

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ASML NETHERLANDS B.V., EXCELITAS TECHNOLOGIES CORP.,
and QIOPTIQ PHOTONICS GMBH & CO. KG,
Petitioner,

v.

ENERGETIQ TECHNOLOGY, INC.,
Patent Owner.

Case IPR2015-01279
Patent 7,786,455 B2

Before SALLY C. MEDLEY, JONI Y. CHANG, and
BARBARA A. PARVIS, *Administrative Patent Judges*.

MEDLEY, *Administrative Patent Judge*.

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

I. INTRODUCTION

Petitioner, ASML Netherlands B.V., Excelitas Technologies Corp., and Qioptiq Photonics GmbH & Co. KG, filed a Petition requesting an *inter partes* review of claims 19 and 39–41 of U.S. Patent No. 7,786,455 B2 (Ex. 1001, “the ’455 patent”). Paper 4 (“Pet.”). Patent Owner, Energetiq

Technology, Inc. did not file a Preliminary Response. We have jurisdiction under 35 U.S.C. § 314, which provides that an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . 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.”

For the reasons that follow, we institute an *inter partes* review of claims 19 and 39–41 of the ’455 patent.

A. Related Proceeding

The ’455 patent is involved in the following lawsuit: *Energetiq Tech., Inc. v. ASML Netherlands B.V., et al.*, No. 1:15-cv-10240-LTS (D. Mass.). Pet. 1.

B. The ’455 Patent

The ’455 patent relates to a method and apparatus for producing light. Ex. 1001, Abstract. The apparatus includes a chamber and an ignition source that ionizes a gas within the chamber. *Id.* A laser provides energy to the ionized gas within the chamber to produce a high brightness light. *Id.* The laser can provide a substantially continuous amount of energy to the ionized gas to generate a substantially continuous high brightness light. *Id.*

C. Illustrative Claim

Claims 19 and 39 are independent claims. Claims 40 and 41 directly depend from claim 39. Claims 19 and 39 are reproduced below.

19. A method for producing light, comprising:

ionizing with an ignition source a gas within a chamber comprising a reflective surface; and

providing laser energy to the ionized gas in the chamber to produce a plasma that generates a high brightness light.

Ex. 1001, 18:63–67.

39. A light source, comprising:

a sealed chamber;

an ignition source for ionizing a gas within the chamber;

at least one laser external to the sealed chamber for providing electromagnetic energy; and

a curved reflective surface to receive and reflect at least a portion of the electromagnetic energy toward the ionized gas within the chamber to produce a plasma that generates a high brightness light, the curved reflective surface also receives at least a portion of the high brightness light emitted by the plasma and reflects the high brightness light toward an output of the light source.

Id. at 20:37–48.

D. Asserted Grounds of Unpatentability

Petitioner asserts that claims 19 and 39–41 are unpatentable based on the following grounds:

References	Basis	Challenged Claims
Gärtner ¹	§ 102(b)	19
Gärtner and Ershov ²	§ 103(a)	39–41

II. ANALYSIS

A. Claim Interpretation

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1277–1279 (Fed. Cir. 2015) (“Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,”³ and “the standard was properly adopted by PTO regulation.”). Under the broadest reasonable construction standard, claim terms are given their ordinary and customary meaning, as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007).

¹ French Patent Publication No. FR2554302A1, published May 3, 1985 (Ex. 1004) (“Gärtner”).

² U.S. Patent Publication No. 2006/0192152, published Aug. 31, 2006 (Ex. 1005) (“Ershov”).

³ Leahy-Smith America Invents Act, Pub. L. No. 112–29, 125 Stat. 284 (2011) (“AIA”).

Petitioner proposes constructions for the following claim terms: “light source” (claim 39) and “high brightness light” (claims 19 and 39). Pet. 7–12.

We have reviewed Petitioner’s proposed constructions and determine that they are consistent with the broadest reasonable construction. For purposes of this Decision, we adopt the following claim constructions:

Claim Term	Construction
light source	a source of electromagnetic radiation in the ultraviolet (“UV”), extreme UV, vacuum UV, visible, near infrared, middle infrared, or far infrared regions of the spectrum, having wavelengths within the range of 10 nm to 1,000 μm
high brightness light	light sufficiently bright to be useful for: inspection, testing or measuring properties associated with semiconductor wafers or materials used in the fabrication of wafers, or as a source of illumination in a lithography system used in the fabrication of wafers, microscopy system, photoresist curing systems, or endoscopic tools

B. Principles of Law

Anticipation requires the disclosure in a single prior art reference of each and every element of the claimed invention, arranged as in the claim. *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 1458 (Fed. Cir. 1984).

A patent claim is unpatentable under 35 U.S.C. § 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

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