the whole truth,
10 and nothing but the truth. And the colloquies,
11 statements, questions and answers thereto were
12 reduced to typewriting under my direction and
13 supervision and the deposition is a true and
14 correct record, to the best of my ability, of
15 the testimony/evidence given by the deponent.

16 I further certify that I am not a
17 relative or employee or attorney or counsel to
18 any of the parties in the case, nor am I a
19 relative or employee of such attorney or counsel,
20 nor am I financially interested in the action.

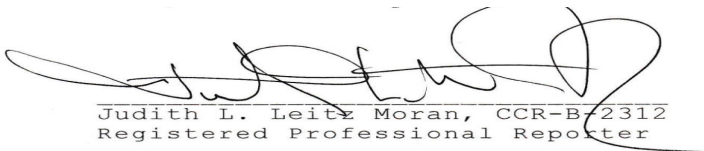
21 This, the 24th day of March 2025.

22

23

24

25


Judith L. Leitz Moran, CCR-B/2312
Registered Professional Reporter

Henderson Legal Services

202-220-4158

www.hendersonlegalservices.com

Exhibit B

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TEXARKANA DIVISION

MAXELL, LTD.,

Plaintiff,

CIVIL ACTION NO.

v.

5:24-CV-00088

CORETRONIC CORP.,

OPTOMA CORP.,

Defendant.

REMOTE DEPOSITION OF

MICHAEL S. LEBBY, PH.D., VOLUME 2,
called by the plaintiffs for examination, taken by
and before Ann Medis, Registered Professional
Reporter and Notary Public in and for the
Commonwealth of Pennsylvania, via Zoom
Videoconference, on Sunday, March 30, 2025,
commencing at 11:05 a.m. PST.

1 improvements on a conventional light source
2 device, which is actually depicted in Figure 6(A).
3 And in Figure 6(A) the patent teaches in column 2,
4 lines 43 to 45, quote, "The condenser lens 6 has
5 its curvature set that incident parallel light
6 rays are condensed on an irradiation region 8 on
7 the disc 9," end quote.

8 That teaches me for the conventional
9 light source device, the light-condensing position
10 is as I've indicated in Figure 6(A) in paragraph
11 65 on page 20. And also in paragraph 53 with the
12 annotated Figure 1(A) -- sorry. That's incorrect.
13 It's not paragraph 53. That's just Figure 6(A) in
14 paragraph 65, page 21.

15 But I also show the improvement of the
16 invention or exemplary embodiments of the
17 invention in paragraph 65, page 21 in Figures
18 1(A), 2(A), 3(A) and 4(A) with an annotated red
19 arrow and a light in a red box that surrounds a
20 light-condensing position, how it's changed and
21 how it actually allows the fluorescent material a
22 longer lifetime, longer reliability through the
23 mitigation of hot spots.

24 BY MR. KERN:

25 Q. Can you point to a disclosure in the

1 '226 patent that describes the location of a focal
2 point of excitation light 10?

3 A. I have a printed copy of the '226 patent
4 in front of me, but I don't have capability to
5 search the word focal in the '226 patent.

6 Do you remember if the term focal point
7 is expressly used in the '226 patent? I don't
8 want to read it.

9 Q. I'll represent to you that it is not.
10 But we can move on.

11 Dr. Lebby, in your recollection, are you
12 aware of anywhere in the '226 patent that
13 describes the light-condensing position of the
14 excitation light 10 in connection with
15 Figure 6(A)?

16 A. Well, in the '226 patent, as I read
17 through the '226 patent, Figure 6(A), which is the
18 conventional light source device, which is the
19 device that the '226 patent is improving upon with
20 its invention, is discussed in column 2.

21 I believe that goes on halfway down
22 column 3. '226 patent does discuss in lines 43 to
23 45 in column 2 that the parallel light rays that
24 emanate from the excitation light sources 1 are
25 condensed on irradiation region 8. Irradiation

1 region 8 is denoted in Figure 6.

2 Q. Dr. Lebby, are you relying on the ray
3 drawings of the excitation light 10 in any of the
4 figures to come to your conclusions?

5 A. I'm relying, as I look through what is
6 being taught in the '226 patent, basically the
7 four corners of the patent, which is the claims,
8 the specification as well as the figures and I
9 guess as well as the prosecution history.

10 So rays is just one piece of the pie
11 that a person of ordinary skill in the art would
12 look at to create an opinion of what's really
13 going on in the conventional light source device
14 in Figure 6. And it's clearly depicted to me or
15 taught in column 2, lines 43 to 45, and further
16 down from 43 to actually 54, where the light
17 that's emanated from light sources 1 that
18 eventually go through condense line 6, those
19 parallel right rays are condensed on irradiation
20 region 8.

21 This just explains to me that the
22 light-condensing position, as I have indicated and
23 annotated in Figure 6(A) on page 21, paragraph 65,
24 is where they say it is. It's on the surface of
25 the fluorescent material.

1 Q. Are you aware that patent drawings
2 generally cannot be relied on for matters of
3 scale?

4 MS. KIM: Objection. Form.

5 THE WITNESS: As a person of ordinary
6 skill in the art that's looked at both
7 architectural drawings, which are to scale, as
8 well as patent drawings, which are typically not
9 to scale, I'm very much aware of the fact where
10 the scaling would be different when it's not
11 regimented like in an architectural drawing.

12 But having said that, I'm a person of
13 the ordinary skill in the art, and what I do is I
14 look at the four corners of the '226 patent, which
15 is the claims, the specifications and the figures,
16 and the figures may not be accurately to scale,
17 but the support of the teaching of what's being
18 shown in the figures is usually through the
19 specification and the claims.

20 And I've looked through all of those,
21 including the patent history, and have come up
22 with my opinions in my declaration. And so my
23 opinion is if you look at Figure 6(A), you can see
24 that the light-condensing position is on the
25 surface of the fluorescent material 7, and that is

1 improve the lifetime of the fluorescent material.

2 And the '226 patent actually teaches them to do
3 that.

4 You've got to actually put the
5 light-condensing position as indicated in
6 Figures 1(A), 2(A), 3(A) and 4(A), which I've
7 shown in paragraph 65 on page 21 of my
8 declaration.

9 Q. That's fantastic, Dr. Lebby.

10 My question was: Does the fluorescent
11 material 7 have a surface that faces the
12 excitation light source 1? Yes or no.

13 MS. KIM: Objection. Form.

14 THE WITNESS: What we're looking at here
15 is the defendant's claim construction here. And
16 what I'm doing from paragraph 68 to 73 is I'm
17 trying to show through my annotated figure in
18 paragraph 72 why the defendant's post-construction
19 won't work. I don't believe this is a simple yes
20 or no answer. But I can go into more detail if
21 you wish.

22 BY MR. KERN:

23 Q. Let's just look at the disclosure of the
24 '226 patent, and maybe we can focus on
25 Figure 1(A). Let me know when you have that in

1 front of you.

2 **A. I have Figure 1(A) in front of me.**

3 Q. So the excitation light sources 1 emit
4 excitation light that travels up onto or into past
5 the fluorescent material. Yes or no.

6 MS. KIM: Objection. Form.

7 THE WITNESS: As indicated in the '226,
8 column 3, lines 39 to 59, there is a description
9 how the '226 teaches the operation of the light.
10 That is an improvement over the conventional
11 device, Figure 6, improved the lifetime and the
12 reliability of the fluorescent material.

13 What happens to the light as it emanates
14 from sources 1 and is -- as the light travels
15 towards the fluorescent material 7.

16 BY MR. KERN:

17 Q. Excitation light is incident on the
18 fluorescent material 7. Yes or no.

19 **A. So the way I interpret Figure 1 as being**
20 **taught in Figure 3 on lines 39 to 59, the**
21 **fluorescent light is not incident as you ask.**
22 **What we're really looking at in Figure 1 is the**
23 **excitation light because that's the light that**
24 **comes out in the lasers.**

25 The light that comes out in lasers goes

1 through a series of optical lenses, 2, 3, 4
2 through dichroic filter 5 as well as condensing
3 lens 6. Figure 1 shows the light-condensing
4 position is as I've indicated in my declaration on
5 paragraph 53 is, more or less, paragraph 65 with
6 red annotated boxes and a red arrow.

7 I'm not sure your question was
8 technically accurate.

9 Q. Are you aware of any written description
10 in the '226 patent that teaches that the
11 excitation light 10 exits an emission side of
12 fluorescent material 7?

13 A. I don't believe I've done a written
14 description in my declaration. I think my
15 declaration is really based on the claim
16 construction, which is indicated in the title of
17 my declaration. So I believe a written
18 description is at this point outside the scope.

19 But as I indicated in paragraph 74, I'm
20 happy to put in a supplemental declaration that
21 looks at a written description and can address
22 that issue for you.

23 Q. I'm asking you as one of ordinary skill
24 in the art, Dr. Lebby. Are you aware of any
25 disclosure in the '226 patent that teaches that

127

1 the excitation light 10 exits an emission side of
2 the fluorescent material 7.

3 MS. KIM: Objection. Form.

4 THE WITNESS: As I've indicated in
5 earlier answers in this deposition -- I guess two
6 weeks ago, you were asking me similar questions.
7 And if you look at Figure 1, and I think I
8 indicated this on record probably two or three
9 times, it's an embodiment. This is an embodiment
10 of the '226 invention.

11 And the invention clearly teaches an
12 improvement of the lifetime fluorescent material
13 over that which was conventional in Figure 6.
14 Figure 1 is an embodiment showing light rays
15 going, emanating from laser sources 1 that
16 eventually reached the fluorescent material 7.
17 But there could be other embodiments, too.

18 I believe you asked me a whole series of
19 questions of whether the optical disc was
20 transparent or not. And I believe I answered yes,
21 if I remember correctly. So this is just one
22 embodiment. There are other embodiments as the
23 patent clearly teaches.

24 In fact, you can just look at column 8,
25 lines, I guess, 4 to 11. That section there

131

1 COMMONWEALTH OF PENNSYLVANIA)

2 COUNTY OF ALLEGHENY) SS:

3 C E R T I F I C A T E

4 I, Ann Medis, RPR, CLR, CSR-WA and
5 Notary Public within and for the Commonwealth of
6 Pennsylvania, do hereby certify:

7 That MICHAEL S. LEBBY, PH.D., the
8 witness whose deposition is hereinbefore set
9 forth, was duly sworn by me via Zoom
10 videoconferencing, and that such deposition is a
11 true record of the testimony given by such
12 witness.

13 I further certify the inspection,
14 reading and signing of said deposition were not
15 waived by counsel for the respective parties and
16 by the witness.

17 I further certify that I am not related
18 to any of the parties to this action by blood or
19 marriage and that I am in no way interested in the
20 outcome of this matter.

21 IN WITNESS WHEREOF, I have hereunto set
22 my hand this 1st day of April, 2025.

23

24

25

Ann Medis
Notary Public

Exhibit C

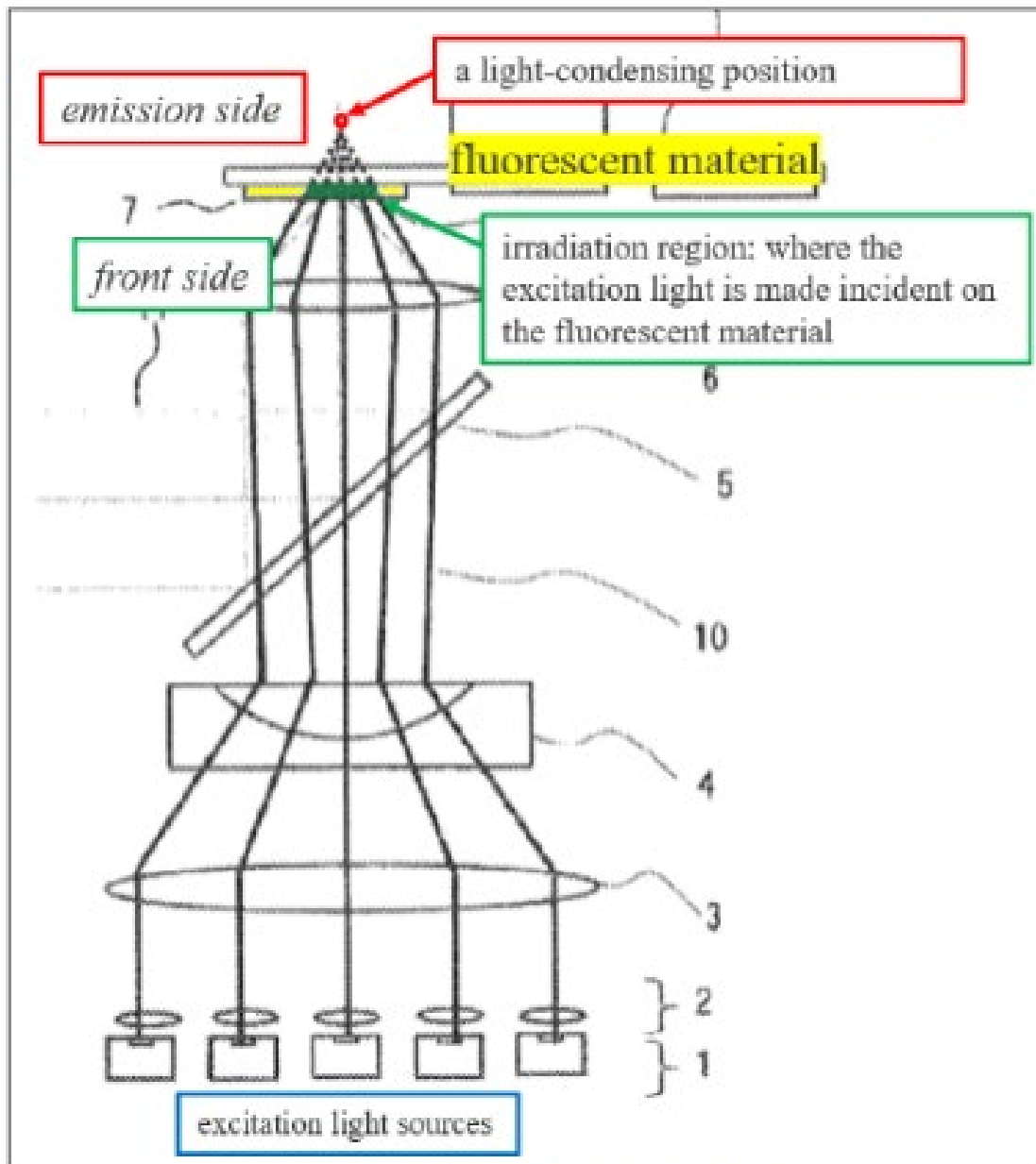
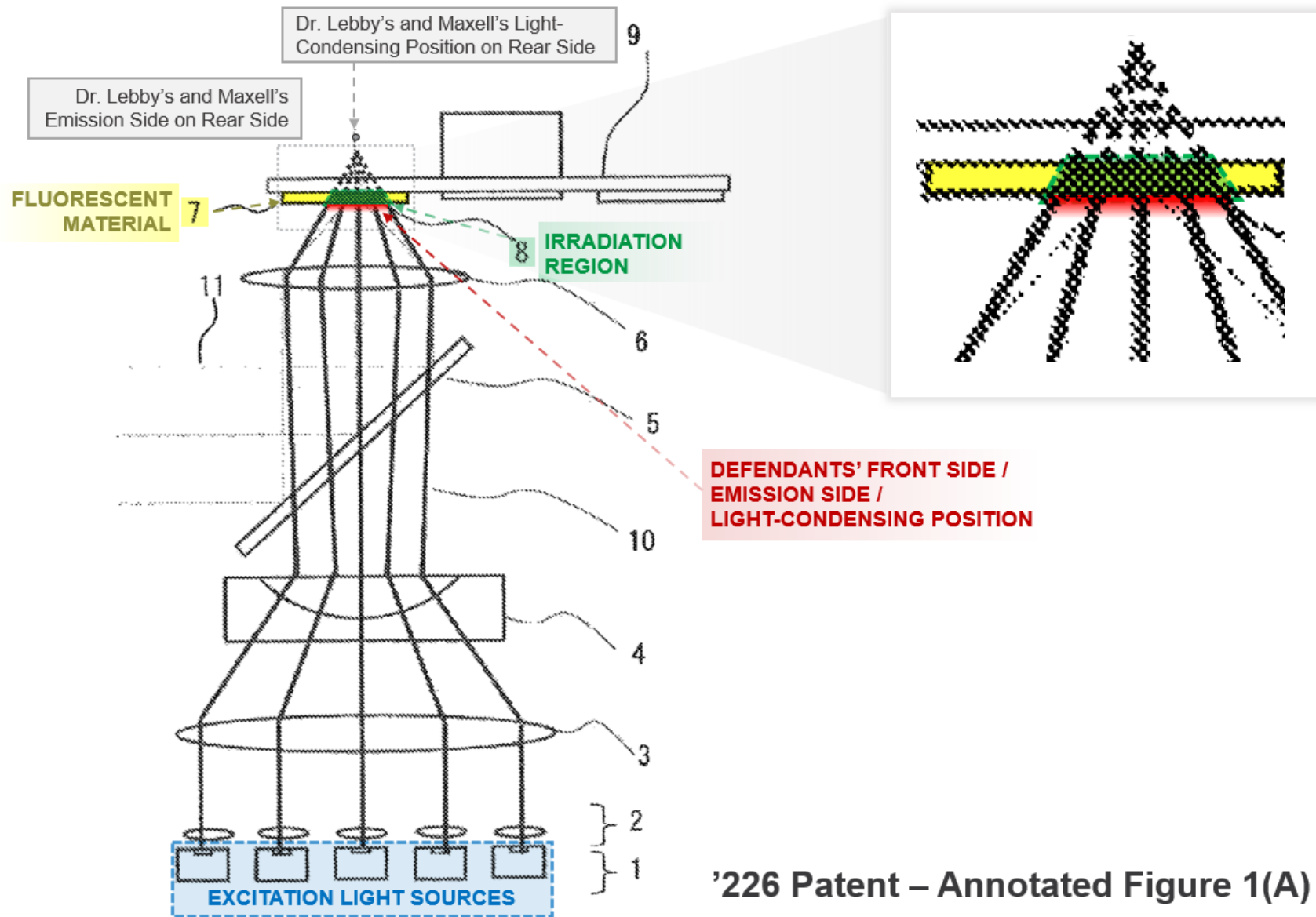


Fig. 1(A) (annotation added)

Exhibit D



'226 Patent – Annotated Figure 1(A)