

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

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CIVIL MINUTES – GENERAL

CASE NO.: CV 8:16-0545 SJO (MRWx)

DATE: March 13, 2019

TITLE: Nichia Corp. v. VIZIO, Inc.

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PRESENT: THE HONORABLE S. JAMES OTERO, UNITED STATES DISTRICT JUDGE

Victor Paul Cruz
Courtroom Clerk

Not Present
Court Reporter

COUNSEL PRESENT FOR PLAINTIFFS:

COUNSEL PRESENT FOR DEFENDANTS:

Not Present

Not Present

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PROCEEDINGS (in chambers): ORDER GRANTING-IN-PART AND DENYING-IN-PART DEFENDANT'S MOTION FOR SUMMARY JUDGMENT [Docket No. 179]

This matter is before the Court on Defendant VIZIO, Inc.'s ("VIZIO" or "Defendant") Motion for Summary Judgment ("MSJ" or "Mot."), filed October 26, 2018. Plaintiff Nichia Corp. ("Nichia" or "Plaintiff") Opposed this MSJ on November 5, 2018 ("Opp'n") and Defendant replied on November 9, 2018 ("Reply"). The Court found this matter suitable for disposition without oral argument. See Fed. R. Civ. P. 78(b). For the following reasons, the Court **GRANTS-IN-PART** and **DENIES-IN-PART** Defendant's Motion for Summary Judgment.

I. FACTUAL AND PROCEDURAL BACKGROUND¹

Nichia initiated the instant action on March 23, 2016, alleging that certain VIZIO televisions (the "Accused Products) infringe four of its patents directed to light emitting diode ("LED") semiconductor chips and phosphor materials that are combined to produce white light. (See *generally* Compl., ECF No. 1.) These patents include: (1) U.S. Patent No. 7,901,959 (the "959 Patent"), entitled "Liquid Crystal Display and Back Light Having a Light Emitting Diode;" (2) U.S. Patent No. 7,915,631 (the "631 Patent"), entitled "Light Emitting Device and Display;" (3) U.S. Patent No. 8,309,375 (the "375 Patent"), also entitled "Light Emitting Device and

¹ Plaintiff submitted evidentiary objections VIZIO's Statements of Undisputed Material Facts. (Plaintiff's Statement of Genuine Disputes of Material Fact ("GDMF"), ECF No. 194-1; Plaintiff's Objections to VIZIO's Evidence ISO Its Motion for Summary Judgment, ECF No. 188-3.) In ruling on this Motion for Summary Judgment, the Court only considered admissible evidence. See, e.g., *Orr v. Bank of Am., NT & SA*, 285 F.3d 764, 773 (9th Cir. 2002) ("A trial court can only consider admissible evidence in ruling on a motion for summary judgment."); *Beyene v. Coleman Sec. Servs., Inc.*, 854 F.2d 1179, 1181 (9th Cir. 1988); Fed. R. Civ. P. 56(e).

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Display;" and (4) U.S. Patent No. 7,855,092 (the "'092 Patent"), entitled "Device or Emitting White-Color Light" (together, the "Asserted Patents"). The Asserted Patents (1) list the same four inventors; (2) share a common specification; and (3) claim priority to the same Japanese patent application, P 09-081010, and the same U.S. Patent Application No. 08/902,725, which issued as U.S. Patent No. 5,998,925 on July 29, 1997 (the "'925 Patent"). (See Compl., Exs. A-D.)

On January 3, 2017, VIZIO filed a Motion to Stay Case ("Motion to Stay") pending completion of four petitions for inter partes review ("IPR") that VIZIO filed against the Asserted Patents. (Mot. to Stay, ECF No. 57.) VIZIO's petitions were prompted in part by a jury verdict in a declaratory judgment action in the Eastern District of Michigan that found that certain claims of the '925 Patent, as well as U.S. Patent No. 7,531,960 (the "'960 Patent") (together, the "Michigan Patents"), were invalid as obvious. *Everlight Elecs. Co., Ltd. et al. v. Nichia Corp. et al.*, No. 4:12-cv-11758-GAD-MKM (E.D. Mich. Apr. 22, 2015) (hereinafter, the "Michigan Action"). VIZIO's petitions relied on much of the same prior art that supported the jury verdict in the Michigan Action. (Mot. to Stay 5; Decl. Richard Erwine in Supp. Mot. to Stay ("Erwine Decl."), Exs. E-H ("IPR Petitions").) Given the overlap of the subject matter and prior art, the Court granted the stay on February 2, 2017. (Order Granting Def's Mot. to Stay, ECF No. 68.)

On August 1, 2017, the Court lifted the stay. (8/01/2017 Minute Order, ECF No. 73.) On January 4, 2018, the Federal Circuit affirmed the Eastern District of Michigan's denial of Nichia's motion for judgment as a matter of law ("JMOL"), which held that substantial evidence supported the jury verdict of invalidity in the Michigan Action. *Everlight Elecs. Co., Ltd v. Nichia Corp.* ("Everlight"), No. 2016-1577, 2018 WL 286119, at *1 (Fed. Cir. Jan. 4, 2018). On January 9, 2018, VIZIO requested permission from the Court to file an early motion for summary judgment on the issues of collateral estoppel and invalidity in light of the Federal Circuit's decision in *Everlight*; the Court granted VIZIO's request on January 23, 2018. (Mot. to File MSJ, ECF No. 87; 1/23/18 Minute Order, ECF No. 92.) After briefing, the Court ultimately denied this motion for summary judgment, finding that the Federal Circuit's decision in a different litigation involving two of the Asserted Patents "cannot serve as the sole basis for invalidating separate patent claims with limitations that were never addressed or are not substantially similar to the claim limitations at issue in the *Everlight* action." (Order Denying Def's Mot. Summary Judgment, ECF No. 105.)

The Court held a claim construction hearing on May 18, 2018. (Minutes of Markman Hearing, ECF No. 124.) On May 29, 2018, the Court issued its Order construing the following terms:

Claim Term	Claim Construction
"transparent material"	no construction necessary
"the blue color light from said light emitting component and the yellow color light from	no construction necessary

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said phosphor are mixed to make a white color light"	
"the blue color light and the light from said phosphor being mixed to make the white-color"	
"diffuses"	"scatters"
"overlap with each other to make a continuous combined spectrum"	"partly extend over each other to make a continuous combined spectrum"
"a concentration of said phosphor in the vicinity of said LED chip is larger than a concentration of said phosphor in the vicinity of the surface of said transparent material"	indefinite
"desired chromaticity"	no construction necessary

(Claim Construction Order, ECF No. 127.) The present Motion for Summary Judgment followed on October 26, 2018. On November 28, 2018, the Court Defendant filed an *ex parte* application to continue the trial and enable it to substitute its technical expert. (*Ex Parte* Application to Continue Trial, ECF No. 225.) The Court granted this application and continued the trial to March 26, 2019. (Minute Order, ECF No. 230.)

II. TECHNOLOGICAL SUMMARY

The Asserted Patents are all divisionals of and claim priority to the same patent application filed on July 29, 1997, now U.S. Patent No. 5,998,925. All of the Asserted Patents are expired. They also share substantially the same patent specification. For convenience, the Court will refer to the '375 Patent for all citations to the common portions of the Asserted Patents' specification, unless otherwise noted.

The Asserted Patents claim devices and method of manufacturing devices that include light emitting diodes ("LEDs"). The Asserted Patents are specifically drawn to LED displays and devices to address shortcomings with earlier LED devices that attempted to create and emit white light. (See, e.g., '375 Patent cols. 4:54-59.) For instance, the Asserted Patents describe previous devices that arranged "three light emitting components of R, G and B closely to each other while diffusing and mixing the light emitted by them." ('375 Patent cols. 1:53-55.) The Asserted Patents explain that "variations in the tone, luminance, and other factors of the light emitting component" made it difficult to achieve "white light of the desired tone" using this arrangement. ('631 Patent cols. 1:56-59.) Other prior art techniques and shortcomings are also described by the Asserted Patents. (See *generally* '375 Patent cols. 1:35-3:3.)

One way that the Asserted Patents purport to solve these various shortcomings is by incorporating a "phosphor," a material that exhibits luminescence, into their claimed LED devices

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and methods of manufacture. The Asserted Patents explain, "the present invention provides a light emitting device, comprising a light emitting component and a phosphor capable of absorbing a part of light emitted by the light emitting component and emitting light of wavelength different from that of the absorbed light." ('375 Patent cols. 3:37-41.) The light emitted by the light emitting component and the light absorbed and emitted at a different wavelength by the phosphor mix and combine to create light of a desired wavelength, including white light. ('375 Patent cols. 4:54-59.)

III. DISCUSSION

In the present MSJ, VIZIO moves for summary judgment as to both invalidity and non-infringement of the '092 and '375 Patents. (See *generally* MSJ.) It argues that the '092 Patent is indefinite for improperly relying on means-plus-function ("MPF") claiming without identifying sufficient supporting structure. (MSJ 2-5.) Defendant next claims that Nichia has failed to establish infringement of either the '092 or '375 Patent. (MSJ 5-7, 15-18.) Finally, it contends that both the '092 and '375 Patents are obvious in light of the existing prior art. (MSJ 7-15, 19-20.)

A. Legal Standards

1. Summary Judgment

Federal Rule of Civil Procedure 56(a) mandates that "[t]he court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). The moving party bears the initial burden of establishing the absence of a genuine issue of material fact. See *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). "When the party moving for summary judgment would bear the burden of proof at trial, it must come forward with evidence which would entitle it to a directed verdict if the evidence went uncontroverted at trial. In such a case, the moving party has the initial burden of establishing the absence of a genuine issue of fact on each issue material to its case." *C.A.R. Transp. Brokerage Co. v. Darden Rests., Inc.*, 213 F.3d 474, 480 (9th Cir. 2000) (citations omitted). In contrast, when the nonmoving party bears the burden of proving the claim or defense, the moving party does not need to produce any evidence or prove the absence of a genuine issue of material fact. See *Celotex*, 477 U.S. at 325. Rather, the moving party's initial burden "may be discharged by 'showing'—that is, pointing out to the district court—that there is an absence of evidence to support the nonmoving party's case." *Id.* "Summary judgment for a defendant is appropriate when the plaintiff 'fails to make a showing sufficient to establish the existence of an element essential to [his] case, and on which [he] will bear the burden of proof at trial.'" *Cleveland v. Policy Mgmt. Sys. Corp.*, 526 U.S. 795, 805-06 (1999) (quoting *Celotex*, 477 U.S. at 322).

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Once the moving party meets its initial burden, the "party asserting that a fact cannot be or is genuinely disputed must support the assertion." Fed. R. Civ. P. 56(c)(1). "The mere existence of a scintilla of evidence in support of the [nonmoving party]'s position will be insufficient; there must be evidence on which the jury could reasonably find for the [nonmoving party]." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252 (1986); accord *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986) ("[O]pponent must do more than simply show that there is some metaphysical doubt as to the material facts."). Further, "[o]nly disputes over facts that might affect the outcome of the suit . . . will properly preclude the entry of summary judgment [and f]actual disputes that are irrelevant or unnecessary will not be counted." *Liberty Lobby*, 477 U.S. at 248. At the summary judgment stage, a court does not make credibility determinations or weigh conflicting evidence. See *id.* at 249. A court is required to draw all inferences in a light most favorable to the nonmoving party. *Matsushita*, 475 U.S. at 587.

2. Means-Plus-Function Claiming

When a limitation "recit[es] a function be performed rather than . . . reciting structure for performing that function," the scope of the claim is limited "to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents." *Williamson v. Citrix Online LLC*, 792 F.3d 1339, 1347-48 (Fed. Cir. 2015). While this restriction ordinarily applies only to those claim terms utilizing the word "means," 35 U.S.C. § 112(6) may also apply to certain "nonce words" if "the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'" *Williamson*, 792 F.3d at 1349. Claims that do not explicitly use the term "means" are entitled to a rebuttable presumption that they are not implicated by § 112(6). *Id.* at 1348; *EnOcean GmbH v. Face Int'l Corp.*, 742 F.3d 955, 959 (Fed. Cir. 2014).

Once a court has determined that a term is governed by 35 U.S.C. § 112(6), it must determine whether the specification discloses sufficient structure corresponding to the claimed function. *Williamson*, 792 F.3d at 1351. This is a two-step process. First, the court must identify the claimed function or functions. *Id.* (citing *Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012)). Next, "the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function." *Id.* at 1351-52.

3. Collateral Estoppel

Collateral estoppel protects a party from having to litigate issues that have been fully and fairly tried in a previous action and adversely resolved against a party-opponent. *Ohio Willow Wood Co. v. Alps S., LLC*, 735 F.3d 1333, 1342 (Fed. Cir. 2013). The law of the regional circuit governs the application of general collateral estoppel principles. *AbbVie Deutschland GmbH & Co., KG v. Janssen Biotech, Inc.*, 759 F.3d 1285, 1295 (Fed. Cir. 2014). "However, for any aspects that may have special or unique application to patent cases, Federal Circuit precedent is applicable." *Aspex Eyewear, Inc. v. Zenni Optical Inc.*, 713 F.3d 1377, 1380 (Fed. Cir. 2013).

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In the Ninth Circuit, collateral estoppel applies when "(1) the issue at stake is identical to an issue raised in the prior litigation; (2) the issue was actually litigated in the prior litigation; and (3) the determination of the issue in the prior litigation must have been a critical and necessary part of the judgment in the earlier action." *Littlejohn v. United States*, 321 F.3d 915, 923 (9th Cir. 2003). The requirement that the issue was "actually litigated" recognizes that collateral estoppel is inappropriate "where the parties have not had a full and fair opportunity to litigate the merits of an issue." *Id.* (citing *Allen v. McCurry*, 449 U.S. 90, 94-95 (1980)). In addition, "a general jury verdict can give rise to collateral estoppel only if it is clear that the jury necessarily decided a particular issue in the course of reaching its verdict." *United Access Techs., LLC v. Centurytel Broadband Servs. LLC*, 778 F.3d 1327, 1331 (Fed. Cir. 2015) (citing *Ashe v. Swenson*, 397 U.S. 436, 444 (1970)). "Where there is doubt as to the issue or issues on which the jury based its verdict, collateral estoppel is inapplicable." *Id.*

4. Obviousness

A patent is invalid for obviousness under 35 U.S.C. § 103 "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." *Takeda Chem. Indus. v. Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1355 (Fed.Cir. 2007) (quoting 35 U.S.C. § 103(a) (2004)).

"Whether an invention would have been obvious under 35 U.S.C. § 103 is a question of law ... based upon underlying factual questions." *Id.* (internal quotation marks and citation omitted). Summary judgment is appropriate if "the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness of the claim is apparent in light of these factors." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 427 (2007) (citation omitted).

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background the obviousness or nonobviousness of the subject matter is determined. Such secondary considerations as commercial success, long felt but unsolved needs, failure of others, etc., might be utilized to give light to the circumstances surrounding the origin of the subject matter sought to be patented.

Id. at 406 (quoting *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966)).

"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two

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known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.” *Id.* at 418.

The “combination of familiar elements according to known methods” is likely to be obvious when it “does no more than yield predictable results.” *Id.* at 416. If an ordinarily skilled artisan can implement a predictable variation of a work available in the same field of endeavor or a different one, § 103 likely bars patentability of the variation. *Id.* at 417.

5. Literal Infringement

"An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). "To establish liability for direct infringement of a claimed method or process under 35 U.S.C. § 271(a), a patentee must prove that each and every step of the method or process was performed." *Move, Inc. v. Real Estate Alliance Ltd.*, 709 F.3d 1117, 1122 (Fed. Cir. 2013) (citing *Akamai Techs., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1307 (Fed. Cir. 2012) (en banc)). To establish literal infringement of a process claim, the enumerated steps must "all be practiced as recited in the claim . . ." *Dippin' Dots, Inc. v. Mosey*, 476 F.3d 1337, 1343 (Fed. Cir. 2007). "[A]ny deviation from the claim precludes a finding of literal infringement." *Jardin v. Datallegro, Inc.*, No. 08-CV-1462-IEG (WVG), 2011 WL 1311732, at *3 (quoting *Litton Sys. Inc. v. Honeywell, Inc.*, 140 F.3d 1449, 1454 (Fed. Cir. 1998), *abrogated*, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 234 F.3d 558 (2000)).

The patentee bears the ultimate burden of proving infringement by a preponderance of the evidence, see *Warner-Lambert Co. v. Teva Pharm. USA, Inc.*, 418 F.3d 1326, 1341 n.15 (Fed. Cir. 2005), and as a result, summary judgment of noninfringement requires a showing by the accused infringer that "no reasonable jury could have found infringement on the undisputed facts or when all reasonable factual inferences are drawn in favor of the patentee," *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1353 (Fed. Cir. 2001).

B. Claims 1 and 12 of the '092 Patent are Invalid for Indefiniteness

VIZIO's first argument is that Claims 1 and 12 of the '092 Patent are invalid for indefiniteness because they recite a “control unit for converting an input to pulse signals.” (Mot. 3.) While the Court would ordinarily need to determine whether “control unit” constitutes a “nonce word,” the parties are in agreement that the term is written in a means-plus-function form and is therefore subject to the strictures of 35 U.S. C. § 112(6). Accordingly, the Court applies § 112(6) and examines the specification for a sufficient corresponding structure. This requires a two-step analysis. The Court must first identify the function of the claim term and must then identify the

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corresponding structure in the specification. Here, the parties agree both that the function of the "control unit" is to "convert[] an input to pulse signals" and that the corresponding structure is the "tone control circuit 604." (Mot. 3; Opp'n 4.) The sole dispute, then, is whether the "tone control circuit," as disclosed in the specification, connotes sufficient structure to a POSITA.

As an initial matter, the Court rejects Plaintiff's argument that the term "tone control circuit" connotes sufficient structure by itself because "a POS[IT]A would understand it to be a circuit." (Opp'n 4.) In support of this contention, Nichia cites to a number of Federal Circuit cases holding that terms such as "circuit" or "processor" can, when "combined with a description of the function of the circuit, connote[] sufficient structure to one of ordinary skill in the art to avoid 112 ¶ 6 treatment." *Massachusetts Inst. of Tech. & Electronics for Imaging, Inc. v. Abacus Software*, 462 F.3d 1344, 1355 (Fed. Cir. 2006); *See also Apex Inc. v. Raritan Comput., Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003); *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1321-22 (Fed. Cir. 2004). These decisions, however, all address the initial stage of MPF analysis, when the Court applies a "rebuttable presumption" that claims not explicitly using the term "means" are not implicated by § 112(6). Once the Court has determined that a claim relies on means-plus-function claiming, this presumption disappears, and the burden is placed on the patentee to establish that the specification contains adequate corresponding structure. Because the claim itself does not use structural language and the parties agree that § 112(6) applies in this case, the *Apex* line of cases is inapposite.

Moreover, even were the Court to apply the rebuttable presumption standard from the initial stage of MPF analysis, the facts of this case are distinguishable from Plaintiff's citations. Because those cases examined claim limitations rather than structures within the specification, each challenged limitation had a single allegedly nonce term. Here, however, the same element identified by Plaintiff is described in three different ways, as the "tone control circuit," the "tone control means," and the "gradation control unit." ('092 Patent col. 21:11,17; Fig. 10.) The very fact that the "circuit" is referred to as both a "means" and a "unit"—both terms that have been routinely found to be nonce terms—severely undercuts Plaintiff's argument that the term itself contains sufficient structure. *See Diebold Nixdorf, Inc. v. International Trade Commission*, 899 F.3d 1291, 1297 (Fed. Cir. 2018) ("conclud[ing] that the term 'cheque standby unit' is subject to the application of § 112, para. 6."); *Williamson*, 792 F.3d at 1349 (quoting *Personalized Media Communications, LLC v. International Trade Commission*, 161 F.3d 696, 703 (Fed. Cir. 1998) ("use of the word 'means' creates a presumption that § 112, ¶ 6 applies"). Nor does the presence of the functional modifier "tone control" provide sufficient structure. While it is true that the use of "adjectival qualifications" can provide additional structure, "not just any adjectival qualification or functional language will suffice." *Power Integrations, Inc. v. Fairchild Semiconductor Intern., Inc.*, 711 F.3d 1348, 1364-65 (Fed. Cir. 2013). "The proper inquiry is whether the claim limitation itself, when read in light of the specification, connotes to the ordinarily skilled artisan sufficiently definite structure for performing the identified functions." *Id.* at 1365. Here, Plaintiff's own expert

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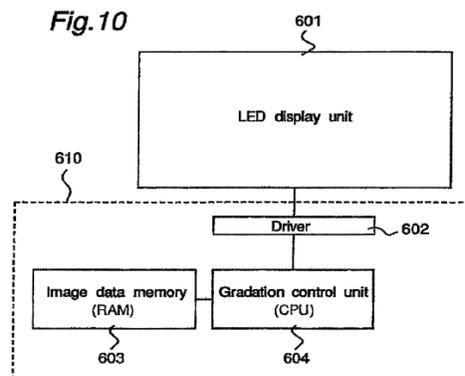
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states that, while he "would – read into the – those three words itself and understand that it is the structure that is suitable to control a tone," he would nevertheless consider "tone control circuit" "a term that would fall under the form of means plus function." (GDMF ¶ 17.)

Having determined that it is Plaintiff that bears the burden of identifying a structure capable of "converting an input to pulse signals," the Court looks to the three descriptions of the identified structure, element 604, in the specification. The first describes a "tone control means which computes and outputs tone signals for controlling the individual light emitting diodes of the LED display device 601 to light with the specified brightness according to the data read from RAM 603." ('092 Patent col 21:11-14.) Several lines later, it is described as a "tone control circuit" which "retrieves data from the Ram 603 and computes the duration of lighting the light emitting diodes of the LED display device 601, then outputs pulse signals for turning on and off the light emitting diodes to the LED display device." ('092 Patent col. 21: 17-21.) Finally, element 604 is identified in Figure 10 as the "gradation control unit" connected to RAM and the LED display unit:



('092 Patent, Fig. 10.)

Defendant argues that these descriptions are purely functional and that, to the extent that the structure of the "tone control circuit" is given by its generic description as a "CPU" in figure 10, the specification fails to provide any sort of algorithm that would transform the component into anything more than a general-purpose computer processor. (Mot. 4-5.) The Court agrees.

While it is true that "corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited structure." *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed. Cir. 2005). The most comprehensive definition of the term is provided in Column 21: "The tone control circuit 604 **retrieves** data from the RAM 603 and **computes** the duration of lighting the light emitting diodes of the LED display device 601, then **outputs** pulse signals for turning on and off the light emitting diodes to the LED display device 601." ('092 Patent col. 21:17-21)(emphasis added). This description is nothing more than a verbal construct describing the function of the element and does not identify any of the components of the "tone control circuit." As the Federal Circuit has made clear, "This type of purely functional language, which simply

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restates the function associated with the means-plus-function limitation, is insufficient to provide the required corresponding structure.” *Noah Systems*, 675 F.3d at 1317 (citing *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1384 (Fed. Cir. 2009); *Aristocrat Technologies Australia Pty Ltd. v. International Game Technology*, 521 F.3d 1328, 1334 (Fed. Cir. 2008)).

To the extent that Nichia contends that the necessary structure is provided by the description in Figure 10 of element 604 as a "CPU," the Federal Circuit has long "required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor." *Id.* (quoting *Aristocrat Technologies Australia Pty Ltd. v. International Game Technology*, 521 F.3d 1328, 1334 (Fed. Cir. 2008)). Thus, when a patentee identifies such a component, it must also identify a corresponding algorithm sufficient to transform the generic component into a special-purpose device. This algorithm may be presented "in any understandable terms, including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *Finisar Corp. v. DirecTV Group, Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008).

Here, Plaintiff contends that the specification does contain the requisite algorithm, disclosing in prose that the tone control circuit "computes times to control the driver," "computes pulse time," or "comput[es] the duration of lighting." (Opp'n 7.) Defendant counters that this description is insufficient to set forth a "step-by-step procedure for accomplishing a given result" as required by § 112(6). (Mot. 5 (quoting *Ergo Licensing LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1363 (Fed. Cir. 2012)). The Court agrees with Defendant. While it is true that 112(6) "does not impose a lofty standard," a patentee must nevertheless provide more than a mere "restatement of the function, as recited in the claim." *Finisar*, 523 F.3d at 1340. "[A] description of an algorithm that places no limitations on how values are calculated, combined, or weighed is insufficient to make the bounds of the claim understandable." *Ibormeith IP, LLC v. Mercedes-Benz USA, LLC*, 732 F.3d 1376, 1382 (Fed. Cir. 2013). The algorithm identified by Plaintiff states merely that the identified circuit computes three values, but provides no specificity or insight into how this function is performed, nor does it identify any of the parameters or limits of this calculation. "As such, the language 'describes an outcome, not a means for achieving that outcome.'" *Blackboard, Inc.*, 574 F.3d at 1384.

Nor is the knowledge of a POSITA sufficient to provide such an algorithm. While Plaintiff correctly notes that "knowledge of one skilled in the art can be called upon to flesh out a particular structural reference in the specification for the purpose of satisfying the statutory requirement of definiteness," it "cannot supplant the total absence of structure from the specification." *Creo Prods., Inc. v. Presstek, Inc.* 305 F.3d 1337, 1347 (Fed. Cir. 2002); *Default Proof Credit Card Sys., Inc. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1302 (Fed. Cir. 2005). The case law relied upon by Plaintiff largely relates to patents in which a particular class of physical structure is identified, such as a "selector," "commercially available vacuum sensor[]," or a "standard electric motor," and the knowledge of the POSITA explains how these terms would be understood within the art. See *Creo*, 305 F.3d at 1347 (collecting cases). A "tone control circuit," however, is not

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an existing component known to POSITAs and cannot simply be purchased. As Plaintiff's own expert unequivocally states, the structure "would not be something that you can Google and buy." (GDMF ¶ 16.)

Here, Plaintiffs are not seeking to have a POSITA translate a known industry term into a specific structure, but instead relying on the POSITA to design a solution for gaps in the written description. This is impermissible. "A patentee cannot avoid providing specificity as to structure simply because someone of ordinary skill in the art would be able to devise a means to perform the claimed function." *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1319 (Fed. Cir. 2013)(quoting *Blackboard, Inc.*, 574 F.3d at 1385.) "To allow that form of claiming under section 112, paragraph 6, would allow the patentee to claim all possible means of achieving a function." *Id.* For these reasons, the Court finds that the '092 Patent does not provide sufficient structure for "converting an input to pulse signals" and that Claims 1 and 12 of the '092 Patent are therefore invalid.

C. There is Sufficient Evidence for a Reasonable Jury to Conclude that Claim 4 of the '375 Patent is Infringed

Nichia's infringement theory is based on the sale of products within the United States that were manufactured abroad using a patented process. See 35 U.S.C. § 271(g). Under this statute, Plaintiff bears the burden of establishing that the Accused Products were, in fact, manufactured according to the method claimed by the '375 Patent. See *Ajinomoto Co., Inc. v. Archer-Daniels-Midland Co.*, 228 F.3d 1338, 1347 (Fed. Cir. 2000). Defendant contends that Plaintiff has not met this burden because it failed to make any reasonable effort to determine the process used in production of the LEDs and that summary judgment must therefore be granted in VIZIO's favor. (Mot. 16.) Plaintiff disagrees, arguing that the testimony of its technical expert, Dr. Wetzel, based on a thorough examination of the Accused Products, is sufficient to establish that they were manufactured according to the claimed method and that there was no need to seek discovery from the manufacturers themselves to confirm this. (Opp'n 16-17.)

Claim 4 of the '375 Patent is a method claim disclosing several manufacturing steps: (1) the preparation of an LED chip made of certain materials and emitting a blue light with a peak wavelength within a certain range; (2) the preparation of phosphor capable of absorbing a portion of the blue light and emitting a yellow color light with a peak wavelength within a certain range; (3) combining the LED component and the phosphor component in such a way that the blue light and the yellow light mix to "obtain a desired chromaticity of [] white light color." Defendant does not deny that its products are manufactured according to this method, but instead argues that Plaintiff has not met its burden by offering proof of the manufacturing process. (Mot. 16.) Plaintiff argues that examination of the final product is sufficient to determine that each of these steps is performed by the manufacturers and that there is no need to inspect the manufacturing process itself. (Opp'n 17.) The Court agrees with Nichia.

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As Plaintiff correctly notes, the process detailed in the claim "is not directed toward a recipe or step-by-step process for making the blue LED chip itself or for making the yellow phosphor itself." (Opp'n 17.) Rather, the claimed process merely requires that the two components consist of certain materials and have certain properties and that they be combined in a particular manner. Whether this occurred can be readily determined by an expert after the fact and need not be ascertained through direct observation of the manufacturing process or discovery directed at the manufacturers themselves. Ultimately, the actual physical manner in which the devices are constructed is largely irrelevant to the question of infringement.

In his expert report, Dr. Wetzel summarizes the testing procedure used to examine each of the Accused Products. (Opening Expert Report of Christian M. Wetzel, Ph.D., ("Wetzel Rep.") ¶¶ 95-116, ECF No. 181-4.) As for the LED chip itself, Nichia performed both scanning transmission electron microscopy ("STEM") and energy dispersive spectroscopy ("EDS") to determine the chemical makeup of the active region. (Wetzel Rep. ¶¶ 114-15.) From this, he determined that the Accused Products contained active layers "comprising a gallium nitride based semiconductor containing indium," as required by claim 4 of the '375 Patent. (Wetzel Rep. ¶¶ 127-133.) The bare LED chip was also measured by a spectrometer to determine the emission spectrum and peak wavelength. (Wetzel Rep. ¶¶ 108-109.) The results of this testing showed that the chip was "capable of emitting a blue color light having a spectrum with a peak wavelength within the range from 420 to 490 nm." (Wetzel Rep. ¶¶ 134-139.) The presence of phosphor was then confirmed using scanning electron microscopy ("SEM") and EDS. (Wetzel Rep. ¶¶ 110-11, 141-147.) Transmission spectroscopy was performed on the phosphor-containing resin, showing that it was "capable of absorbing a part of the blue color light emitted from said light emitting component." (Wetzel Rep. ¶¶ 112-13, 148-150.) The emission spectrum of the phosphor was determined to "compris[e] a peak wavelength comprising a peak wavelength existing around the range from 510 to 600 nm and a tail continuing beyond 700 nm" and furthermore, to "comprise[] a peak wavelength existing around the range from 530 to 570 nm. . . ." as required by claim 4. (Wetzel Rep. ¶¶ 106-107, 157-159, 181-183.) Finally, spectroscopy was performed on the LED package as a whole, revealing that the "combin[ation of]...the blue color light from said light emitting component and the yellow color light from said phosphor are mixed to make a white color light." (Wetzel Rep. ¶¶ 104-5, 168-176.)

From this testimony, it seems apparent that the basic manufacturing process of the Accused Products is ascertainable by examining the structure and makeup of the finished product. Indeed, VIZIO's own expert, Mr. Butterworth admits as much, stating that he was able to determine the manner through which a product was manufactured "by direct observation." (Nichia's Statement of Additional Material Facts ("AMF") ¶ 91, ECF No. 194-3.)

The one potential flaw specifically identified by Defendant relates to the requirement that "a content a said phosphor in said light emitting device is selected to obtain a desired chromaticity of the white color light." (Mot. 17.) VIZIO contends that the plain language of this limitation requires that a manufacturer first start with a particular chromaticity in mind and then select the

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phosphor content appropriate to reach that result and that such a thing can only be established by direct knowledge of the manufacturing process itself. (Mot. 17.) Plaintiff has, however, provided sufficient evidence supporting the assumption that the manufacturers chose phosphor content based on a targeted chromaticity. Dr. Wetzel has testified that this limitation is met "[b]ased on [his] experience that one would not get a certain target color without select[ing]...amount of phosphor during the manufacturing process"—an opinion supported by other documents discussing manufacturers' efforts to consistently produce LEDs falling within a narrow chromaticity range. (AMF ¶¶ 96, 98-99.) A reasonable juror, presented with this evidence, could conclude that chromaticity was the driving factor in Defendant's manufacturing process and that phosphor content was selected "to obtain a desired chromaticity of the white light color." For this reason, the Court **DENIES** VIZIO's motion to for summary judgment with respect to Plaintiff's infringement claim based on claim 4 of the '375 Patent.

D. Claim 4 of the '375 Patent is not Invalid as Obvious

VIZIO's final argument is that claim 4 of the '375 Patent is invalid as obvious in light of the existing prior art. (Mot. 19.) This argument is, in many ways, an attempt to relitigate the issue of collateral estoppel that the Court addressed in its previous summary judgment order. In that ruling, the Court compared claim 4 to the claims found to be obvious in *Everlight* and found collateral estoppel to be inappropriate because claim 4 included an additional material limitation, namely that "a content of said phosphor in said light emitting device [be] selected to obtain a desired chromaticity of the white color light." (Minute Order Denying Defendant's Motion for Summary Judgment ("Init. MSJ") 13-15, ECF No. 105.) While VIZIO argued in its initial motion that "a person of ordinary skill in the art would have known that adjusting the amount of phosphor disclosed in Hoffman or Philips would necessarily change the resulting chromaticity point of white color light," the Court found that this was irrelevant to the narrow issue of collateral estoppel that was before it. (Init. MSJ 14-15.)

Defendant now points to three pieces of prior art that were presented to the jury in *Everlight* which it claims address the additional limitation and therefore render the '375 Patent obvious. The first is U.S. Patent No. 6,600,175 ("Baretz"), which demonstrates the use of phosphors capable of absorbing blue light in combination with blue LED chips in order to create a white LED. The second is Improved Color Rendition in High Pressure Mercury Vapor Lamps, J. Illuminating Engineering Soc'y, vol. 6, 89 (1977) ("Hoffman"), which teaches that the phosphor content can be used to obtain a desired chromaticity. The last is U.S. Patent No. 5,727,283 ("Philips"), which largely parallels the teachings of Hoffman and examines the relationship between phosphor content and chromaticity.

To address this argument, the Court must first determine whether the "the issue in the prior litigation must have been a critical and necessary part of the judgment in the earlier action." *Littlejohn v. United States*, 321 F.3d 915, 923 (9th Cir. 2003). This requires examination of the prior art on which the jury in *Everlight* relied in reaching its verdict. The jury in the Michigan

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action, however, entered a general verdict, merely stating that it found the claims invalid due to obviousness. (Verdict Form, ECF No. 505, *Everlight Elecs. Co. v. Nichia Corp.*, No. 12-cv-11758, 2016 WL 8232553, at *1 (E.D. Mi. Jan. 19, 2016)). It did not offer any specific factual findings with respect to the prior art it relied upon or any motivation that a skilled artisan might have to combine these pieces of prior art. "Where the prior judgment was based on a general verdict, the inquiry is whether rational jurors must necessarily have determined the issue as to which estoppel is sought." *Chew v. Gates*, 27 F.3d 1432, 1438 (9th Cir. 1994). The Court must therefore attempt to reconstruct the issues in the *Everlight* case to determine whether a reasonable jury would necessarily have relied upon Hoffman/Philips and Baretz in reaching its conclusion of obviousness.

During the *Everlight* trial, the jury was presented with at least nine separate pieces of prior art, each disclosing one or more of the required limitations of the '925 and '960 Patents: Baretz, Hoffman, Philips, Japanese Patent Application No. H05-152609 ("Tadatsu"), U.S. Patent no. 3,699,478 ("Pinnow"), A new Phosphor for Flying-Spot Cathode-Ray Tubes for Color Television: Yellow-Emitting $Y_3Al_5O_{12}-Ce^{3+}$, Applied Physics Letters, vol. 11:2, 53 (1967)("Blasse & Brill I"), Investigation of some Ce^{3+} -Activated Phosphors, J. Chem. Phys. Vol. 47:12, 5139 (1967) ("Blasse & Brill II"), and Luminescence Conversion of Blue Light Emitting Diodes, Applied Physics A, vol. 64, 417 (1997) ("Schlotter"). Notably, the jury was presented with five separate references in support of the yttrium-aluminum-garnet ("YAG") phosphor limitation. (See Transcript of Jury Trial, Volume IV 102:15-22, ECF No. 517, *Everlight*, No. 12-cv-11758 ("Q. Okay. And the only YAG references you testified to for those characteristics were Hoffman, the two Blasse and Brill references, Pinnow, and Philips, is that right? A. Yes, that's what we discussed yesterday.")) Only two of these references are currently relied upon by Defendant in its MSJ, Hoffman and Philips. Because a general verdict form was used in *Everlight*, however, it is impossible for the Court to determine which of these five references formed the basis of the jury's finding that the use of YAG was obvious.

In order to invalidate a patent on the basis of obviousness, a party must "demonstrate 'by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.'" *Procter & Gamble Co. v. Teva Pharm. USA, Inc.*, 566 F.3d 989, 994 (Fed. Cir. 2009)(quoting *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 1361 (Fed. Cir. 2007)). While it is true that both Philips and Hoffman were presented to the jury, there is no guarantee that these sources were relied upon in their ultimate conclusion regarding obviousness. The jury may, for instance, have determined that Hoffman and Philips, as patents related to lamps rather than LEDs, were not analogous to the '925 Patent and instead relied on Blasse & Brill or on Pinnow. Thus, the Court cannot conclude that the *Everlight* jury "must necessarily have determined" that Hoffman or Philips were analogous or that there was motivation to combine them with Baretz. Because Defendant's MSJ is premised on such a finding, the Court **DENIES** Defendant's motion for summary judgment of invalidity as to Claim 4 of the '375 Patent.

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IV. CONCLUSION

In sum, the Court concludes that the term "control unit" in claims 1 and 12 of the '092 Patent is subject to 35 U.S.C. § 112(6) and that the specification does not identify sufficient corresponding structure. For this reason, claims 1 and 12 of the '092 Patent are invalid for indefiniteness. As to claim 4 of the '375 Patent, the Court finds that Defendant has failed to establish obviousness and that there there is sufficient evidence on which a reasonable jury could base a finding of infringement.

V. RULING

For the foregoing reasons, the Court **GRANTS** VIZIO's Motion for Summary Judgment as it relates to Claims 1 and 12 of the '092 Patent and **DENIES** VIZIO's Motion for Summary Judgment as to the '375 Patent.

IT IS SO ORDERED.

Initials of Preparer: SMO