

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CORDELIA LIGHTING, INC.,
Petitioner,

v.

COOPER LIGHTING, LLC,
Patent Owner.

Case IPR2017-01858
Patent 8,348,479 B2

Before LYNNE E. PETTIGREW, GREGG I. ANDERSON, and
ROBERT J. WEINSCHENK, *Administrative Patent Judges*.

PETTIGREW, *Administrative Patent Judge*.

DECISION
Denying Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Petitioner, Cordelia Lighting, Inc., filed a Petition for *inter partes* review of claims 1, 2, 4, 5, 13–16, 19, and 20 of U.S. Patent No.

8,348,479 B2 (Ex. 1001, “the ’479 patent”). Paper 1 (“Pet.”). Patent Owner, Cooper Lighting, LLC, filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). Institution of an *inter partes* review is authorized by statute when “the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a); see 37 C.F.R. § 42.108. Having considered the Petition and Preliminary Response, we conclude the information presented does not show there is a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of any of claims 1, 2, 4, 5, 13–16, 19, and 20 of the ’479 patent.

A. Related Matters

The parties indicate that the ’479 patent has been asserted in *Cooper Lighting, LLC v. Cordelia Lighting, Inc.*, Case No. 1:16-cv-02669 (N.D. Ga.). Pet. 1–2; Paper 5, 1. Petitioner also has filed petitions for *inter partes* review of related U.S. Patent Nos. 8,348,477 B2 and 8,789,978 B2 in IPR2017-01857 and IPR2017-01860, respectively. See Pet. 2; Paper 5, 1–2. In IPR2017-01859, another case between the same parties, we recently instituted review of U.S. Patent No. 9,010,956 B1, directed to similar subject matter as the ’479 patent.

B. The ’479 Patent

The ’479 patent relates generally to recessed light fixtures. Ex. 1001, 1:33. A traditional recessed light fixture is installed in a hollow opening in a ceiling or other surface and includes a “can” fixture (i.e., a can-shaped receptacle). *Id.* at 1:45–50. A lamp socket for receiving an incandescent lamp or compact fluorescent lamp (“CFL”) is coupled to the can. *Id.* at

1:51–54. According to the '479 patent, there is a need for a recessed light fixture that uses a light emitting diode (“LED”) light source instead of a traditional incandescent lamp or CFL because LEDs have higher energy efficiency and longevity. *Id.* at 1:66–2:7.

The '479 patent describes a recessed light fixture with an LED light source. *Id.* at 2:11–12. Figure 8 of the '479 patent is reproduced below:

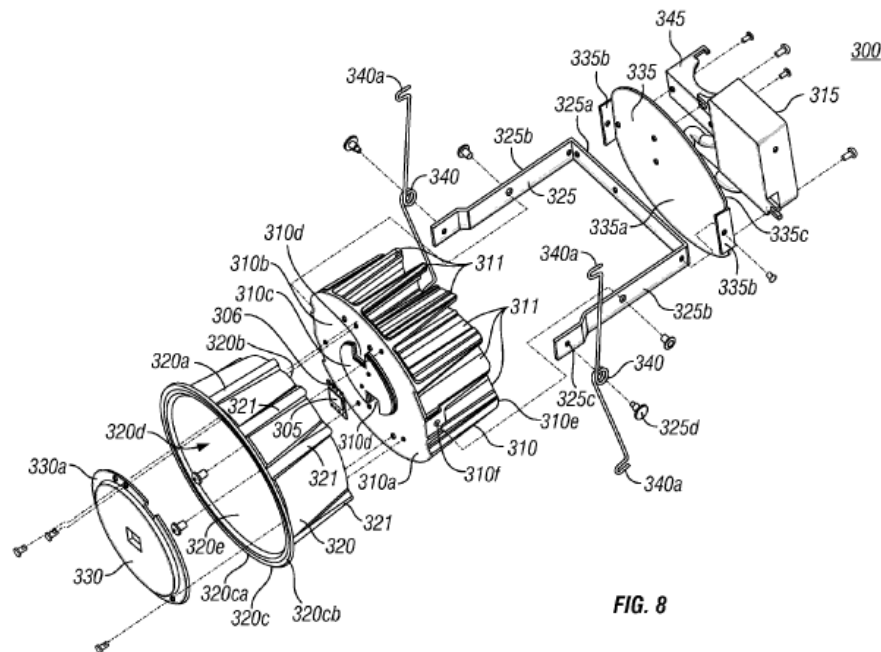


Figure 8 is a perspective exploded side view of an LED module for installation within a can of a recessed lighting fixture. *Id.* at 3:59–61. As shown in Figure 8, LED module 300 includes LED package 305 mounted to heat sink 310. *Id.* at 5:32–35. LED package 305 includes one or more LEDs mounted to common substrate 306, which is electrically connected to driver 315 for supplying electrical power and control to LED package 305. *Id.* at 5:39–40, 6:46–48. Heat sink 310 conducts heat away from the LEDs. *Id.* at 6:60–63. Reflector housing 320 is coupled to bottom surface 310a of heat sink 310. *Id.* at 7:63–64.

LED module 300 may be mounted in a housing using torsion springs 340. *Id.* at 9:17–36, 10:55–61. Bracket 325 couples torsion springs 340 to opposite side surfaces 310*f* of heat sink 310. *Id.* at 9:17–18. Each torsion spring 340 includes opposing bracket ends 340*a* that can be squeezed together and inserted into corresponding slots in a can. *Id.* at 9:30–36.

C. Illustrative Claim

Among the claims challenged by Petitioner, claims 1 and 13 are independent; claims 2, 4, and 5 depend directly or indirectly from claim 1; and claims 14–16, 19, and 20 depend directly or indirectly from claim 13. Claim 1 is illustrative of the claimed subject matter:¹

1. A downlight module, comprising:
 - a light emitting diode (“LED”) package comprising a plurality of LEDs mounted to a common substrate;
 - a heat sink coupled to the LED package; and
 - at least two torsion springs located on opposite side surfaces of the downlight module proximal to an open end of the downlight module, wherein the torsion springs are used to mount the heat sink and LED package within a recessed light fixture,wherein the LED package generates substantially all of the light emitted by the recessed lighting fixture through the open end of the downlight module.

Ex. 1001, 14:9–20.

¹ Petitioner asserts the challenged claims all “cover the same basic structure of a downlight LED module: (1) a LED package, (2) a heat sink coupled to the LED package, (3) torsion springs to mount the module within a recessed fixture, and (4) where the LED package generates substantially all of the emitted light.” Pet. 5.

D. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 3–4):

Reference(s)	Basis	Challenged Claims
Zhang ²	§ 102(e) ³	1, 2, 4, 5, 13–16, 19, and 20
DeCicco ⁴ and Stimac ⁵	§ 103(a)	1, 2, 4, 5, and 13–16
Lumodan ⁶ and DeCicco	§ 103(a)	1, 2, 4, 5, 13–16, 19, and 20
Lumodan, DeCicco, and Mondloch ⁷	§ 103(a)	19 and 20

Petitioner relies on the declaration of Mr. Fred P. Smith in support of its unpatentability contentions. *Id.* at 4 (citing Ex. 1014).

II. DISCUSSION

A. Claim Construction

In an *inter partes* review, we construe claim terms in an unexpired patent according to their broadest reasonable construction in light of the specification of the patent in which they appear. *See* 37 C.F.R. § 42.100(b);

² U.S. Publication No. US 2009/0097262 A1, published Apr. 16, 2009 (Ex. 1004, “Zhang”).

³ The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (“AIA”), amended 35 U.S.C. §§ 102 and 103. Because the ’479 patent has an effective filing date before the effective date of the applicable AIA amendments, we refer to the pre-AIA version of §§ 102 and 103.

⁴ U.S. Patent No. 6,588,922 B1, issued July 8, 2003 (Ex. 1006, “DeCicco”).

⁵ U.S. Patent No. 6,787,999 B2, issued Sept. 7, 2004 (Ex. 1007, “Stimac”).

⁶ European Patent Application Publication EP 1600691 A1, published Nov. 30, 2005 (Ex. 1008, “Lumodan”).

⁷ U.S. Patent No. 7,629,570 B2, issued Dec. 8, 2009 (Ex. 1009, “Mondloch”).

Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2144–46 (2016) (upholding the use of the broadest reasonable interpretation standard). Consistent with the broadest reasonable construction, claim terms are presumed to have their ordinary and customary meaning as understood by a person of ordinary skill in the art in the context of the entire patent disclosure. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

Petitioner asserts that the claim terms “coupled” and “proximal” should be construed as proposed by Patent Owner in pending district court litigation between the parties involving the ’479 patent. Pet. 31. Petitioner also proposes a construction for “reflector.” *Id.* at 31–32. We agree with Patent Owner that these terms do not require construction for purposes of this decision. *See* Prelim. Resp. 7–8; *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”)).

In addition, Petitioner proposes a construction for “means for mounting the heat sink and LED package within a recessed light fixture,” as recited in independent claim 13, which it contends is a means-plus-function limitation to be construed under 35 U.S.C. § 112(6).⁸ Pet. 32. Patent Owner urges us to deny the Petition with respect to claims 13–16, 19, and 20 because the Petition does not identify specific portions of the specification that describe corresponding structure, as required by our rules. Prelim.

⁸ We refer to the pre-AIA version of 35 U.S.C. § 112.

Resp. 8–11 (citing 37 C.F.R. § 42.104(b)(3)). As explained below, we deny the Petition for other reasons, so we need not address the parties’ arguments regarding construction of the “means for mounting” limitation.

B. Asserted Anticipation by Zhang

Petitioner contends that claims 1, 2, 4, 5, 13–16, 19, and 20 are anticipated by Zhang under 35 U.S.C. § 102(e). Pet. 33–40. In response, Patent Owner argues that Zhang is not prior art to the ’479 patent. Prelim. Resp. 15–24. We agree with Patent Owner for the reasons below.

1. Effective Filing Date of the ’479 Patent

The ’479 patent, titled “Light Emitting Diode Recessed Light Fixture,” issued on January 8, 2013, from an application filed on May 17, 2011. Ex. 1001, at [22], [45]. The ’479 patent is a continuation of, and claims priority to, U.S. Patent Application No. 12/235,116, filed September 22, 2008. *Id.* at [63], 1:6–9. The ’479 patent also claims priority to four provisional applications, the most recent of which, U.S. Provisional Patent Application No. 61/090,391 (“the ’391 application”), was filed on August 20, 2008. *Id.* at [60], 1:10–19.

Petitioner contends the earliest disclosure that provides written description support for the challenged claims of the ’479 patent is the ’391 application. Pet. 16 (citing Ex. 1014 ¶ 41 (asserting that the three earlier provisional applications do not support certain claim limitations)). Thus, Petitioner argues, the earliest effective filing date for the challenged claims of the ’479 patent is no earlier than August 20, 2008. Patent Owner accepts this as the effective filing date for purposes of this decision. Prelim. Resp. 15. The record does not include a copy of the ’391 application. Nevertheless, for purposes of this decision, and because this is not a dispute

before us at present, we will consider August 20, 2008, to be the earliest effective filing date of the challenged claims.

2. *Effective Filing Date of Zhang*

Zhang has a filing date of October 10, 2008. Ex. 1004, at [22]. Zhang claims the benefit of the filing date of U.S. Provisional Application No. 60/979,068 (Ex. 1005, “Zhang Provisional”), filed October 10, 2007. *Id.* ¶ 1. Based on the October 2007 filing date of the Zhang Provisional, which is prior to the August 2008 effective filing date of the challenged claims, Petitioner asserts that Zhang is prior art under 35 U.S.C. § 102(e).⁹ Pet. 19–20.

Petitioner contends that “[u]nder *Dynamic Drinkware*, if Zhang finds Section 112 support in the Zhang Provisional, then Zhang is entitled to a prior art reference date of October 10, 2007.” Pet. 20 (citing *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375 (Fed. Cir. 2015)). According to Petitioner, “[t]he Zhang Provisional contains substantially the same disclosure and drawings as in Zhang.” *Id.* To support its argument that Zhang is entitled to claim the benefit of the October 2007 filing date of the Zhang Provisional, Petitioner presents a claim chart allegedly showing disclosure in the Zhang Provisional that provides written description support for claim 1 of Zhang. *Id.* at 21–24. The claim chart cites to paragraph 57 of Mr. Smith’s declaration, which includes the same information as the claim chart. *Id.* (citing Ex. 1014 ¶ 57).

⁹ Zhang also claims the benefit of the filing date of U.S. Design Application No. 29/295,943 (“the ’943 application”), filed October 10, 2007. Ex. 1004 ¶ 1. Petitioner does not argue that Zhang is entitled to the benefit of the filing date of the ’943 application.

Patent Owner alleges that Zhang is not prior art to the '479 patent because Zhang is not entitled to claim the benefit of the October 2007 filing date of the Zhang Provisional. Prelim. Resp. 15–16. Patent Owner advances two reasons Petitioner has not shown Zhang is entitled to the filing date of the Zhang Provisional: “(1) Petitioner never demonstrates that the disclosures it relies on from the Zhang Publication *are present in and supported by the Zhang Provisional*, and (2) the Zhang Provisional does not provide § 112 support for claim 1 of the Zhang Publication.” *Id.* at 16 (boldface omitted). With regard to the first reason, Patent Owner argues that Petitioner fails to show that the disclosure in Zhang relied on for its asserted anticipation ground has been “carried forward” from the Zhang Provisional. *Id.* at 17–21 (citing, e.g., *In re Giacomini*, 612 F.3d 1380, 1383 (Fed. Cir. 2010)). As for the second reason, Patent Owner argues that Petitioner’s claim chart comparing the disclosure of the Zhang Provisional to claim 1 of Zhang does not show that all limitations of claim 1 are supported by the Zhang Provisional, as required under *Dynamic Drinkware*. *Id.* at 21–24.

Under *Dynamic Drinkware*, Petitioner has the initial burden of production to show that Zhang is entitled to the filing date of the Zhang Provisional. *See Dynamic Drinkware*, 800 F.3d at 1379. Because Petitioner is relying on the filing date of the Zhang Provisional to establish that Zhang is prior art to the '479 patent, Petitioner must show the Zhang Provisional provides written description support for claims of Zhang. *See id.* at 1381–82. Here, Petitioner attempts to make that showing by comparing claim 1 of Zhang to the disclosure of the Zhang Provisional. Pet. 21–24.

We agree with Patent Owner that Petitioner has not shown sufficiently that the Zhang Provisional provides written description support for two

limitations in claim 1 of Zhang. *See* Prelim. Resp. 22–24. Claim 1 of Zhang recites that “the integrated baffle heat sink draws heat out of the recessed housing and conducts it to the trim ring.” Claim 1 further recites “whereby heat communicated to the trim ring may be dissipated at the outer side of the surface.” Petitioner’s claim chart comparing the Zhang Provisional to Zhang’s claim 1 asserts that the Zhang Provisional “describ[es] the heat sink being integrated with the baffle of the trim.” Pet. 24 (citing Ex. 1005, 10). The claim chart also quotes the following language from the Zhang Provisional’s one-page textual disclosure as supporting these limitations: “[T]he Baffle also includes the Ring as one part. Together they work to release heat into the room below and Out of the Can.” *Id.* (quoting Ex. 1005, 10).

Upon consideration of the record, we agree with Patent Owner that the quoted text from the Zhang Provisional does not provide written description support for the two recited limitations. *See* Prelim. Resp. 22. Moreover, neither the claim chart nor the Petition itself otherwise explains how the quoted text provides support for recited claim language (e.g., a heat sink drawing heat out of the housing and conducting it to the trim ring). And Mr. Smith’s declaration merely cites the same disclosure from the Zhang Provisional without any further explanation. Ex. 1014 ¶ 57.

For these reasons, Petitioner has not shown sufficiently that Zhang is entitled to claim the benefit of the Zhang Provisional’s filing date. Because we have determined Petitioner has not shown the Zhang Provisional provides written description support for claim 1 of Zhang, we do not address Patent Owner’s arguments based on *In re Giacomini*. *See* Prelim. Resp. 17–21.

On this record, Zhang is not available as § 102(e) prior art to the challenged claims of the '479 patent. Therefore, we determine the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that claims 1, 2, 4, 5, 13–16, 19, and 20 are anticipated by Zhang.

C. Legal Standard for Obviousness

A claim is unpatentable under § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). “To satisfy its burden of proving obviousness, a petitioner cannot employ mere conclusory statements. The petitioner must instead articulate specific reasoning, based on evidence of record, to support the legal conclusion of obviousness.” *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Furthermore, in assessing the prior art, the Board must consider whether a person of ordinary skill would have been motivated to combine the prior art to achieve the claimed invention. *In re Nuvasive*, 842 F.3d 1376, 1381 (Fed. Cir. 2016).

Petitioner alleges that a person having ordinary skill in the art would have had “either a bachelor’s degree in a science or engineering discipline,

such as mechanical engineering, or at least three years of experience in designing LED downlight modules.” Pet. 33 (citing Ex. 1014 ¶ 21). Patent Owner disagrees, arguing that at the time of the invention in 2008, based on evidence of record, a person of ordinary skill in the art would not have had that much experience in LED downlight modules. Prelim. Resp. 11–12 (citing, e.g., Exs. 1004, 1009, 1010). Instead, Patent Owner contends a person of ordinary skill “was more likely to have had a few years of experience with indoor lighting or in the lighting industry generally.” *Id.* at 12.

On this record, and for purposes of this decision, we adopt Petitioner’s proposal for the level of ordinary skill as modified by Patent Owner’s proposal with respect to work experience in the lighting industry generally.

D. Asserted Obviousness over DeCicco and Stimac

Petitioner contends that claims 1, 2, 4, 5, and 13–16 are unpatentable under 35 U.S.C. § 103(a) as obvious over DeCicco and Stimac. Pet. 40–48. Relying on the testimony of Mr. Smith, Petitioner alleges that the combined references teach or suggest all of the limitations of the challenged claims and that a person having ordinary skill in the art would have combined the references in the manner asserted. *Id.* (citing, e.g., Ex. 1014 ¶¶ 104–108). In response, Patent Owner contends that (1) a person of ordinary skill in the art would not have combined DeCicco and Stimac, and (2) the combination of references does not teach or suggest certain limitations. Prelim. Resp. 24–48.

1. DeCicco

DeCicco discloses open mounting frames for use in recessed lighting fixtures. Ex. 1006, 1:28–29. One embodiment disclosed in DeCicco may be

torque springs 202 and 204 in their respective torque spring receptacles. *Id.* at 4:35–56. According to DeCicco, the “construction of the torque springs is conventional and well known.” *Id.* at 4:15–16.

2. Stimac

Stimac discloses a lamp including an optics module and an electronics module. Ex. 1007, 3:23–25. The optics module includes a plurality of LEDs for emitting light, and a heat sink thermally coupled to the LEDs. *Id.* at 3:25–27. The invention may “find application in modular lighting, in portable lighting applications such as flashlights, in retrofitting incandescent and other types of lamps with LED-based lamps, in computerized stage or studio lighting applications, and the like.” *Id.* at 1:7–12.

Figure 1 of Stimac is reproduced below:

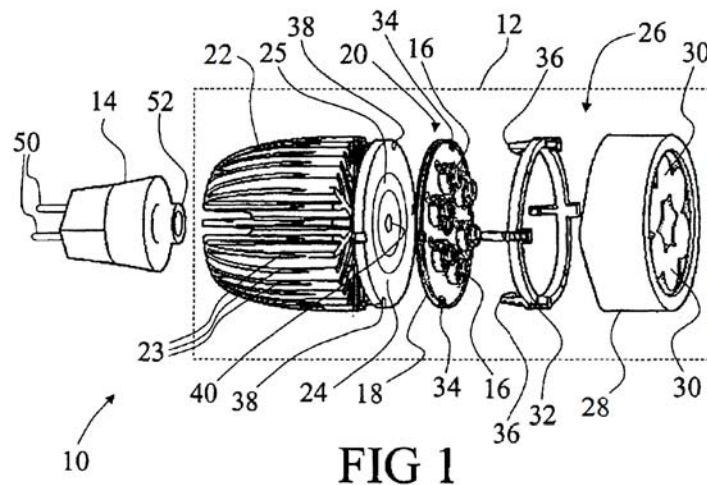
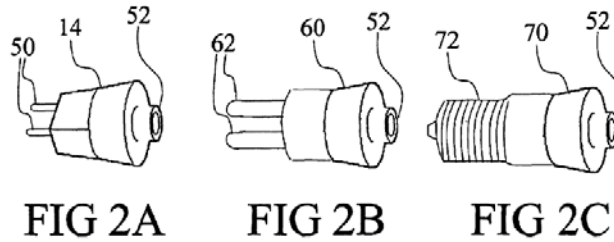


Figure 1 illustrates an embodiment of the lamp disclosed in Stimac, including optics module 12 and electronics module 14. *Id.* at 5:12–14. Optics module 12 includes LED module 20 and heat sink 22 for removal of heat generated by LEDs 16 from LED module 20. *Id.* at 5:51–53. Electronics module 14 includes a suitable electrical connector, such as GU-type two-prong connector 50, to connect with a selected power supply.

Id. at 6:43–53. Figure 2, reproduced below, illustrates different types of electrical connectors that can be used with Stimac’s lamp:



As shown in Figure 2, Stimac’s lamp may use, for example, GU-10 connector 50 (Fig. 2A) for connecting to a 240V AC, 50 Hz power supply, GU-5.3 connector 62 (Fig. 2B) for connecting to a 12V DC power supply, or Edison-type threaded connector 72 (Fig. 2C). *Id.* at 6:58–67.

3. Analysis

With respect to independent claim 1, Petitioner contends that DeCicco discloses a downlight module (i.e., a recessed lighting fixture in a ceiling) and the use of two torsion springs (called torque springs in DeCicco) in a recessed lighting fixture. Pet. 43–44 (citing Ex. 1006, 1:6–8, 1:28–32, Fig. 6). For the claimed LED package and heat sink coupled to the LED package, Petitioner relies on Stimac’s teachings of an LED module arranged on a heat sink. *Id.* (citing Ex. 1007, at [57], 3:25–26, 5:51–55, Fig. 1).

Petitioner contends Stimac and other references not relied upon in the asserted obviousness ground provide a motivation to combine Stimac with DeCicco because they recognize the advantages of using LEDs as a light source. Pet. 41 (citing Ex. 1007, 2:42–45; Ex. 1010, 1:13–29; Ex. 1011, 2:24–31; Ex. 1012, 1:18–32). Petitioner further argues that a person of ordinary skill in the art would have been motivated to substitute LEDs for incandescent or fluorescent light sources in DeCicco’s fixture that used torsion springs and that such a modification would have been a “simple

substitution” to obtain predictable, better results. *Id.* (citing Ex. 1014 ¶¶ 104–105). In Petitioner’s view, “[t]his is particularly true in light of Stimac’s teachings of LED light source adapters including either a screw-plug end for converting from incandescent light to LEDs or a two-prong plug for converting from fluorescent light to LEDs.” *Id.* Petitioner further asserts that the proposed modification of DeCicco in view of Stimac would not produce unexpected results. *Id.* at 41–42 (citing Ex. 1014 ¶ 106).

In addition, Petitioner submits that “torsion springs were known to work equally well with the hardware associated with different light sources, including incandescent and fluorescent lights and associated electrical components,” e.g., a ballast or transformer used in a fluorescent light. *Id.* at 42 (citing Ex. 1014 ¶ 107). Because a ballast or transformer is “very similar in structure and function” to a driver in LED modules, Petitioner alleges that a person of ordinary skill “would have concluded that LEDs and their associated hardware, including the driver, also *could be* inserted into and supported within with [sic] those housings by the same torsion springs.” *Id.* (emphasis added) (citing Ex. 1014 ¶ 108).

We agree with Patent Owner that Petitioner has not articulated a sufficient rationale for modifying DeCicco with Stimac in the manner asserted in the Petition. To begin, there are flaws in Petitioner’s argument that using LEDs as taught by Stimac in the recessed lighting fixture of DeCicco would have been a “simple substitution.” Petitioner asserts that a person skilled in the art would have substituted LEDs for incandescent or fluorescent light sources in DeCicco’s fixture that used torsion springs. Pet. 41. DeCicco, however, only describes the use of torsion springs in a fixture with a fluorescent light source. As discussed above, Figure 6 of

DeCicco, the embodiment Petitioner relies on in its obviousness analysis, discloses a recessed lighting fixture having a fluorescent light source and held in place with torsion springs. Ex. 1006, 1:66–2:2, 4:3–56, Fig. 6. In a different embodiment, DeCicco discloses a recessed lighting fixture that has an incandescent light source and is held in place in a different manner using coil springs instead of torsion springs. *Id.* at 2:13–28, 3:29–38, Fig. 1, Fig. 5. In view of these separate embodiments, Petitioner does not explain adequately how DeCicco describes the use of torsion springs on a fixture for an incandescent light source.

Petitioner’s “simple substitution” argument also states that Stimac teaches adapters for converting from incandescent light to LEDs and for converting from fluorescent light to LEDs. Pet. 41. As Patent Owner points out, however, Stimac does not disclose a connector for converting from fluorescent light to LEDs. See Prelim. Resp. 38–39. Rather, Stimac illustrates connectors for incandescent lamps in Figure 2A (two-prong connector 50 for European bi-pin incandescent lamps) and Figure 2C (Edison-type connector 72 for United States incandescent lamps) and a connector for halogen lamps in Figure 2B (bi-pin connector 62 for halogen MR (i.e., mirrored reflector) lamps). Ex. 1007, 1:63–2:3, 6:43–67, Figs. 2A–2C. Indeed, as Patent Owner notes, Stimac makes no mention of fluorescent lamps at all. See Prelim. Resp. 39 (citing Ex. 1007).

In view of these defects in Petitioner’s argument, Petitioner has not made a sufficient showing that modifying DeCicco’s recessed lighting fixture held in place with torsion springs to include LEDs and a heat sink as taught in Stimac would have been a “simple substitution.” This is particularly true because DeCicco only teaches the use of torsion springs

with a fluorescent light fixture that also includes a large reflector, whereas Stimac does not teach using an LED module in a light fixture configured to receive a fluorescent lamp. Patent Owner argues persuasively that to the extent a person having ordinary skill in the art would have considered combining the teachings of Stimac with those of DeCicco, she would have inserted Stimac's LED module with an Edison-type connector into DeCicco's incandescent light fixture, as shown in Figure 1 of DeCicco, which does not include torsion springs. *See* Prelim. Resp. 36–37. In other words, Petitioner has not cited any disclosure in Stimac that would have suggested to a person skilled the art replacing a fluorescent lamp with an LED module or any disclosure in DeCicco that would have suggested using torsion springs with anything other than a fluorescent lighting fixture.

We also are unpersuaded by Petitioner's argument relying on the assertion by Mr. Smith that "torsion springs were known to work equally well with the hardware associated with different light sources." *See* Pet. 42 (citing Ex. 1014 ¶ 107). Petitioner and Mr. Smith conclude that a person of ordinary skill in the art would have recognized that LEDs and their associated hardware "could be" inserted into a housing using torsion springs. Pet. 42; Ex. 1014 ¶ 108. But the fact that one of ordinary skill in the art "could have" combined the teachings of the prior art references is not sufficient to establish that a person of ordinary skill in the art would have had a reason to do so. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418 (2007) (explaining that an obviousness analysis must "determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue").

For at least these reasons, we agree with Patent Owner that Petitioner has not sufficiently articulated a rationale for combining DeCicco and Stimac in the manner asserted in the Petition. Thus, we determine the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that claims 1, 2, 4, 5, and 13–16 would have been obvious over the combination of DeCicco and Stimac.

E. Asserted Obviousness over Lumodan and DeCicco

Petitioner contends that claims 1, 2, 4, 5, 13–16, 19, and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Lumodan and DeCicco. Pet. 48–55. Relying on the testimony of Mr. Smith, Petitioner alleges that the combined references teach or suggest all of the limitations of the challenged claims and that a person having ordinary skill in the art would have combined the references in the manner asserted. *Id.* (citing, e.g., Ex. 1014 ¶¶ 112–118). In response, Patent Owner contends that (1) the Petition does not sufficiently explain the proposed combination of Lumodan and Stimac, and (2) the combination of references does not teach or suggest certain limitations. Prelim. Resp. 48–61.

1. Overview of Lumodan

Lumodan discloses a lamp assembly that may be built into a ceiling, wall, or floor, or included in a housing that may be fastened to a ceiling, wall, floor, or cupboard, or the like. Ex. 1008 ¶ 1. The housing may include fasteners to hold the lamp in a desired position (e.g., springs with extending parts for engaging the backside of a ceiling plate). *Id.* ¶¶ 33, 45. The lamp assembly includes an LED mounted on a printed circuit board. *Id.* ¶¶ 5, 7–8. The LED may be included in a housing, which may also include a heat sink

mounted to the printed circuit board. *Id.* ¶¶ 12–13. The LED may be placed in a reflector structure. *Id.* ¶ 15.

2. Analysis

Petitioner relies on Lumodan for teaching all of the limitations of independent claims 1 and 13, except the “torsion springs” in claim 1 and the “means for mounting the heat sink and LED package within a recessed light fixture” in claim 13. Pet. 50–54. For those limitations, Petitioner relies on the torsion springs in the Figure 6 embodiment of DeCicco. *Id.* at 51–53. Petitioner contends a person of ordinary skill in the art would have used torsion springs as taught in DeCicco to mount Lumodan’s lamp in an existing downlight housing. *Id.* at 49.

The first limitation in the body of each of claims 1 and 13 is “a light emitting diode (“LED”) package comprising a plurality of LEDs mounted to a common substrate.” Petitioner contends that Lumodan discloses a plurality of LEDs, referring to an embodiment of a light source in Lumodan comprising “light emitting diode assemblies 34, 36, 38.” *Id.* at 51 (quoting Ex. 1008 ¶ 54). Petitioner contends that Lumodan also discloses LEDs mounted to a common substrate, referring to “a star shaped circuit board 26 whereon a light emitting diode is mounted.” *Id.* (quoting Ex. 1008 ¶ 41). Relying on the testimony of its declarant, Mr. Smith, Petitioner argues that a person having ordinary skill in the art would have understood that “a circuit board is [a] common substrate because a substrate is a substance or layer that underlies something, and a common example of a substrate for LEDs is a circuit board.” *Id.* (citing Ex. 1014 ¶ 81).

We agree with Patent Owner that Petitioner fails to show that Lumodan teaches an LED package comprising a plurality of LEDs mounted

to a common substrate. *See* Prelim. Resp. 54–56. The Petition identifies printed circuit board 26 as the claimed “common substrate.” Pet. 51.

Printed circuit board 26, however, is part of an embodiment in which the light source is a single LED, not a plurality of LEDs. Ex. 1008 ¶ 41 (“[T]he light source is constituted by a star shaped circuit board 26 whereon a light emitting diode is mounted.”), Fig. 3a. As Patent Owner notes, each of LED assemblies 34, 36, and 38, relied on by Petitioner as the claimed “plurality of LEDs,” is mounted on its own printed circuit board—40’, 40’’, or 40’’’.

Id. ¶ 51 (“The alternative light source comprises 3 light emitting diode assemblies 34, 36, 38 mounted on printed circuit boards 40’, 40’’, 40’’’.”); *see* Prelim. Resp. 55. There is no teaching in Lumodan that any LED assembly includes more than one LED (nor does Petitioner argue that there is), and thus no teaching that any printed circuit board has a plurality of LEDs mounted on it. *See* Prelim. Resp. 56. Therefore, the Petition does not show that Lumodan teaches a printed circuit board as a common substrate on which a plurality of LEDs are mounted, as required by claims 1 and 13.

For at least this reason, Petitioner has not shown sufficiently that the combination of references teaches all limitations of the challenged claims. Accordingly, we determine the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that claims 1, 2, 4, 5, 13–16, 19, and 20 would have been obvious over the combination of Lumodan and DeCicco.

F. Asserted Obviousness over Lumodan, DeCicco, and Mondloch

Petitioner contends that claims 19 and 20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Lumodan, DeCicco, and Mondloch. Pet. 56–60. Petitioner does not rely on Mondloch for teaching a plurality of

LEDs mounted to a common substrate, and therefore Mondloch does not cure the deficiency discussed above in the asserted ground based on Lumodan and DeCicco. Accordingly, we determine the information presented does not show a reasonable likelihood that Petitioner would prevail in establishing that claims 19 and 20 would have been obvious over the combination of Lumodan, DeCicco, and Mondloch.

III. CONCLUSION

For the foregoing reasons, we determine the information presented does not establish a reasonable likelihood that Petitioner would prevail in showing that claims 1, 2, 4, 5, 13–16, 19, and 20 of the '479 patent are unpatentable on the grounds asserted in the Petition.

IV. ORDER

Accordingly, it is:

ORDERED that the Petition is denied, and no *inter partes* review is instituted.

IPR2017-01858
Patent 8,348,479 B2

PETITIONER:

Lester Savit
John Lord
Paul Y. Feng
ONE LLP
lsavit@onellp.com
jlord@onellp.com
pfeng@onellp.com

PATENT OWNER:

Geoffrey K. Gavin
Joshua R. Nightingale
Calvin P. Griffith
JONES DAY
ggavin@jonesday.com
jrnightingale@jonesday.com
cpgriffith@jonesday.com