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Please find below and/or attached an Office communication concerning this application or proceeding.

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Opinion for the Board filed by Administrative Patent Judge HEANEY.
Opinion Dissenting-in-Part and Concurring-in-Part filed by Administrative Patent Judge CASHION.

HEANEY, Administrative Patent Judge.
DECISION ON APPEAL

Appellant requests review pursuant to 35 U.S.C. § 134(a) from the Examiner’s Final Rejection of claims 1, 7, 8, 11, 25–29, and 32–39 of Application 13/124,379. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

BACKGROUND

The subject matter on appeal relates to a display device for an automotive vehicle, and a method of manufacturing such a display device. Appeal Br. 2.

Claim 1 is illustrative of the subject matter on appeal and is reproduced below:

1. A display device comprising a display element, the display element being backlit by a preassembled back-lighting module, wherein the preassembled back-lighting module comprises:

   a frame formed from a material comprising magnesium;
   
   a light source positioned on a lateral side of a display area of the display element, wherein the light source is in direct contact and direct thermal contact with the frame;
   
   a lightguide configured to distribute light emitted by the light source substantially uniformly over the display area;


2 Appellant identifies the real party in interest as Visteon Corporation. Appeal Br. 2.
an optical filtering device configured to enable the preassembled back-lighting module to be used with various display element types; and

a light scattering device configured to enhance uniformity of the light distributed over the display area;

wherein the display device is formed by associating the preassembled back-lighting module with the display element; and

wherein the light source comprises a light-emitting diode (LED), and the LED is directly coupled to the frame by an adhesive.

Appeal Br. 18. Independent claim 26 is directed to a method of manufacturing a display device, having a first step of preassembling a back-lighting module comprising the same components as the back-lighting module of claim 1, and a second step of associating the preassembled back-lighting module with a display element. Id. at 19. Independent claim 33 is directed to a display device having a preassembled back-lighting module comprising some of the components of the back-lighting module of claim 1, but not including an optical filtering device or light scattering device. Id. at 20.

According to the Specification, the advantage of placing the light source, preferably an LED, in direct contact with the frame is that heat transfer between the light source and the frame is greatly improved. Spec. ¶ 8–9.
THE REJECTIONS

The Examiner maintains the following rejections on appeal:

1. Claims 1, 7, 8, 11, 25–29, and 32–39 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Final Act. 4

2. Claims 1, 7, 8, and 25 are rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over the combination of Suzuki,\(^3\) Luettgen,\(^4\) Morbieu,\(^5\) and Ohta.\(^6\) *Id.* at 5.

3. Claim 11 is rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over the combination of Suzuki, Luettgen, Morbieu, Ohta, and Choi.\(^7\) *Id.* at 9.

4. Claims 26–28 and 32 are rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over the combination of Hsu,\(^8\) Suzuki, Luettgen, Morbieu, and Ohta. *Id.* at 10.

5. Claim 29 is rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over the combination of Hsu, Suzuki, Luettgen, Morbieu, Ohta, and Choi. *Id.* at 14.

6. Claims 33, 34, 36, 37, and 39 are rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over the combination of Suzuki, Luettgen, and Ohta. *Id.* at 15.

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7. Claim 35 is rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over the combination of Suzuki, Luettgen, Ohta, and Choi. *Id.* at 17.

8. Claim 38 is rejected under pre-AIA 35 U.S.C. § 103(a) as unpatentable over the combination of Suzuki, Luettgen, Ohta, and Morbieu. *Id.*

**DISCUSSION**

§ 112 Enablement Rejection

To be enabling, the specification of a patent must teach those skilled in the art how to make and use the full scope of the claimed invention without “undue experimentation.” *Genentech, Inc. v. Novo Nordisk, A/S*, 108 F.3d 1361, 1365 (Fed. Cir. 1997) (quoting *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993)). “‘The scope of the claims must be less than or equal to the scope of the enablement’ to ‘ensure[] that the public knowledge is enriched by the patent specification to a degree at least commensurate with the scope of the claims.’” *Sitrick v. Dreamworks, LLC*, 516 F.3d 993, 999 (Fed. Cir. 2008) (quoting *Nat’l Recovery Techs., Inc. v. Magnetic Separation Sys., Inc.*, 166 F.3d 1190, 1195–96 (Fed. Cir. 1999)) (alteration in original); see also *In re Fisher*, 427 F.2d 833, 839 (CCPA 1970) (“[T]he scope of the claims must bear a reasonable correlation to the scope of enablement provided by the specification to persons of ordinary skill in the art.”).

When rejecting a claim under the enablement requirement of § 112, the Examiner bears an initial burden of setting forth a reasonable explanation as to why the scope of protection provided by that claim is not adequately enabled by the description of the invention provided in the specification of
the application; this includes providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement. *In re Wright*, 999 F.2d 1557, 1561–62 (Fed. Cir. 1993). If the Examiner meets this burden, the burden then shifts to the Applicant to provide suitable proofs indicating that the specification is indeed enabling. *Id.* *(citing In re Marzocchi, 439 F.2d 220, 223–24 (CCPA 1971)).*

The Examiner rejects all of the appealed claims as failing to comply with the enablement requirement because the limitation “the LED is directly coupled to the frame” in each of the independent claims renders the scope of the claim unclear. Final Act. ¶ 9; *see also* Ans. 3 (“[T]here is inadequate written description in order to provide enablement of the limitation ‘the LED is directly coupled to the frame.’”). Specifically, the Examiner finds it is not clear how the LED is oriented and constructed to allow direct contact with the frame, and in Figure 2, “the flexible circuit appears to be directly contacting the frame, with the LEDs directing contacting the flexible circuit. Therefore, it is not clear how the backlighting of the display may be implemented with the LED attached directly to the frame.” Final Act. ¶ 13. The Examiner concludes “it is not clear how the backlighting of the display may be implemented with the LED attached directly to the frame.” *Id.*

Appellant argues as follows:

*[O]ne skilled in the art would understand how to connect one surface/side of the LED to a flexible printed circuit and to couple another surface/side of the LED to a frame, while a further side of the LED may emit light. By way of example only, a bottom side of an LED may be connected to a flexible printed circuit, a left side of the LED may be directly coupled to a frame, and light may be emitted from a right side of the LED (e.g., side-emitting LED).*
Appeal Br. 8.

In the Reply Brief, Appellant further argues that the Specification includes disclosure, in addition to Figure 2, that the light source preferably makes direct thermal contact with the frame, especially by way of an adhesive. Reply Br. 3 (citing Spec. ¶¶ 8–9). Appellant further argues that because the light source is an LED, and because the light source is in direct contact with the frame, therefore the LED is in direct contact with the frame. Id.

Appellant’s arguments are persuasive of reversible error in the rejection. The Examiner has not met the burden of providing a reasonable explanation why the Specification would not have enabled a person of ordinary skill in the art to implement an LED directly coupled to the frame of a backlight device. The Examiner’s conclusion that it is not clear how an LED would be attached directly to the frame is not supported by sufficient reasoning, and does not take into consideration whether undue experimentation would have been necessary. In re Wands, 858 F.2d 731, 737 (Fed. Cir. 1988). Accordingly, we reverse the rejection of claims 1, 7, 8, 11, 25–29, and 32–39 for lack of enablement.

§ 103 Rejections

Each of Rejections 2–8 is based in part on the Examiner’s finding that Ohta teaches an LED light source directly coupled to the frame of a backlight device by an adhesive. Final Act. 8, 13, 16. The Examiner finds that Ohta’s LED unit 20 corresponds to the LED recited in each of the independent claims 1, 26, and 33. Id.; Ans. 3. In addressing this finding for Rejections 2–8, Appellant argues that Ohta does not teach this recitation
Accordingly, we limit our discussion to Appellant’s argument against the Examiner’s finding as to Ohta.

Appellant argues that Ohta does not teach the LED is directly coupled to the frame by an adhesive, but rather discloses a board of an LED unit fixed to a frame. Appeal Br. 10 (citing Ohta ¶ 36, Fig. 2). Appellant argues that Ohta considers its LEDs 22 and the board 21 to which LEDs 22 are connected as separate elements. Id. at 11 (citing Ohta ¶ 8). Appellant further argues that a person of ordinary skill in the art would consider the LED recited in the independent claims to correspond to one of the LEDs 22 of Ohta, not to LED unit 20, and that the Examiner provides no objective evidence why the LED unit 20 corresponds to the claimed LED. Reply Br. 4.

Appellant’s argument is not persuasive of reversible error. Ohta’s disclosure in Figure 2 and paragraph 36 of LED unit 20 fixed to the sidewall of frame 14 supports the Examiner’s finding that Ohta’s LED unit 20 corresponds to the LED recited in the claims. Although Ohta expressly describes LEDs 22 and board 21 to which LEDs 22 are connected as separate elements, we do not consider this disclosure to be dispositive in an obviousness determination. The Examiner’s correspondence of Ohta’s LED unit 20 (including board 21) to the claimed LED is consistent with a reasonable interpretation of Ohta by a person of ordinary skill in the art and Appellant does not explain why a person of ordinary skill in the art would not have understood Ohta to have an LED directly coupled to its frame. On this record, we discern no basis to reject the Examiner’s relevant findings. Accordingly, we affirm each of Rejections 2–8.
SUMMARY

We reverse the rejection of claims 1, 7, 8, 11, 25–29, and 32–39 under 35 U.S.C. § 112, first paragraph.

We affirm the rejections of claims 1, 7, 8, 11, 25–29, and 32–39 as unpatentable under 35 U.S.C. § 103(a).

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1). See 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

I concur with the reversal of the appealed rejection of claims 1, 7, 8, 11, 25–29, and 32–39 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement for the reasons given above.

However, I respectfully dissent from the decision of my colleagues affirming the rejections of claims 1, 7, 8, 11, 25–29, and 32–39 under 35 U.S.C. § 103(a) (Rejections 2–8). In my opinion, Appellant has identified a reversible error in the Examiner’s finding that Ohta teaches directly coupling an LED to a frame as required by the subject matter of independent claim 1. Therefore, I would reverse the Examiner’s prior art rejections. My reasoning follows.

Claim 1 is directed to a display device having a “light source comprising a light-emitting diode (LED), and the LED is directly coupled to the frame by an adhesive.”
There is no dispute that Ohta discloses an LED \textit{unit} 20 directly coupled to a frame 14 by an adhesive. Appeal Br. 10; Ans. 3; Ohta Figure 2, ¶ 36. Specifically, Ohta discloses LED unit 20 as comprising a board 21 and LED 22. Ohta Figure 2, ¶ 36. Ohta also discloses that board 21 of LED unit 20 is directly coupled to frame 14. \textit{Id.} The Examiner finds Ohta’s noted disclosure meets the disputed claim limitation because “the LED unit of Ohta et al. corresponds to the LED of the instant application.” Ans. 3.

Appellant argues that Ohta does not teach or suggest an LED directly coupled to the frame by an adhesive, as claimed. Appeal Br. 10. Appellant contends that Ohta instead teaches fixing the board 21 of the LED unit 20, and not the LED 22, directly to the frame 14 with an adhesive. Appeal Br. 10; Ohta ¶ 36.

I agree with Appellant that the Examiner has not met the burden to establish a prima facie case of obviousness.

The dispositive issue for this rejection is whether the claimed language “LED is directly coupled to the frame by an adhesive” encompasses Ohta’s direct coupling of an LED 20 to a frame 14. Thus, the review of this ground of rejection of the appealed claims necessarily entails the interpretation of the scope of the appealed claims, giving the broadest reasonable interpretation to the terms thereof consistent with the written description provided in Appellant’s Specification as it would be interpreted by one of ordinary skill in this art. \textit{See In re Morris}, 127 F.3d 1048, 1054 (Fed. Cir. 1997). Terms in the appealed claims must be given their broadest reasonable interpretation including the ordinary meaning unless another meaning is intended by Appellant as established in the written description of their Specification. \textit{See, e.g., In re Zletz}, 893 F.2d 319, 321–22 (Fed. Cir.)
When the Specification does not contain an express definition, a reasonable, supported interpretation of the appealed claims that differs from that urged by applicants can be used to determine the patentability of the claims. *Morris*, 127 F.3d at 1055–56 (“Absent an express definition in their specification, the fact that appellants can point to definitions or usages that conform to their interpretation does not make the PTO’s definition unreasonable when the PTO can point to other sources that support its interpretation.”). Indeed, “[i]t is the applicants’ burden to precisely define the invention, not the PTO’s. *See* 35 U.S.C. § 112 ¶ 2 [statute omitted].” *Morris*, 127 F.3d at 1055–56.

The Specification discloses that placing a light source in direct contact with the frame by way of an adhesive improves advantageously the heat transfer between the back-lighting light source and the frame. Spec. ¶ 8. The Specification also discloses that the light source is a light-emitting diode (LED) that is connected to a flexible printed circuit. *Id.* ¶ 9. In other words, the Specification distinguishes between a light source (LED) and a unit comprising an LED and a support (akin to Ohta’s LED unit 20). This description, together with the description of the Application’s Figure 2 (*id.* ¶ 27), would have reasonably led one skilled in the art to interpret the disputed language of claim 1 as requiring the LED (light source) to be directly coupled to the frame with an adhesive.

In view of this interpretation, I agree with Appellant that the Examiner has not explained adequately why Ohta’s LED unit 20 is considered to correspond to the claimed LED. *Reply Br. 4.* The Examiner has also not directed us to any portion of Ohta that teaches or suggests coupling an LED directly to a frame.
Based on this, I would also not sustain the Examiner’s prior art rejections.