NOTE: This disposition is nonprecedential.

United States Court of Appeals for the Federal Circuit

GE LIGHTING SOLUTIONS, LLC,
Plaintiff-Appellant

v.

LIGHTS OF AMERICA, INC., LIGHTING SCIENCE GROUP CORPORATION, FEIT ELECTRIC COMPANY, INC., MSI, LLC, TECHNICAL CONSUMER PRODUCTS, INC.,
Defendants-Appellees

2015-1979, 2015-1980, 2015-1981, 2015-1982, 2015-2044

Appeals from the United States District Court for the Northern District of Ohio in Nos. 1:12-cv-03131-DAP, 1:12-cv-03132-DAP, 1:12-cv-03134-DAP, 1:12-cv-03136-DAP, 5:12-cv-03127-JRA, Judge Dan Aaron Polster, Judge John R. Adams.

Decided: October 27, 2016

RICHARD L. RAINEY, Covington & Burling LLP, Washington, DC, argued for plaintiff-appellant. Also represented by ROBERT JASON FOWLER, RANGANATH SUDARSHAN.

GARRET A. LEACH, Kirkland & Ellis LLP, Chicago, IL, argued for all defendants-appellees. Appellee Lighting Science Group Corporation also represented by KOURTNEY BALTZER, ERIC DAVID HAYES.

GARY W. SMITH, Posternak Blankstein & Lund LP, Boston, MA, for defendant-appellee Lights of America, Inc.

RYAN DYKAL, Shook, Hardy & Bacon, LLP, Kansas City, MO, for defendant-appellee Feit Electric Company, Inc. Also represented by MARK SCHAFER.

JOSEPH W. BAIN, Shutts & Bowen LLP, West Palm Beach, FL, for defendant-appellee MSI, LLC. Also represented by DANET RODRIGUEZ FIGG.

STACIE RACHEL HARTMAN, Schiff Hardin LLP, Chicago, IL, for defendant-appellee Technical Consumer Products, Inc. Also represented by HENRY BEHNEN, New York, NY.

Before PROST, *Chief Judge,* WALLACH and HUGHES, *Circuit Judges.*

HUGHES, *Circuit Judge*.

GE Lighting Solutions sued Defendants for infringing U.S. Patent Nos. 6,787,999 and 6,799,864—two patents directed to dissipating heat from light emitting diode lamps. The district court correctly found the asserted '864 patent claims indefinite, but erroneously determined that the asserted '999 patent claims are indefinite. Accordingly, we affirm-in-part, reverse-in-part, and remand for further proceedings.

I

This appeal results from the consolidation of several cases arising from the United States District Court for the Northern District of Ohio. One of those cases, *GE Lighting Solutions, LLC v. Technical Consumer Products, Inc.*, Case No. 5:12-cv-3127 (N.D. Ohio) (*GE Lighting I*) was assigned to Judge Adams, while the other cases (collectively, *GE Lighting II*)[1] proceeded before Judge Polster.

After the *GE Lighting I* court construed certain disputed claims, the *GE Lighting II* defendants moved for summary judgment on the grounds that the terms "elongated" and "to heat sink" render the asserted claims indefinite. The *GE Lighting II* court agreed and thus held that the asserted claims are indefinite. Because the *GE Lighting II* indefiniteness findings were entitled to preclusive effect, the *GE Lighting I* court entered judgment against GE. GE appeals both final judgments here.

II

"We review a district court's ultimate determination that a claim is invalid as indefinite under 35 U.S.C. § 112 ¶ 2 de novo, although, as with claim construction, any factual findings by the district court based on extrinsic evidence are reviewed for clear error." *UltimatePointer, L.L.C. v. Nintendo Co.,* 816 F.3d 816, 826 (Fed. Cir. 2016) (footnote omitted).[2] Under *Nautilus, Inc. v. Biosig Instruments, Inc.*, claims are indefinite when "read in light of the specification delineating the patent, and the prose-

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[1] Unless otherwise mentioned, all references here are to *GE Lighting II*.

[2] The patents-in-suit were filed before the adoption of the Leahy-Smith America Invents Act, Pub. L. No. 112–29, § 3, 125 Stat. 284, 285–93 (2011), and so the prior version of § 112 governs. *See Fleming v. Escort, Inc.*, 774 F.3d 1371, 1374 n.1 (Fed. Cir. 2014).

cution history," they "fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." 134 S. Ct. 2120, 2124 (2014). "Even if a claim term's definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope." *Halliburton Energy Servs., Inc. v. M-I LLC,* 514 F.3d 1244, 1251 (Fed. Cir. 2008).

A

GE asserted claims 1, 4–8, 10, 12, and 14–16 of the '864 patent against Defendants. The asserted claims all require a thermally conductive core, which draws heat from the LEDs and dissipates it into the air. Each asserted claim also requires (directly or by dependence) that the thermally conductive core be "elongated." J.A. 28. The district court construed "elongated" to mean "extending in length." J.A. 11, 14–15. The court then found the asserted claims indefinite because a person of ordinary skill in the art could not be reasonably certain of the claim scope in light of the term "elongated." J.A. 22–23. We agree.

"Elongated" is undoubtedly a term of degree. Although "terms of degree are [not] inherently indefinite," the patent must provide "some standard for measuring that degree" such that the claim language "provide[s] enough certainty to one of skill in the art when read in the context of the invention." *Biosig Instruments, Inc. v. Nautilus, Inc.*, 783 F.3d 1374, 1378 (Fed. Cir. 2015), *cert. denied*, 136 S. Ct. 569 (internal quotations and citations omitted); *see also Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370–71 (Fed. Cir. 2014), *cert. denied*, 136 S. Ct. 59 (2015). And so for the asserted claims to be definite, the patent must provide that additional information in the form of "objective boundaries." *Interval Licensing*, 766 F.3d at 1371.

The '864 patent fails to do so. As GE's expert admitted, an ordinarily skilled artisan cannot, without addi-

tional information, differentiate an "elongated" core from a "non-elongated" core. J.A. 2060–62. "Elongated" appears nowhere in the specification, nor, as GE admits, are the core's dimensions otherwise described in text or drawings. *See* J.A. 5588. And in the prosecution history, GE distinguished two prior art references disclosing heat sinks, Reisenauer and Serizawa, as not containing an "elongated" element. *See* J.A. 5894 ("There is nothing in Serizawa's plate shaped heat sink 153 that could be described as 'elongated.'"); *id.* ("Reisenaur [sic] discloses a disk or plate shaped heat sink which cannot be considered to be elongated"); J.A. 5896 ("Applicants find no aspect of element 28 [of the Reisenauer prior art reference] which could conceivably be called 'elongated.'"). But the disk of Reisenauer and the plate in Serizawa both extend in length, which creates an unresolved ambiguity as to how the prior art elements are not considered to be "elongated." A person of ordinary skill thus has no objective means to determine which cores are "elongated" and which are not.

Although "a patentee need not define his invention with mathematical precision," *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1384 (Fed. Cir. 2005) (internal quotations and citations omitted), at best, a skilled artisan would know from the prosecution history only that the elongated cores cannot be "disk or plate shaped" or "generally planar." J.A. 5896. Those general descriptions hardly provide the necessary "objective boundaries" about the length or shape of an "elongated" core. *See Interval Licensing*, 766 F.3d at 1371. Accordingly, we affirm the finding of indefiniteness for the asserted claims of the '864 patent.

B

GE also asserted claims 8, 9, and 12 of the '999 patent, which covers certain LED lamps. The asserted claims cover an LED lamp that contains a heat sink with

an LED module on one side and an electronic module on the other side. *See* '999 patent col. 10 ll. 7–20. The heat sink draws heat from both components, which are "in thermal communication" with the heat sink. *Id.* The heat sink then dissipates heat into the air. *Id.* col. 4 ll. 45–50, col. 8 ll. 55–59. The court construed the noun "heat sink" to carry its plain and ordinary meaning and adopted GE's proposed construction of "to heat sink" as "to receive and dissipate heat from." The district court then found that the phrase "to heat sink" renders the asserted claims indefinite. GE argues that the phrase "to heat sink" does not render the asserted claims of the '999 patent indefinite. We agree.

As the district court recognized, "[t]he claims, specification and prosecution history demonstrate[] that *any amount* of heat transfer is sufficient for 'heat sink (verb).'" J.A. 25–26 (emphasis added). And that is true even if a lamp's design seeks to minimize heat transfer. J.A. 27 ("[A]s [heat sinking] is used in the '999 Patent, an object that is shielded from receiving heat is still 'heat sinking.'"). Thus, whether a component heat sinks another component is an objectively defined fact: either heat is transferred between the components and heat sink, or it is not. Because "to heat sink" creates no "zone of uncertainty," *see Nautilus*, 134 S. Ct. at 2129, we conclude that the asserted claims of the '999 patent are not indefinite.[3]

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[3] Because the asserted claims are not indefinite based on the clear intrinsic evidence, we need not consider any extrinsic evidence. *See Profectus Tech. LLC v. Huawei Techs. Co.*, 823 F.3d 1375, 1380 (Fed. Cir. 2016) ("Extrinsic evidence may not be used to contradict claim meaning that is unambiguous in light of the intrinsic evidence." (internal quotation marks omitted)).

III

Accordingly, we affirm-in-part, reverse-in-part, and remand for proceedings consistent with this opinion.

AFFIRMED-IN-PART, REVERSED-IN-PART, AND REMANDED

No costs.