

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC. and LG ELECTRONICS U.S.A., INC.,
Petitioner,

v.

TOSHIBA SAMSUNG STORAGE TECHNOLOGY KOREA
CORPORATION,
Patent Owner.

Case IPR2016-01678
Patent RE43,106 E

Before KALYAN K. DESHPANDE, MICHAEL R. ZECHER, and
TREVOR M. JEFFERSON, *Administrative Patent Judges*.

DESHPANDE, *Administrative Patent Judge*.

DECISION

Institution of *Inter Partes* Review
35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a)

I. INTRODUCTION

LG Electronics, Inc. and LG Electronics U.S.A., Inc. (collectively, “Petitioner”) filed a Petition requesting an *inter partes* review of claims 38–54 of U.S. Patent No. RE43,106 E (Ex. 1001, “the ’106 patent”). Paper 1 (“Pet.”). Toshiba Samsung Storage Technology Korea Corporation (“Patent Owner”) did not file a Preliminary Response. We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition and associated evidence, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of claims 38–54 of the ’106 patent. Thus, we authorize institution of an *inter partes* review of claims 38–54 of the ’106 patent.

A. Related Proceedings

The parties indicate that the ’106 patent is involved in the following district court cases: (1) *LG Electronics, Inc. v. Toshiba Samsung Storage Technology Korea Corp.*, Case No. 1:12-cv-01063 (LPS) (D. Del.); and (2) *Toshiba Samsung Storage Technology Korea Corp. v. LG Electronics, Inc.*, Case No. 1:15-cv-0691 (LPS) (D. Del.). Pet. 2–3; Paper 7, 1. Case IPR2015-01653 involved the ’106 patent and a Final Decision was issued on February 2, 2017. *LG Elec. v. Toshiba Samsung Storage Tech. Korea Corp.*, Case IPR2015-01653, Paper 43 (PTAB Feb. 2, 2017).

B. The ’106 Patent (Ex. 1001)

The ’106 patent describes an optical pickup apparatus that can compatibly record information on, and read information from, a digital video

disk (DVD) and a recordable compact disk (CD-R) using a holographic lens. Ex. 1001, 1:28–34. The optical pickup apparatus is set forth in Figure 3 of the '106 patent as follows:

FIG. 3

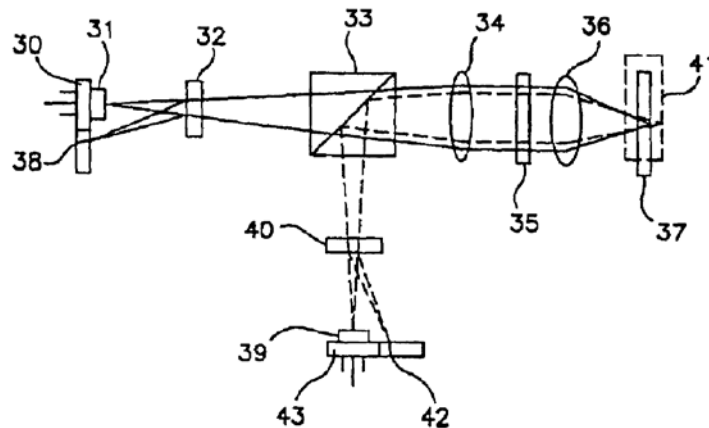


Figure 3 shows an optical system of an optical pickup according to one embodiment. *Id.* at 4:33–34. The optical pickup apparatus includes laser light sources 31 and 39 for emitting light beams having different wavelengths. *Id.* at 4:34–37. Laser light source 31 emits a wavelength of 650 nm, suitable for a DVD. *Id.* at 4:55–59. Laser light source 39 emits a light beam having a 780 nm wavelength suitable for a CD-R. *Id.* at 4:61–67. Holographic beam splitters 32 and 40 alter the optical path of the light beams reflected from information recording surfaces, beam splitter 33 completely transmits or reflects the incident light beam according to wavelength, and collimating lens 34 collimates the incident light beam to be in a parallel form. *Id.* at 4:34–47. Holographic lens 35 diffracts the incident light beam according to its wavelength, and objective lens 36 focuses the light beams on the respective information recording surfaces of optical disks 37 and 41. *Id.*

Holographic lens 35 selectively diffracts the incident light beam in order to prevent the generation of spherical aberration with regard to the light beam's focus on the information recording surfaces of optical disks 37 and 41. *Id.* at 5:6–10. The relationship between holographic lens 35, objective lens 36, and optical disks 37 and 41 is illustrated in Figure 4A of the '106 patent as follows:

FIG. 4A

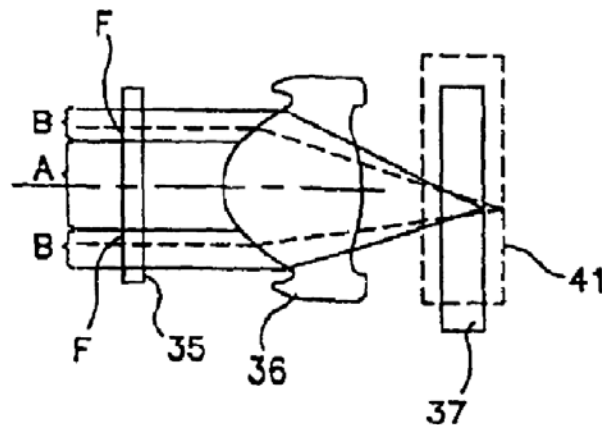


Figure 4A describes that objective lens 36 is partitioned into regions A and B. *Id.* at 5:13–14. Region A is closer to the optical axis of objective lens 36 and has little effect on spherical aberration, whereas region B is farther from the optical axis of objective lens 36 and has a large effect on spherical aberration. *Id.* at 5:14–18. Objective lens 36 is most appropriate for an optical disk having a thin thickness, such as a DVD. *Id.* at 5:18–20. The light beam incident to region A passes through objective lens 36 without any diffraction by holographic ring lens 35 and is focused directly on the disk. *Id.* at 5:33–36. The light beam incident to region F is wavelength-selectively diffracted by holographic ring lens 35 and then proceeds to objective lens 36. *Id.* at 5:36–39.

C. Illustrative Claim

Petitioner challenges claims 38–54 of the '106 patent. Pet. 18–72. Claims 38, 42, 47, and 50 are the only independent claims at issue. Claim 38 is illustrative of the challenged claims and is reproduced below:

38. An objective lens for an optical pickup for selectively diffracting at least one of plurality of light beams, the lens comprising
a first surface which focuses the plurality of light beams;
and
a second surface adjacent to the first surface and having a diffractive pattern to diffract at least one of the plurality of light beams, wherein the diffractive pattern comprises a holographic pattern.

Ex. 1001, 11:12–20 (italics removed).

D. The Alleged Ground of Unpatentability

The information presented in the Petition sets forth a proposed ground of unpatentability of claims 38–54 of the '106 patent under 35 U.S.C. § 103(a) as follows (*see* Pet. 18–72):¹

References	Claims Challenged
APA ² and Katayama ³	38–54

¹ Petitioner supports its challenge with the Declaration of Dr. Mansuripur. Ex. 1012.

² The '106 patent includes Admitted Prior Art (“APA”) describing a conventional optical pickup apparatus and a thin-film type variable aperture. *See* Ex. 1001, 1:58–3:29, Figs. 1, 2. We consider APA as a relevant admission by Toshiba of the background knowledge of a person of ordinary skill in the art at the time of the invention of the '106 patent. For simplicity, we refer to APA and its disclosure generally in our analysis that follows.

³ U.S. Patent No. 5,696,750, issued on December 9, 1997 (Ex. 1002, “Katayama”).

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.