

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT														
NATURE OF CONVEYANCE:	ASSIGNMENT														
CONVEYING PARTY DATA															
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Chikara TANIOKA</td> <td>11/06/2012</td> </tr> <tr> <td>Kazuo WATABE</td> <td>11/07/2012</td> </tr> <tr> <td>Hideaki OKANO</td> <td>11/07/2012</td> </tr> <tr> <td>Akihito OGAWA</td> <td>11/07/2012</td> </tr> <tr> <td>Takashi USUI</td> <td>11/08/2012</td> </tr> <tr> <td>Kazuaki DOI</td> <td>11/07/2012</td> </tr> </tbody> </table>		Name	Execution Date	Chikara TANIOKA	11/06/2012	Kazuo WATABE	11/07/2012	Hideaki OKANO	11/07/2012	Akihito OGAWA	11/07/2012	Takashi USUI	11/08/2012	Kazuaki DOI	11/07/2012
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RECEIVING PARTY DATA															
Name:	KABUSHIKI KAISHA TOSHIBA														
Street Address:	1-1, Shibaura 1-chome, Minato-Ku														
City:	Tokyo														
State/Country:	Japan														
Postal Code:	105-8001														
PROPERTY NUMBERS Total: 1															
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13709787</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13709787										
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Application Number:	13709787														
CORRESPONDENCE DATA															
Fax Number:	7034132220														
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>															
Phone:	(703) 413-3000														
Email:	cevans@oblon.com														
Correspondent Name:	Oblon, Spivak, et al.														
Address Line 1:	1940 Duke Street														
Address Line 4:	Alexandria, VIRGINIA 22314														
ATTORNEY DOCKET NUMBER:	408263US2S CONT														
NAME OF SUBMITTER:	Christopher Evans														
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ASSIGNMENT

SDG054417-USA-A
(10S1330P)

In consideration of value received, I, having a residence as stated below above my name, the sole inventor (if only one name is listed below) or a joint inventor (if plural inventors are listed below) of an invention described in an application for United States patent entitled:

OPTICAL PICKUP AND OPTICAL DISK APPARATUS

have sold and assigned and do hereby sell and assign to
KABUSHIKI KAISHA TOSHIBA
a Japanese corporation, having a business address at
1-1, Shibaura 1-chome, Minato-ku, Tokyo 105-8001, Japan

its successors, assigns or nominees, hereinafter referred to as "Assignee", my entire right, title and interest in and to said invention as disclosed, shown and described in said United States patent application:

(check one) executed concurrently herewith
 executed on _____ ;
 Application No. 13/709,787 , filed December 10, 2012 ;

and in and to all applications for patent and patents for invention including all divisions, reissues, continuations, substitutes and extensions thereof and all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property, including rights of priority, resulting from the filing of any of said applications; and I authorize and request any official whose duty is to issue patents, to issue any patent on said invention or resulting therefrom to said Assignee, and I agree that on request and without further consideration, but at the expense of said Assignee, I will communicate to said Assignee or its representatives all facts known to me respecting said invention and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuing, continued prosecution, reissue, or other applications, make all rightful oaths and declarations, and generally do everything possible to aid said Assignee to obtain and enforce proper patent protection for said invention.

I hereby grant the following law firm the power to insert on this Assignment any further identification which may be necessary or desirable in order to comply with the Rules of the U.S. Patent and Trademark Office for recordation of this document.

Oblon, Spivak, McClelland, Maier & Neustadt, L.L.P., 1940 Duke Street Alexandria, VA 22314

ASSIGNMENT

SDG054417-USA-A
(10S1330P)

[1st Inventor]

Residence Address: Yokohama-shi, Japan
Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome,
Minato-ku, Tokyo 105-8001, Japan
Citizenship: Japan

Chikara Tanioka

Nov. 6, 2012

Chikara Tanioka

Date:

[2nd Inventor]

Residence Address: Yokohama-shi, Japan
Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome,
Minato-ku, Tokyo 105-8001, Japan
Citizenship: Japan

Kazuo Watabe

November 7, 2012

Kazuo Watabe

Date:

[3rd Inventor]

Residence Address: Yokohama-shi, Japan
Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome,
Minato-ku, Tokyo 105-8001, Japan
Citizenship: Japan

Hideaki Okano

Nov. 7, 2012

Hideaki Okano

Date:

[4th Inventor]

Residence Address: Fujisawa-shi, Japan
Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome,
Minato-ku, Tokyo 105-8001, Japan
Citizenship: Japan

Akihito Ogawa

Nov. 7, 2012

Akihito Ogawa

Date:

[5th Inventor]

Residence Address: Saitama-shi, Japan
Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome,
Minato-ku, Tokyo 105-8001, Japan
Citizenship: Japan

Takashi Usui

Nov. 8, 2012

Takashi Usui

Date:

ASSIGNMENT

SDG054417-USA-A
(10S1330P)

[6th Inventor]

Residence Address: Kawasaki-shi, Japan

Mailing Address: c/o Intellectual Property Division, Toshiba Corporation, 1-1, Shibaura 1-chome,
Minato-ku, Tokyo 105-8001, Japan

Citizenship: Japan

Kazuaki Doi

Nov. 7, 2012

Kazuaki Doi

Date: