UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION

EVERLIGHT ELECTRONICS CO., LTD.,
and EMCORE CORPORATION,

Plaintiffs,

v.

NICHIA CORPORATION, and
NICHIA AMERICA CORPORATION

Defendants and
Counter-Plaintiffs,

v.

EVERLIGHT ELECTRONICS CO., LTD.,
EMCORE CORPORATION, and
EVERLIGHT AMERICAS, INC.,

Counter-Defendants.
_____/

Case No. 12-cv-11758

UNITED STATES DISTRICT COURT JUDGE
GERSHWIN A. DRAIN

UNITED STATES MAGISTRATE JUDGE
MONA K. MAJZOUB

OPINION AND ORDER GRANTING JUDGMENT IN FAVOR OF NICHIA ON EVERLIGHT'S INEQUITABLE CONDUCT CLAIMS

I. INTRODUCTION

Everlight Electronics Co., Ltd. ("Everlight"), commenced this suit seeking a declaratory judgment of non-infringement, invalidity, and unenforceability of Nichia Corporation's ("Nichia"), United States Patent No. 5,998,925 (the "'925 Patent") and United States Patent No. 7,531,960 (the "'960 Patent"). The patents-in-suit relate to light emitting diode ("LED") technology. The suit was brought pursuant to the Declaratory Judgment Act, 28 U.S.C. §§ 2201, 2202, and the patent laws of the United States, 35 U.S.C. § 1 *et seq*. Nichia filed counterclaims

against Everlight for direct and indirect infringement of the '925 and '960 Patents. The parties are business competitors in the manufacture and supply of white LEDs.

A jury trial was held in April of 2015. On April 22, 2015 the jury returned a verdict solely on the issues of validity and infringement. In light of the jury's findings the Court entered a judgment in favor of Everlight's claims that claims 2, 3 and 5 of the '925 Patent and claims 2, 14, and 19 of the '960 Patent are invalid. *See* Dkt. No. 524 at 1. Additionally, based on the jury's findings, the Court entered a judgment in favor of Everlight dismissing Nichia's counterclaims that claims 2, 3 and 5 of the '925 Patent and claims 2, 14, and 19 of the '960 Patent are infringed. *See id.* at 2. The jury verdict did not affect Everlight's declaratory judgment claims that the '925 Patent and the '960 Patent are unenforceable due to inequitable conduct. Instead, this Court conducted a bench trial on June 15, 2015, June16, 2016, and June 18, 2015 (the "Bench Trial") to address Everlight's claims of inequitable conduct.

The Court heard testimony, considered the credibility of the witnesses, and conducted a thorough review of the record for both the jury and bench trials. After reviewing the record, the arguments of the parties, the evidence and exhibits, and the applicable law, the Court concludes that deceptive intent was not the single most reasonable inference to be drawn from the evidence. Accordingly, the Court rules against Everlight on its claim for unenforceablilty due to inequitable conduct with respect to both the '925 Patent and the '960 Patent. The Court's findings of fact and conclusions of law from the bench trial are set forth in detail below.

II. FINDINGS OF FACT

A. The Patents-in-Suit

The '925 Patent is entitled "Light Emitting Device Having a Nitride Compound Semiconductor and a Phosphor Containing a Garnet Fluorescent Material." The '925 Patent

names Yoshinori Shimizu, Kensho Sakano, Yasunobu Noguchi, and Toshio Moriguchi as inventors. The application for the '925 Patent was filed with the United States Patent and Trademark Office ("USPTO") on July 29, 1997 via United States Patent Application No. 08/902,725. The '925 Patent issued on December 7, 1999 to assignee Nichia Kagaku Kogyo Kabushiki Kaisha (d/b/a/ Nichia Corporation).

The '960 Patent is entitled "Light Emitting Device with Blue Light LED and Phosphor Components." The '960 Patent names Yoshinori Shimizu, Kensho Sakano, Yasunobu Noguchi, and Toshio Moriguchi as inventors. The application for the '960 Patent was filed with the USPTO on March 5, 2007 via United States Patent Application no. 11/682,014. The '960 Patent issued on May 12, 2009 to assignee Nichia Corporation.

Both the '925 Patent and the '960 Patent ("the patents-in-suit") relate to LEDs that implement a gallium-nitride-based semiconductor with a phosphor. The '925 Patent focuses on the use of yttrium-aluminum-garnet ("YAG") phosphors in LEDs to create a wide range of white light. The Abstract of the '925 Patent states as follows:

> The white light emitting diode comprising a light emitting component using a semiconductor as a light emitting layer and a phosphor which absorbs a part of light emitted by the light emitting component and emits light of wavelength different from that of the absorbed light, wherein the light emitting layer of the light emitting component is a nitride compound semiconductor and the phosphor contains garnet fluorescent materials activated with cerium which contains at least one element selected from the group consisting of Y, Lu, Sc, La, Gd and Sm, and at least one element selected from the group consisting of Al, Ga and In and, and [sic] is subject to less deterioration of emission characteristic even when used with high luminance for a long period of time.

The Abstract of the '960 Patent claims priority to the '925 Patent and concerns how the phosphor is distributed in the resin covering the semiconductor component. The '960 Abstract states as follows:

> A light emitting device includes a light emitting component; and a phosphor capable of absorbing a part of light emitted by the light emitting component and emitting light of a wavelength different from that of the absorbed light. A straight line connecting a point of chromaticity corresponding to a peak of the spectrum generated by the light emitting component and a point of chromaticity corresponding to a peak of the spectrum generated by the phosphor is disposed along with the black body radiation locus in the chromaticity diagram.

Thus, the patents-in-suit cover the use of particular phosphors in white LED technology enabling efficient, long-lasting, high luminance LEDs in a wide variety of applications including computer and cellular telephone displays.

When prosecuting the patents-in-suit, Messrs. Yoshinori Shimizu, Kensho Sakano, Yasunobu Noguchi, and Toshio Moriguchi ("the inventors") signed a "Combined Declaration and Power of Attorney for Patent and Design Applications" (the Inventor Oath). The Inventor Oath states, and that the inventors affirmed, in relevant part:

> As a below named inventor, I hereby declare that . . . I verily believe that I am the original, first and sole inventor (if only one inventor is named below) or an original, first and joint inventor (if plural inventors are named below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:* LIGHT EMITTING DEVICE AND DISPLAY . . . .
>
> I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.
>
> I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.
>
> I do not know and do not believe the same was ever known or used in the United States of America before my or our invention thereof, or patented or described in any printed publication in any country before my or our invention thereof, or more than one year prior to this application, that the same was not in public use or on sale in the United States of America more than one year prior to this application, that the invention has not been patented or made the subject of an inventor's certificate issued before the date of this application in any country foreign to the United States of America on an application filed by me or my legal representatives or assigns more than twelve months (six months for designs) prior to this application, and that no application for patent or inventor's certificate on this invention has been filed in any country foreign to the United States of

> America prior to this application by me or my legal representatives or assigns, except as follows. . . .
>
> I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

The Inventor Oath was signed on July 22, 1997. The Inventor Oath was submitted to the USPTO on July 29, 1997 via United States Patent Application No. 08/902,725, which led to the issuance of the patents-in-suit.

As it pertains to Everlight's claim of inequitable conduct, the inventors' affirmations supported four assertions in the patents-in-suit that are now under scrutiny. First, in the '925 Patent, the inventors submitted Example 12, which states that Y_3 In_5 O_{12} :Ce ("YIG") was synthesized to make 100 pieces of LED. Specifically, Example 12 reads as follows:

> The light emitting diode of Example 12 was made in the same manner as in Example 1 except for using phosphor represented by general formula Y_3 In_5 O_{12} :Ce. 100 pieces of the light emitting diode of Example 12 were made. Although the light emitting diode of Example 12 showed luminance lower than that of the light emitting diodes of Example 1, showed good weatherability comparable to that of Example 1 in life test.
>
> As described above, the light emitting diode of the present invention can emit light of a desired color and is subject to less deterioration of emission efficiency and good weatherability even when used with high luminance for a long period of time. Therefore, application of the light emitting diode is not limited to electronic appliances but can open new applications including display for automobile, aircraft and buoys for harbors and ports, as well as outdoor use such as sign and illumination for expressways.

Second, the inventors submitted Example 8 in the '925 Patent, which states that Gd_3 $(Al_0.5$ $Ga_0.5)_5$ O_{12} ("GGAG") was used to make 100 pieces of LED. Specifically, Example 8 states:

> The light emitting diode of Example 8 was made in the same manner as in Example 1 except for using phosphor represented by general formula Gd_3 $(Al_0.5$

$Ga_{0}.5)_5$ O_{12} :Ce which does not contain Y. 100 pieces of the light emitting diodes of Example 8 were made and measured for various characteristics.

Although the light emitting diodes of Example 8 showed a low luminance, showed good weatherability similar to that of Example 1 in life test.

Third, the inventors filed claims in the '925 Patent indicating that that the LEDs in the patent contained phosphors with yttrium being substituted with gadolinium. For example:

> 8. A light emitting device according to claim 2, wherein the phosphor may be an yttrium-aluminum-garnet fluorescent material containing a first fluorescent material and a second fluorescent material, with each different parts of yttriums in said first fluorescent material and second fluorescent material being substituted with gadolinium. . . .
>
> 21. A light emitting diode according to claim 18, wherein the phosphor contains an yttrium-aluminum-garnet fluorescent material containing a first fluorescent material and a second fluorescent material wherein part of yttrium is substituted with gadolinium to different degrees of substitution. . . .
>
> Also in the light emitting device of the present invention, in order to control the wavelength of emitted light, the phosphor may be an yttrium-aluminum-garnet fluorescent material containing a first fluorescent material and a second fluorescent material, with different parts of each yttrium being substituted with gadolinium. . . .
>
> In the light emitting diode of the present invention, similarly, yttrium-aluminum-garnet fluorescent material a first fluorescent material and a second fluorescent material may be used wherein part of yttrium being substituted with gadolinium to different degrees of substitution as the phosphor, in order to control the emitted light to a desired wavelength.

In the '960 Patent, the inventors affirmed that the following statements were true:

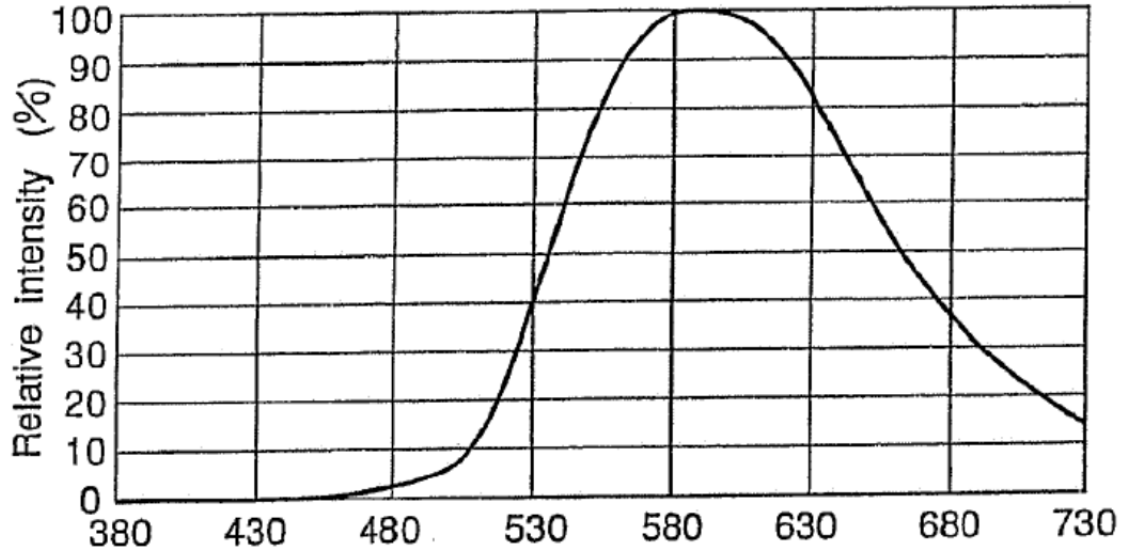
> The phosphor used in the first embodiment is, because of garnet structure, resistant to heat, light and moisture, and is therefore capable of absorbing excitation light having a peak at a wavelength near 450 nm as shown in FIG. 3A. It also emits light of broad spectrum having a peak near 580 nm tailing out to 700 nm as shown in FIG. 3B. Moreover, efficiency of excited light emission in a region of wavelengths 460 nm and higher can be increased by including Gd in the crystal of the phosphor of the first embodiment. When the Gd content is increased, emission peak wavelength is shifted toward longer wavelength and the entire emission spectrum is shifted toward longer wavelengths. This means that, when emission of more reddish light is required, it can be achieved by increasing

the degree of substitution with Gd. When the Gd content is increased, luminance of light emitted by photoluminescence under blue light tends to decrease. . . .

The yttrium-aluminum-garnet fluorescent material activated with cerium (YAG fluorescent material) used in the second embodiment has garnet structure similarly to the case of the first embodiment, and is therefore resistant to heat, light and moisture. The peak wavelength of excitation of the yttrium-aluminum-garnet fluorescent material of the second embodiment can be set near 450 nm as indicated by the solid line in FIG. 5A, and the peak wavelength of emission can be set near 510 nm as indicated by the solid line in FIG. 5B, while making the emission spectrum so broad as to tail out to 700 nm. This makes it possible to emit green light. The peak wavelength of excitation of another yttrium-aluminum-garnet fluorescent material activated with cerium of the second embodiment can be set near 450 nm as indicated by the dashed line in FIG. 5A, and the peak wavelength of emission can be set near 600 nm as indicated by the dashed line in FIG. 5B, while making the emission spectrum so broad as to tail out to 750 nm. This makes it possible to emit red light.

Lastly, the inventors included Figure 19A which they stated "shows the emission spectrum of the phosphor $(Y_{0.2}Gd_{0.8})_3Al_5O_{12}$:Ce of Example 5[:]"

Fig. 19A



B. Testimony of the Witnesses

Throughout the three day bench trial, the Court heard testimony from the following witnesses and expert witnesses: Mssrs. Noguchi and Sakano, and Drs. Martin Wilding, Eric

Bretschneider, Uwe Happek, and Fred Schubert. After listening to the testimony, judging the credibility of the witnesses, and considering the witness testimony in conjunction with a review of the record, the Court made the following findings regarding the testimony of each witness.

1. Yasunobu Noguchi (Everlight Adverse Direct Examination)

Mr. Noguchi is a named inventor on the patents-in-suit and had over 34 years of experience working with phosphors at Nichia. Everlight spent the majority of its examination attempting to point out inconsistencies between Mr. Noguchi's records, testing, and findings, and what ultimately ended up in the '925 Patent and the '960 Patent. At the outset of his testimony, Mr. Noguchi acknowledged that he understood he filed an oath regarding the patents-in-suit.

Everlight began by focusing on Example 12 of the '925 Patent. Mr. Noguchi, indicated that Nichia did not have the records relating to the manufacture of YIG and Example 12, but indicated "my recollection is back then we had them." Nevertheless, Mr. Noguchi indicated that he was not surprised to learn that YIG had been made with full substitution and that LEDs had been made, stating:

> I am the one back then who used indium and who did the series of experiment using indium and my recollection is that I did do the various tests, series of tests. And back then, also, I worked on GIG and we did a series of test, or tests, and therefore, I must have done it. And as for GIG, the brightness was low, but I do have a recollection that a similar light emission was observed.

Mr. Noguchi noted that Nichia looked for the records with respect to YIG, but that they could not find them. Nevertheless, he was adamant "but back then there must have been records" and he was adamant that he made the YIG and sent YIG samples to either Mssrs. Shimizu, Sakano, or Moriguchi.

Not only was Mr. Noguchi adamant that he made YIG, but he also remembered YIG and GIG as having a similar level of brightness. Everlight attempted to undermine Mr. Noguchi's

testimony, focusing on Mr. Noguchi putting an X through sample 22 which was an attempt for full substitution with indium—a sample where Mr. Noguchi tried to make GIG. Mr. Noguchi indicated that sample 22 was not the only attempted full substitution with indium in the notebook, stating that Everlights assertion "must be wrong."

When explaining the X that was written next to sample 22, Mr. Noguchi put his former statements in context in order to explain that his use of the word "dark" to explain sample 22 did not mean that no light was emitted:

> When I wrote this the Japanese when I said this, I didn't mean pitch-dark. What meant was compared to other things it's a little bit darker. It was lower in brightness or luminance and, therefore, I didn't mean that it didn't emit any light at all and my recollection was that it was, I used this word to mean not that it was pitch-dark but when you make a comparison that the brightness was a little lower than others.
>
> My writing of X, crossing out what that means it's a little darker, and below that I have handwriting which says a little harder, and a little dirty yellow.
>
> As I have been saying for the last couple minutes, when, in Japanese when you say dark it doesn't mean that, when we say dark it doesn't mean that it didn't emit light at all and when you look at in Japanese, what it means when we say dark, again, it does not mean it did not work or it didn't emit light.

Mr. Noguchi used a similar approach when pressed about his statement that GAG does not emit light. When asked, he gave context and indicated that it was not the light he expected: "What I meant was that it functioned or it worked, but the brightness or luminance was low." Despite Everlight attempting to tie him to the "did not emit light" statement, Mr. Noguchi explained:

> Yes, if you only look at that section, that is correct. But, for example, you can look at lab notes. It is written there that I -- that note writes, has a record which recites the brightness, and therefore, it does not mean that it did not emit light. . . .
>
> We are engineers, and therefore, we are always striving to obtain beyond -- something that's beyond 100 percent, so anything below 10 percent is what we would have wrote in report such as monthly report as not emitting light. . . .

> There's no number which is definite, but anything that's about below 10 percent, such as a few percent, and then in a report such as monthly report, we would write as not emitting light.

Overall, the Court did not see any critical inconsistencies in Mr. Noguchi's testimony.

Mr. Noguchi was called again during Nichia's case in chief. During Nichia's direct examination of Mr. Noguchi, Mr. Noguchi explained that in his opinion the wavelength in Figure 19A was a broad peek and that the wavelength was around 590 nanometers, which he stated he felt was near 600 nanometers. He indicated that the 600 nanometer figure had no particular significance to him. Moreover, he indicated his inspection group created Figure 19A. Mr. Noguchi indicated that everything from his Japanese Patent was in the '925 Patent.

During Nichia's direct examination, Mr. Noguchi further went into detail about what happened to the test data that is not in his laboratory notebook relating to modified YAG:

> I was taking notes on loose note paper and back then I kept those paper or pieces of paper but subsequently Nichia began mass producing products using another composition and that, and that got on a right track and several years later those things that were related to phosphors that had lower commercial values were sorted out and discarded.

Mr. Noguchi gave a specific instance when he relocated in a major move between 1998 and 2005 and indicated that during that time "unnecessary documents were removed or discarded" and indicated that the data at issue "might have been included in that pile." This testimony was important because it demonstrated that Mr. Noguchi likely does not have all of the information that he relied upon when conducting the test data for the patent.

On cross-examination, Everlight questioned Mr. Noguchi about Figure 19A and asked if he had ever presented the court with the emission spectrum apart from the patent that shows an actual emission spectrum for 80 percent gadolinium substituted YAG. Mr. Noguchi indicated that his files have them and that the files were in a blue binder sent together with his lab notes. Overall, the Court found that Mr. Noguchi may have been careless in losing or discarding the

written records documenting the work he completed. However, the Court did not find Mr. Noguchi's testimony to be wholly incredible.

2. Kensho Sakano

Mr. Sakano is also an employee from Nichia who is listed as an inventor in the patents-in-suit. When pressed about his recollection of making LEDs that were referenced in Example 8 of the '925 Patent, Mr. Sakano stated twice that he did not have a clear recollection that he made the LEDs that were mentioned in Example 8. Instead, Mr. Sakano took the position that 'because . . . they're written in [the] patent I have a very strong conviction that either I or somebody, a member from my group made them."

When asked whether he could point to any documents showing that the LEDs from Example 8 were actually made in 1996 and 1997, Mr. Sakano could not point to any documents. Instead, Mr. Sakano indicated that he "was very convinced" that he left all the data with the technical/intellectual property department after he transferred to the procurement department. Likewise, Mr. Sakano could not point to any numerical results reported for the LEDs that he claims were made from YIG in Example 12. Nevertheless, Mr. Sakano was "very convinced that the LEDs in Example 12 were made."

Mr. Sakano spoke generally about his role at Nichia and his relationship with Mr. Shimizu, who Mr. Sakano knew for 25 years and described as a person who was "honest and a person of integrity." Mr. Sakano then gave a summary of how he would make and test a standard of 100 LED prototypes after he received phosphors from other individuals. Notably, he noted that he was not a chemist so he did not understand the composition of the LEDs that he was making. Accordingly, with respect to the composition of the phosphors, Mr. Sakano stated that "I think what I wrote is something somebody such as either Shimizu or Noguchi gave me[.]"

In making LEDs, Mr. Sakano noted that he had never been personally accused of being dishonest in his work. Furthermore, Mr. Sakano declared that it was "unthinkable" that there was anything in the '925 Patent application that either Mr. Shimizu or Mr. Noguchi would have put that was dishonest.

Mr. Sakano was noticeably less certain in his recollection of the phosphors that were used when he made the LED samples. Nevertheless, he was adamant that he, or members of his team, actually made the samples that were listed in the patents-in-suit and sent to him. Like Mr. Noguchi, Mr. Sakano may have been careless in keeping records of the work that he completed. However, the Court did not find his testimony to be testimony to be wholly incredible.

3. Dr. Martin Wilding

Dr. Wilding is a physics professor at Aberystwyth University in Wales, United Kingdom. He received a BDC from Derbyshire College of Higher Education in 1986 and received his Ph.D. from the University of Edinburgh in 1990. Dr. Wilding indicated that he focuses his research in neutron and x-ray diffraction of liquids, amorphous material, and crystalline materials. Dr. Wilding was offered as an expert for Everlight in the synthesis of powdered garnets. As it pertains to this case, he was offered as an expert with respect to the synthesis of YIG, as he synthesized YAG or a YAG derivative about 200 times.

Nichia emphasized on *voir dire* that Dr. Wilding had no experience in LED chips, and only had experience in making powdered garnets and phosphors. Nichia noted, and Dr. Wilding admitted that he had never made a phosphor before the case and had only made garnets. Dr. Wilding explained that he had no experience whatsoever in phosphor synthesis. Moreover, Dr. Wilding explained that he had not used the methods explained in the patent to make a phosphor.

The Court permitted Dr. Wilding to testify as an expert in the synthesis and characterization of powdered garnets. Dr. Wilding explained that he reviewed the patents-in-suit, reviewed literature before and after 1996, and also viewed the inventor notebooks to try to follow the synthesis method in the patent. After trying to follow the synthesis method in the patent twice, Dr. Wilding explained that, in his opinion, "you cannot fully substitute indium for aluminum in YAG." He reached this opinion on the theory that "indium is too large an atom to fit into a garnet structure."

Next, Dr. Wilding relied upon a paper by Cunningham and Anderson published in 1961, amongst other papers, to conclude that "indium is restricted to octahedral sites." He concluded that if he had successfully synthesized YIG he "would have published a paper on it . . . [b]ecause if you've managed to successfully substitute indium into a garnet structure, it would have been counter to everything anybody understands about crystallography and would have been a major groundbreaking paper."

Nichia conducted an effective cross-examination of Dr. Wilding. The cross-examination contrasted Dr. Wilding's academic theory with Mr. Noguchi's assertions of what happened in reality. This examination did not necessarily show that Dr. Wilding was misguided in his opinion that YIG could not be made, but instead limited Dr. Wilding's opinion to his theory. Indeed, on the re-direct, Everlight concluded its questioning of Dr. Wilding where he indicated that his "theory is quite unequivocal. You can only fit indium into octahedral sites in a garnet structure." However, it was not shown that it is *impossible* to make YIG using known synthesis techniques that were stated in the patent. Instead, Dr. Wilding, who admitted not using all the methods explained in the patent, only showed he was unable to make YIG after two attempts.

Overall, Dr. Wilding's testimony was intriguing, but it was not dispositive. It was very notable that Dr. Wilding was not a person of ordinary skill of the art or phosphor synthesis. Ultimately, his theory was simply a notion that YIG was impossible to make as he admittedly did not use all of the methods listed in the '925 Patent in his brief attempt to make YIG for this case.

4. Dr. Eric Bretschneider

Dr. Eric Bretschneider was an expert witness from the Jury Trial in this case who gave background on LEDs and how they were made. Dr. Bretschneider was a witness for Everlight in the Bench Trial. The Court limited the scope of his expert testimony to testimony regarding phosphor synthesis. After a continuing objection from Nichia, Dr. Bretschneider stated that a person of ordinary skill in the art would expect data that reported in Figure 19A of the '960 Patent to compare the same, but scaled differently, to the data in Figure 19C of the '960 Patent. Dr. Bretschneider contended that 19C had a peak wavelength of 850 nanometers while 19A had a peak wavelength of about 580 nanometers. According to Dr. Bretschneider he concluded there was an issue with the data and there is an inconsistency because there is a correlation between the peak and dominant wavelengths. After a rather long back and forth during cross-examination, there was a rare and notable point of agreement between Dr. Bretschneider and counsel for Nichia with respect to the assertion that the claims in the patent do not require any minimum amount of light to be emitted.

5. Dr. Uwe Happek

Dr. Happek is a professor of physics at the University of Georgia. He received his Ph.D. in 1989 from the University of Regensburg in Germany focusing on high frequency sound waves using rare earth luminescence. Dr. Happek indicated that 75 percent of his assignment at the University of Georgia is related to research, mostly related to phosphors. Dr., Happek was

submitted as an expert for Nichia with respect to phosphors, including garnet phosphor, phosphor synthesis and the structure and composition of phosphors.

Dr. Happek disagreed with Dr. Wilding's testimony that YIG or yttrium indium garnet cannot be made, and offered the following testimony regarding Dr. Wilding's testimony:

> If you have a theory, a theory always has some premises, some starting point and if these premises are not met, then your theory is not wrong, but it doesn't apply. Point in case, Mr., Dr. Wilding pointed out on thermal dynamical arguments that a GAG, the gadolinium compound, cannot be made. Yes, later on he actually made it and it was not that his theory was wrong; his theory did not apply.

Dr. Happek's testimony was a marked contrast from the stance taken by Dr. Wilding. Dr. Happek opined that Dr. Wilding hadn't "tried, really to make [YIG]." Additionally, Dr. Happek noted that in 1996 it would have been reasonable for Mr. Noguchi to believe he actually synthesized YIG because, at the time, "there were many publications that referred to YIG as yttrium indium garnet. So at the time, '96, if somebody published results on this materials, you know, it must be assumed you can make it. Dr. Happek also put forth a contamination theory, explaining the possibility of YAG powder being contaminated when someone attempted to make YIG:

> [O]ne possible, possibilities, and I had that actually happen to me, you heat a sample, you know, that does not contain aluminum, an aluminum crucible which contains aluminum and you heat it up and it actually leeched out part of the aluminum, which then you make YAG and there will there luminesce. These are the most powerful luminescent materials that we have.

Dr. Happek indicated that his point was that when attempting to make YIG you could end up with some YAG, and indicated that Dr. Wilding produced nominal YIG.

On cross-examination, Everlight emphasized that Dr. Happek did not perform an x-ray diffraction on the powders that Dr. Wilding synthesized. Evelright then attempted to get Dr. Happek to admit definitively that it is possible to make YIG. However, Dr. Happek repeatedly

indicated that he could not rule it out, but only confirm that it is hard to get indium into the tetrahedral site and that you need to force the material. Dr. Happek's testimony neutralized the testimony put forth by Dr. Wilding. Dr. Happek's testimony showed the weaknesses in Dr. Wilding's dogmatic theory that it is definitively *impossible* to make YIG. Thus, the Court does not reach Dr. Wilding's conclusion.

6. Dr. Fred Schubert

Dr. Schubert was proffered as an expert for Nichia with respect to LED technology, including phosphor synthesis and composition. Dr. Schubert explained that one of skill in the art could have reasonably believed that YIG could have been made at the time of the invention:

> In1996 as well as the present time there are numerous reports that YIG, and I spell it out to avoid ambiguity with the yttrium iron garnet. So I'm talking about the yttrium indium garnet. There are numerous reports that have reported the substance. At the present time there are 45 reports that report the use of yttrium indium garnet These 45 reports have appeared in journals. They are authored by more than hundred scientist and it appears to me that Dr. Wilding is saying these hundred scientists are wrong and he is right, and this is hard, this is just based on that point alone. I cannot agree with Dr. Wilding on this point. . . .[] I believe it is possible [to make YIG] and even the substance that was made by Dr. Wilding himself following the recipe of the patent or the instruction of the patent yielded a material that emitted luminescence.

Additionally, Dr. Schubert testified that Figure 19A shows a composition with 80 percent gadolinium with the peak wavelength of 590. He disagreed with Dr. Bretschneider's testimony that the peak and dominant wavelength are equivalent in the chromaticity diagrams. Dr. Schubert found that a person of skill in the art reading the specification of the patents-in-suit and reading the claims would understand that the peak wavelength of a phosphor would range from near 510 nanomeaters to near 600 nanometers.

With respect to the "near 600" language Dr. Schubert explained: the term "near" is a relative measure, but the '925 patent gives guidance in that respect. The inventors themselves

call an emission spectrum with a peak wavelength of 585 nanometer being near 600 nanometer[.]" Ultimately, Dr. Schubert provided testimony measuring the dominant wavelength—not the peak wavelength—of Mr. Noguchi's GAG sample to be about 592 nm.

III. CONCLUSIONS OF LAW

In *Therasense, Inc. v. Becton, Dickinson & Co.*, the United States Court of Appeals for the Federal Circuit sought to address the "problems created by the expansion and overuse of the inequitable conduct doctrine." 649 F.3d 1276, 1285 (Fed. Cir. 2011) (*en banc*). "Inequitable conduct is an equitable defense to patent infringement that, if proved, bars enforcement of a patent." *Id.* The Federal Circuit labeled the remedy of inequitable conduct as "the 'atomic bomb' of patent law[,]" because "inequitable conduct regarding any single claim renders the entire patent unenforceable." *Id.* at 1288 (citations omitted).

Given the "far-reaching consequences" of the inequitable conduct doctrine, the Federal Circuit noted "that charging inequitable conduct ha[d] become a common litigation tactic[,]" which "[l]eft unfettered . . . ha[d] plagued not only the courts but also the entire patent system." *Therasense*, 649 F.3d at 1289; *see also id.* (quoting ABA Section of Intellectual Property Law, *A Section White Paper: Agenda for 21st Century Patent Reform* 2 (2009), to state that "[a]pplicants disclose too much prior art for the [United State Patent and Trademark Office ('USPTO' or 'PTO'] to meaningfully consider, and do not explain its significance, all out of fear that to do otherwise risks a claim of inequitable conduct."); *see also id.* (citing the United States' *amici* brief to note that there was a "tidal wave of disclosure" at the USPTO, which made "identifying the most relevant prior art more difficult.").

The Federal Circuit emphasized that "honesty at the PTO is essential," but stressed that the previous low "standards for intent and materiality ha[d] inadvertently led to many unintended

consequences, among them, increased adjudication cost and complexity, reduced likelihood of settlement, burdened courts, strained PTO resources, increased PTO backlog, and impaired patent quality." *Therasense*, 649 F.3d at 1290. Accordingly, the Federal Circuit sought to address this problem by "tighten[ing] the standards for finding both intent and materiality in order to redirect a doctrine that has been overused to the detriment of the public." *Id*.

Now, in order to prove inequitable conduct after the Federal Circuit's *Therasene* decision, a challenger must show by clear and convincing evidence that the patent applicant (1) misrepresented or omitted information material to patentability, and (2) did so with specific intent to mislead or deceive the USPTO. *See In re Rosuvastatin Calcium Patent Litig.,* 703 F.3d 511, 519 (Fed. Cir. 2012) (citing *Therasense,* 649 F.3d at 1287).

The materiality requirement concerns "but-for" materiality; it "requires proof that the patentee withheld or misrepresented information that, in the absence of the withholding or misrepresentation, would have prevented a patent claim from issuing." *Ohio Willow Wood Co. v. Alps S., LLC,* 735 F.3d 1333, 1345 (Fed. Cir. 2013). "Information is material when a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent." *Symantec Corp. v. Computer Assocs. Int'l Inc*., 522 F.3d 1279, 1297 (Fed. Cir. 2008) (internal quotation marks and citation omitted). In making this determination, "[t]he court should apply the preponderance of the evidence standard and give claims their broadest reasonable construction." *Am. Calcar, Inc. v. Am. Honda Motor Co., Inc.,* 768 F.3d 1185, 1189 (Fed. Cir. 2014) (citing *Therasense,* 649 F.3d at 1291–92). However, "[t]here is no presumption that information not filed by an applicant was material simply because patentability ensued." *C.R. Bard v. M3 Sys., Inc.,* 157 F.3d 1340, 1365 (Fed. Cir. 1998) (citation omitted). It is only "[w]hen the patentee has engaged in affirmative acts of egregious misconduct, such as the filing of an

unmistakably false affidavit," that materiality is presumed. *Therasense,* 649 F.3d at 1292 (citations omitted); *see also Outside the Box Innovations, LLC v. Travel Caddy, Inc.,* 695 F.3d 1285, 1294 (Fed. Cir. 2012) ("[A] false affidavit or declaration is per se material.").

In evaluating the element of intent, "intent to deceive the PTO must be 'the single most reasonable inference able to be drawn from the evidence.'" *In re Rosuvastatin Calcium Patent Litig.*, 703 F.3d at 519 (quoting *Therasense,* 649 F.3d at 1290). The specific intent to commit inequitable conduct may be inferred from indirect and circumstantial evidence. *Therasense,* 649 F.3d at 1290. However, while intent can be inferred from indirect or circumstantial evidence, the evidence "must still be clear and convincing, and inferences drawn from lesser evidence cannot satisfy the deceptive intent requirement." *Star Scientific Inc. v. R.J. Reynolds Tobacco Co.,* 537 F.3d 1357, 1366 (Fed. Cir. 2008) (citation omitted). Likewise, inferences cannot be based on gross negligence. Instead, "when there are multiple reasonable inferences that may be drawn, intent to deceive cannot be found." *Therasense,* 649 F.3d at 1290–91 (citing *Scanner Techs. Corp. v. ICOS Vision Sys. Corp.,* 528 F.3d 1365, 1376 (Fed. Cir .2008)). In fact, "[w]henever evidence proffered to show either materiality or intent is susceptible of multiple reasonable inferences," the Federal Circuit has stated that "a district court clearly errs in overlooking one inference in favor of another equally reasonable inference." *Scanner Techs. Corp. v. ICOS Vision Sys. Corp. N.V.*, 528 F.3d 1365, 1376 (Fed. Cir. 2008).

Even prior to the Federal Circuit's decision in *Therasene*, the Federal Circuit established that "[t]he need to strictly enforce the burden of proof and elevated standard of proof in the inequitable conduct context is paramount because the penalty for inequitable conduct is so severe . . . courts must be vigilant in not permitting the defense to be applied too lightly." *Star Scientific, Inc.,* 537 F.3d at 1365–66. After the decision in *Therasene*, the Federal Circuit

emphasized that the elements of materiality and intent must be established separately. *See In re Rosuvastatin Calcium Patent Litig.*, 703 F.3d at 519. Additionally, "[a] district court should not use a 'sliding scale,' where a weak showing of intent may be found sufficient based on a strong showing of materiality, and vice versa." *Therasense*, 649 F.3d at 1290. Lastly, and importantly, the Court cannot "strike down an entire patent where the patentee only committed minor missteps or acted with minimal culpability or in good faith." *Star Scientific*, 537 F.3d at 1366; *see also Therasense*, 649 F.3d at 1290 ("A finding that the misrepresentation or omission amounts to gross negligence or negligence under a 'should have known' standard does not satisfy [the] intent requirement.").

Everlight contends that Mssrs. Nougchi, Sakano, and Shimizu engaged in inequitable conduct with respect to the patents-in-suit in three ways. First, Everlight contends that the inventors engaged in inequitable conduct with respect to the '925 Patent by submitting false information to the USPTO—via Example 12—and making false claims that they invented YIG. Second, Everlight contends that the inventors engaged in inequitable conduct by making false claims that they invented an LED with a GAG phosphor and failing to disclose data showing that GAG did not emit light. Finally, Everlight contends that Mssrs. Nougchi, Sakano, and Shimizu engaged in inequitable conduct with respect to the '960 Patent by making false claims that they invented an LED with phosphors having peak wavelengths up to 600 nm and failing to disclose data concerning their failure to achieve a wavelength above 580 nm.

Ultimately, the facts established at trial did not show that the inventors submitted a false oath to the USPTO and withheld material data from the USPTO. Accordingly, the Court finds that Everlight did not satisfy the materiality requirement for any of these arguments. Moreover, assuming that Everlight did satisfy the materiality requirement, the Court finds that Everlight

definitely did not satisfy the requirement of showing that the inventors acted with the specific intent to mislead or deceive the USPTO. Accordingly, the Court will rule against Everlight on its claim for unenforceablilty due to inequitable conduct with respect to the patents in suit.

A. Materiality

The Court finds that Everlight has neither shown *per se* nor but-for materiality for any of the arguments that it has put forth. To briefly review, a false affidavit or declaration can be considered *per se* material. *Outside the Box Innovations, LLC,* 695 F.3d at 1294. But-for materiality, on the other hand, requires proof that the inventors withheld or misrepresented information that would have prevented a patent claim from issuing. *Ohio Willow Wood Co.,* 735 F.3d at 1345. Ultimately, the Court finds that Everlight has failed to meet its high burden of showing through clear and convincing evidence that the inventors "engaged in affirmative acts of egregious misconduct, such as the filing of an *unmistakably* false affidavit[.]" *Therasense,* 649 F.3d at 1292 (citations omitted) (emphasis added).

1. The alleged false submission of Examples 12, 8, and alleged false claims that the inventors invented YIG.

The thrust of Everlight's first argument is that Examples 12 and 8 are false because there are no documents that show the inventors ever attempted to synthesize YIG or make any LEDs with YIG. Additionally, Everlight places an emphasis on the theory put forth by Dr. Wilding—that YIG is impossible to make—in order to state that the inventors statements in Examples 12 and 8 are patently false and were both *per se* and but-for material in securing the '925 Patent. However, Everlight's contention—that the facts show the inventors never performed the work described in Examples 12 and 8—is in direct contrast with the testimony elicited from Mr. Noguchi and Mr. Sakano. Critically, beyond Everlight's assertions, Everlight did not *show*

enough, and there is not enough in the record, to provide clear and convincing evidence that the applicants misrepresented or omitted information material to patentability.

For example, Mr. Noguchi, was adamant that he remembered making YIG and sent it to both Mr. Sakano and Mr. Shimizu to make sample LEDs in Example 12. Mr. Sakano explained how he would make and test a standard of 100 LED prototypes after he received phosphors from the other inventors. Moreover, Mr. Sakano testified that he was "very convinced" that the LEDs from both Examples 12 and 8 were made from a YIG sample sent from Mr. Noguchi as indicated in the '925 Patent.

Everlight argues that these assertions are outright fabrications. Everlight's argument that Nichia's assertions were outright fabrications is twofold: first, Everlight argues that it is impossible to make YIG, and second, Everlight argues that even if YIG was made Mr. Noguchi would not have made use of it given his testimony from the jury trial. The Court is not persuaded by these theories advanced by Everlight.

For the first argument, Everlight simply failed to convince the Court that it is outright *impossible* to create YIG. Everlight is correct in its assertion that the evidence does not "strongly suggest" that YIG was created. However, Everlight did not do enough to show through clear and convincing evidence that YIG was *not* created. Ultimately, the evidence adduced at trial left the Court with enough information to conclude that it was more likely than not that YIG was created. At a minimum, the Court can confidently conclude based on the evidence shown that Mr. Noguchi believed—whether correct or not—that he created YIG.

Everlight's reliance on Dr. Wilding's academic theory that it is impossible to create YIG was counterbalanced by the testimony Nichia's expert witnesses. For example, while Dr. Wilding thought it was impossible to create YIG, Dr. Happek refused to foreclose the idea that

YIG could be created, and Dr. Schubert was definitive that YIG could be created. These conclusions by Drs. Happek and Schubert coupled with Dr. Wilding's concession that he had not used the methods explained in the patent in his brief attempt to make YIG—amongst other concessions regarding his testimony—led the Court to concludes that Everlight has not shown by clear and convincing evidence that Mr. Noguchi did not believe he created YIG in 1996.

With respect to Mr. Sakano's making LED samples out of Examples 12 and 8, the analysis is similar. Put simply, Everlight did not show through clear and convincing evidence that the LED samples were not made by Mr. Sakano. For all the faults with Mr. Sakano's testimony with respect to the specific phosphors he used to make the LEDs, he was nevertheless adamant that samples for Examples 12 and 8 were made by himself or his department. Ultimately, the Court is again left to conclude that it was more likely than not that the samples were made given the testimony from Mr. Sakano and the failure of Everlight to meet its very high burden of showing by clear and convincing evidence that the samples were not made.

For the second argument, Everlight focuses on Mr. Noguchi's statement from Phase I of the Jury Trial that when "light emission was at two to three percent level [the inventors] never made use it." Everlight emphasizes that Mr. Noguchi testified during the Phase II Bench Trial that the YIG sample at issue had about the same low luminous intensity as GIG which was one percent. Accordingly, Everlight argues that even if YIG was made, the YIG would not have been used to make LEDs in light of Mr. Noguchi's testimony. However, Nichia aptly points out Mr. Noguchi's testimony was focused on mass production—not research—when he was speaking about not making use of the phosphors with low luminescence. *Cf.* Dkt. No. 579 at 110:15-16 ("Regardless of whether or not it's marked with an X, I sent samples."). Thus, Everlight has

failed to show by clear and convincing evidence that Mr. Noguchi would not have sent the samples for to be made as part of his research.

In sum, Everlight has not shown through clear and convincing evidence that Examples 12 and 8 were false, and that the assertion that the inventors created YIG was a false assertion. Moreover, Everlight has not shown through clear and convincing evidence that the inventors withheld or misrepresented information in the patent.[1] Thus, ultimately, the Court finds that Everlight has neither shown *per se* nor but-for materiality with respect to Examples 12 and 8, and the creation of YIG.

2. The alleged false claims of inventing an LED with a GAG phosphor, and alleged failure to disclose data showing that GAG did not emit light.

The basis of Everlight's second argument is that Mr. Noguchi told management in 1996 that GAG does not emit light. Throughout both the jury and the bench trial, Mr. Noguchi tirelessly gave context to this statement and explained that "[w]hat I meant was that it functioned or it worked, but the brightness or luminance was low." Thus, Mr. Noguchi has repeatedly testified that GAG did emit light.

Similarly, Mr. Noguchi repeatedly explained the X that was written next to sample 22, and Mr. Noguchi put his former statements in context in order to explain that his use of the word "dark" to explain sample 22 did not mean that no light was emitted. This was similar to his explanation of his statement why he indicated that the GAG "did not emit light." After reviewing his testimony in context, the Court cannot definitively say that GAG was or was not created. However, the Court can say that Everlight has failed to meet its burden of showing through clear

[1] As with all of the following arguments addressed by the Court, the Court does not even get to the fact that it is not readily clear whether Everlight, if actually proven to be false, "would have prevented a patent claim from issuing." *Ohio Willow Wood Co.*, 735 F.3d at 1345.

and convincing evidence that a GAG phosphor was *not* made and that Mr. Noguchi failed to disclose data showing that GAG did not emit light.

Critically, and rather surprisingly, Everlight's own "Proposed Findings of Fact and Conclusions of Law Relating to the Phase 2 Trial Regarding Nichia's Inequitable Conduct" states that "[o]n or around July 1996, Mr. Noguchi *successfully synthesized GAG*." Dkt. No. 546 at ¶ 144 (emphasis added). Everlight then put forth a proposed finding, consistent with Mr. Noguchi's testimony that "Mr. Noguchi concluded that GAG would not be useful as a phosphor in an LED." *Id.* at ¶ 146. The Court agrees with this proposed finding, and finds that Everlight has neither shown *per se* nor but-for materiality with respect to this argument either.

3. The alleged false claim that the inventors invented an LED with phosphors having peak wavelengths near 600 nm, and alleged omission of data showing failure to achieve a wavelength above 580 nm.

Lastly, Everlight argues that the inventors never achieved a peak wavelength near 600 nm. The argument between the parties regarding this point has become rather unwieldy, but has ultimately come down to, as Everlight puts it, whether Mr. Noguchi "knew that the real spectra in [his] 'blue binder' showed a repeated failure to achieve even 580 nm peak wavelengths for 80% Gd-substituted phosphors." Dkt. No. 586 at 19. More to this point, Everlight put forth the following argument:

> Nichia attempts to deflect attention away from Mr. Noguchi's failure to testify about his actual spectra results by blaming Everlight for not having previously questioned Mr. Noguchi about his "blue binder." However, Mr. Noguchi repeatedly testified about the spectral data contained in the patents, and relied on the patent drawings as if they were actual data. It was not until his very last cross examination, that Mr. Noguchi for the first time testified that the spectral data in the patent was not actual, but rather the figures drawn by an attorney, and that he knew the exact location of the actual spectra – his "blue binder." That binder shows that Mr. Noguchi never achieved a peak wavelength "near 600 nm," or even 585 nm as shown in patent Figure 5A. Both Mr. Noguchi and Nichia's counsel knew full well that the blue binder contained actual emission data and made a conscious decision not to present this information at either trial.

Dkt. No. 586 at 19 (internal citations omitted). In response, with respect to the spectra in Mr. Noguchi's blue notebook, Nichia argues that "because [Everlight] avoided questioning Mr. Noguchi on the spectra in his blue binder, [Everlight] offers only its attorneys' (mis)characterization[.]" Dkt. No. 587 at 12. According to Nichia, the data in Mr. Noguchi's notebook was data "that [Everlight] had since 2013 but never bothered to ask Mr. Noguchi about." *Id.* This back and forth encapsulates the Court's hesitancy to find inequitable conduct on behalf of the inventors given what was shown at trial.

Overall, the Court has struggled to conclude that Everlight has shown through clear and convincing evidence that the inventors definitively lied about achieving a peak wavelength near 600nm. Everlight's argument that Nichia made a conscious decision not to present information at trial showing that Mr. Noguchi never achieved a peak wavelength near 600nm is perplexing considering it is Everlight who possesses the burden to demonstrate by clear and convincing evidence that the patent applicant misrepresented or omitted information material to patentability.

The Court understands Everlight's argument that the spectra it has pointed out from the blue binder shows that Figure 19A was false. However, without expert testimony regarding the data in the blue binder, the Court would either have to take Everlight's attorneys at their word or would necessarily have to speculate to reach Everlight's conclusion that "Mr. Noguchi relied on the patent figures knowing full well the actual spectra showed that he never achieved a peak wavelength above 580 nm." Dkt. No. 576 at 22. *Cf. Invitrogen Corp. v. Clontech Labs., Inc.,* 429 F.3d 1052, 1068–69 (Fed. Cir. 2005) ("Unsubstantiated attorney argument regarding the meaning of technical evidence is no substitute for competent, substantiated expert testimony. It does not, and cannot, support [a party's] burden[.]");*Biotec Biologische Naturverpackungen*

GmbH & Co. KG v. Biocorp, Inc., 249 F.3d 1341, 1353 (Fed. Cir. 2001) ("It is not the trial judge's burden to search through lengthy technologic documents for possible evidence.").

This is particularly so considering the fact that Dr. Schubert—an undisputed person of skill in the art—testified that a person of skill in the art reading the specification of the patents-in-suit and reading the claims would understand that the peak wavelength of a phosphor would range from near 510 nanometers to near 600 nanometers. Thus, again, while a close call with respect to this issue, the Court finds that Everlight has not met its burden to show *per se* or but-for materiality with respect to the inventors achieving a peak wavelength near 600 nm.

B. Specific Intent

Even if Everlight was able to show materiality, Everlight does not show through clear and convincing evidence that the alleged falsifications were made with the requisite intent to deceive the USPTO. Indeed, Everlight's best argument for materiality hinged on the fact that many of the documents relating to the work done by the inventors are noticeably absent. However, Everlight severely overstates its position when it argues that the only reasonable inference is that the inventors withheld information in order to obtain new claims.

"[I]ntent to deceive the PTO must be 'the single most reasonable inference able to be drawn from the evidence.'" *In re Rosuvastatin Calcium Patent Litig.,* 703 F.3d at 519 (quoting *Therasense I,* 649 F.3d at 1290). Nevertheless, "[w]henever evidence proffered to show either materiality or intent is susceptible of multiple reasonable inferences," the Federal Circuit has stated that "a district court clearly errs in overlooking one inference in favor of another equally reasonable inference." *Scanner Techs. Corp.*, 528 F.3d at 1376. This Court would clearly err if it were to overlook the obvious other reasonable inferences that could be drawn with respect to both materiality and intent with respect to the allegedly missing information.

Even focusing on the fact that work notes and data are noticeably absent, there was not clear and convincing evidence that the inventors, intentionally and with the specific intent to deceive the USPTO, withheld or misrepresented information in the patent. The Court certainly questioned how such critical documents could be lost; however, using Everlight's first argument as an example, the Court noted that several documents were lost beyond just Examples 12 and 8.

For example, the Court notes that this all occurred almost two decades ago. The Court also noted that a lot of this information was handwritten in a time before documents were electronically stored. Accordingly, the absence of documents that were handwritten decades ago did not serve as clear and convincing evidence that the inventors withheld or misrepresented information in the patent. *Cf. Loral Fairchild Corp. v. Matsushita Elec.*, 266 F.3d 1358, 1365 (Fed. Cir. 2001) ("[I]t is not surprising that Loral has been unable to submit documents showing production test results, considering that the events at issue occurred almost 30 years ago.").

With respect to Everlight's argument for missing data in Mr. Noguchi's blue notebook, the Court's analysis is the same. Everlight repeatedly points to evidence that it expected to find with respect to a peak wavelength "near 600 nm." However, Everlight happened to find in Mr. Noguchi's blue notebook spectra which it asserts showed a repeated failure to achieve even 580 nm peak wavelengths for 80% Gd-substituted phosphors. This evidence, however, must be contrasted with the expert testimony from Dr. Schubert who found the dominant wavelength of Mr. Noguchi's GAG sample to be about 592 nm. *Cf. Star Scientific Inc.*, 537 F.3d at 1366 ("[I]nferences drawn from lesser evidence cannot satisfy the deceptive intent requirement.").

Put simply, the single most reasonable inference that the Court walked away from with respect to the lost documents, and all of the issues that Everlight brought to the Court's attention, is that the inventors *should have* been more careful in keeping a record of this information and

documenting their findings. However, "[a] finding that the misrepresentation or omission amounts to gross negligence or negligence under a 'should have known' standard does not satisfy [the] intent requirement." *Therasense I,* 649 F.3d at 1290. The Federal Circuit has spoke clearly when stating the Court cannot "strike down an entire patent where the patentee only committed minor missteps or acted with minimal culpability or in good faith." *Star Scientific,* 537 F.3d at 1366. At most, that is what Everlight has shown here—that the patentee committed minor missteps or acted in good faith. Accordingly, the Court will not rule in favor of Everlight on its claim for unenforceability due to inequitable conduct because Everlight have not met its considerably high burden.

IV. CONCLUSION

For the reasons discussed above, the Court concludes that Everlight has failed to establish through clear and convincing evidence that the inventors misrepresented or omitted information material to patentability. Moreover, the court finds that Everlight has failed to establish through clear and convincing evidence that the inventors possessed a specific intent to deceive the USPTO. Therefore, the Court concludes that Everlight has failed meet its considerably high burden of proving that the '925 Patent and the '960 Patent are unenforceable due to inequitable conduct.

IT IS SO ORDERED.

Dated: October 20, 2015
Detroit, Michigan

s/Gershwin A. Drain
GERSHWIN A. DRAIN
United States District Judge