

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

BX LED LLC,

Plaintiff,

v.

WALMART INC.,

Defendant.

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Case No. 6:22-cv-00445-ADA-DTG

JURY DEMANDED

PLAINTIFF’S RESPONSIVE CLAIM CONSTRUCTION BRIEF

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Exhibit	Description
A	Expert Declaration Of John K. Roberts (“Roberts Delaration”)
B	U.S. Patent No. 6,869,812 (“the ’812 Patent”)
C	U.S. Patent No. 7,901,109 (“the ’109 Patent”)
D	U.S. Patent No. 7,973,465 (“the ’465 Patent”)
E	U.S. Patent No. 8,203,260 (“the ’260 Patent”)
F	U.S. Patent No. 8,567,988 (“the ’988 Patent”)
G	U.S. Patent No. 8,998,433 (“the ’433 Patent”)
H	U.S. Patent No. 10,966,300 (“the ’300 Patent”)
I	August 24, 2010 “Office Action Response”
J	May 28, 2013 “Office Action Response”
K	February 18, 2011 “Notice of Allowability”
L	Duty Cycle (“Wikipedia”)
M	Duty Cycle (“Academic Dictionaries and Encyclopedias”)
N	What is PWM: Pulse Width Modulation
O	Optical Filters (“Edmund Optics”)
P	“Why PCB Power Rails Need to be Low Impedance”
Q	Rail “PCMag Encyclopedia”
R	“Standard Cells in ASIC Design Standard Cells in VLSI”
S	Photoluminescence “Britannica”
T	Power Rail “Science Direct”
U	“What is Thermal Resistance – Thermal Resistivity – Definition,” Nick Connor (2019)

VII. U.S. Patent No. 8,567,988**A. “efficient thermal path” (Claim 1)**

Term	BX LED Construction	Walmart Construction
“efficient thermal path” (Claim 1)	Plain and ordinary meaning – no need for construction.	Indefinite
Proposed by Walmart	Alternatively, “the path for heat dissipation created by mounting an LED directly to a substrate with high thermal conductivity without intervening insulating materials”	

Walmart argues that this term is indefinite because the word “efficient” is not specifically defined in the specification and that a POSITA would find it “unclear when the ‘thermal path’ starts being ‘efficient’ and when it stops being ‘efficient.’” Opening Brief, Dkt. 23 at 14. This is effectively an argument that “efficient” is an indefinite term of degree.

Walmart’s argument is not supported by caselaw. The term is far from analogous to the purely subjective terms of degree that the Federal Circuit has invalidated. *E.g.*, *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1347-50 (Fed. Cir. 2022) (collecting indefinite terms-of-degree like “aesthetically pleasing” and “unobtrusive manner”). Rather, the term provides definite boundaries—albeit broad ones. “But a claim is not indefinite just because it is broad.” *Id.* at 1347.

Even if “efficient” and “thermal path” were terms of degree, which they are not, an “efficient thermal path” is adequately described in the specification of the ’988 Patent. *See* ’988 at 1:44-40; 4:44-59 (discussing an “efficient thermal path” allowing heat to pass directly through the substrate without the ceramic substrate); *see also* Ex. A, “Roberts Declaration” at ¶¶ 69-71. Conversely, the specification reasonably informs a POSITA of what falls outside of an “efficient thermal path.” That is, where there is a dielectric insulator between the LEDs the substrate does

not create an efficient thermal path. *Id.* at 71 (citing ‘988 Patent at 4:54-59). This reasonably informs a POSITA the bounds of the claim term and is consistent with a POSITA’s general understanding of the phrase as distinguishing between high and low thermal resistance created by various materials. Ex. A, “Roberts Declaration” at ¶¶ 69-71; *see also, e.g., Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1349 (Fed. Cir. 2022) (holding that the terms “resilient” and “pliable” were not indefinite because “[t]he intrinsic record provides objective boundaries by which a skilled artisan could determine the scope of the claims.”).

Moreover, Walmart’s reliance on *Versata Software* case is misplaced because the term-at-issue in that case, “space-constrained display”, was held to be a term of degree and ultimately invalid because the claim term as defined would change scope over time and “fails to provide information about when something is not a space-constrained display.” *Versata Software, Inc. v. Zoho Corp.*, No. A-13-CA-00371-SS, 213 F. Supp. 3d 829, 836-37 (W.D. Tex. 2016). Additionally, the *Versata* court found that patentee “mount[ed] no defense to [the] allegation that the term “space-constrained display” is indefinite. *Id.* No parallel exists here as the intrinsic record alone informs a POSITA “not only what falls inside the scope of the claim term, but also what falls outside of it.” *Id.*

Finally the context of the phrase “efficient thermal path” in Claim 1 contains further limitations that “unambiguously create an efficient thermal path on the basis of well-known principles” such as requiring a “metal substrate” (e.g., a material with high thermal conductivity) and “a plurality of LED chips mounted directly to the reflective surface of the metal substrate” (e.g., having no dielectric insulator). Ex. A, “Roberts Declaration” at ¶ 72. A POSITA would further be able to measure the bounds of this limitation within the context of the limitation because the LED chips would unacceptably heat in a configuration where a poor thermally conductive

material was inserted between the chip and the substrate; a precise problem rectified by the claimed invention. *Id.*

Alternatively, should the Court decide that it must construe the term, it should be construed as “the path for heat dissipation created by mounting an LED directly to a substrate with high thermal conductivity without intervening insulating materials” as this description is consistent with the patent’s claims, specification, prosecution history, and a POSITA’s general understanding of the term.

B. “electrical path formed by connecting the LED chips in a chip to chip fashion” (Claim 1)

Term	BX LED Construction	Walmart Construction
“an electrical path formed by connecting the LED chips in a chip to chip fashion” (Claim 1) Proposed by Walmart	Plain and ordinary meaning	“electrically connecting one LED chip directly to another LED chip”

Walmart argues that the ’988 Patent term “an **electrical path** formed by connecting the LED chips in a chip to chip fashion” is the equivalent to Walmart’s overly broad and incorrect construction “**electrically connecting**” the LED chips “**directly to**” each other. However, a POSITA in the field of solid-state lighting would readily understand the electrical path formed by connecting chips in a chip to chip fashion by its plain and ordinary meaning, and as supported by the specification. Ex. A, “Roberts Declaration” at ¶ 74. (“Since the claim is about an electrical path, “chip to chip” would simply indicate electrical directness, in other words an absence of intervening elements having a significant impact on electrical conduction.”).

Walmart argues that the patentee disavowed any scope for “an electrical path formed....” Opening Brief, Dkt. 23 at 17. The patentee did not disavow claim scope, and certainly not

unambiguously. First, in overcoming the examiner’s rejection of *Yamada*, the patentee did not make any narrowing amendments. Second, patentee did not distinguish *Yamada* for what *Yamada* disclosed (i.e., having a chip-to-substrate connection), rather *Yamada* was distinguished for lacking (at least) a chip-to-chip connection as provided in Claim 1. Neither Walmart nor its expert dispute this. Disavowal requires that “the specification or prosecution history make clear that the invention does not include a particular feature . . .” *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1372 (Fed. Cir. 2014) (cleaned up). Thus, Walmart’s construction is improper as “forming an electrical path” is fully distinct from electrically connecting LEDs.

Moreover, the patentee highlighted two disclosures from *Yamada* that have no bearing on Walmart’s argument that the claim language be restricted to “electrically connecting...directly”. Ex. J, May 28, 2013 “Office Action Response” at 5-6. The patentee noted that “*Yamada* discloses that each LED chip is connected to the metal substrate [] through wires.” Ex. J, May 28, 2013 “Office Action Response” at 4. Furthermore, that *Yamada* “[taught] that the LED chips 2 are die-bonded to the metal substrate [] and mounted by wire bonding the metal wires [].” Ex. J, May 28, 2013 “Office Action Response” at 4. Finally, the patentee noted that *Yamada* had both electrical path and thermal paths in a single direction. Ex. J, May 28, 2013 “Office Action Response” at 6. As the patentee concluded, none of these disclose a chip to chip connection, but rather, that the chips were mounted and connected to the substrate through metal wires. *See* Ex. A, “Roberts Declaration” at ¶ 77. Several potential configurations for a chip to chip connection would be apparent to a POSITA from the disclosure that are beyond the wiring to substrate configuration of *Yamada*. *See Id.* at ¶¶ 78-79.

Furthermore, Walmart’s construction simply eliminates the “electrical path” language from the claims outright and replaces it with “electric connection”. As in common parlance, a “path” is

not a “connection” and a “path formed” through connection is not the same as a connection itself. However, Walmart does not argue that patentee acted as his own lexicographer to modify these claim definitions. Nor did Defendant’s expert provide an opinion that would support its construction. For these reasons alone, Defendant’s arguments should be rejected. *See Golden Bridge Tech.*, 758 F.3d at 1365 (requiring application of a term’s plain and ordinary meaning absent lexicography or disavowal).

VIII. U.S. PATENT NO. 8,998,433

A. “configured to irradiate a wavelength conversion component with excitation energy” (Claim 1)

Term	BX LED Construction	Walmart Construction
“configured to irradiate a wavelength conversion component with excitation energy” (Claim 1) Proposed by Walmart	Plain and ordinary meaning.	“designed to direct light through a wavelength conversion component”

The parties’ dispute centers on Walmart’s assertion that the term “excitation energy” should be restricted to “light”. Walmart’s argument falters because it does not give credence to the well-understood meaning of this term, even in view of the intrinsic evidence, and it has no basis for narrowing the definition of the term. Walmart has also baselessly transformed the claim language “configured to irradiate” to “configured to direct” without support or discussion.

Walmart argues that the term “*configured to irradiate ... with excitation energy*” should be construed as “*designed to direct light...*”. Opening Brief, Dkt. No. 23 at 19. Walmart asserts that this limiting construction is correct because the only “excitation energy” discussed in the specification is light. *Id* at 20. However, Walmart does not cite to any intrinsic evidence from the specification or otherwise that supports the conclusion that the patentee acted as his own

Dated: February 17, 2023

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CERTIFICATE OF SERVICE

The undersigned counsel for Plaintiff hereby certifies that a copy of the foregoing document was served on counsel of record on February 17, 2023 by the Court's ECF system.

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