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(Rev. 03/01)

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U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office

OMB No. 0651-0027 (exp. 5/31/2002) 102140130 To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof Name of conveying party(ies): 2. Name and address of receiving party(ies) 01 hi Takahashi and Shunichi Sato Name: Ricoh Company, Ltd. Internal Address: JUN 2 2002 Street Address: I name(s) of conveying party(ies) 3-6, Nakamagome 1-chome Ohta-ku, Tokyo 143-8555 3. Nature of Conveyance: JAPAN x Assignment Merger Security Agreement Change of Name City: Other State: Additional name(s) & May 10, 2002 x No **Execution Date:** address(es) attached: 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the new application is: A. Patent Application No.(s): B. Patent No.(s): 10/095,516 Additional numbers attached? Yes 6. Total number of applications and 5. Name and address of party to whom correspondence concerning document should be mailed: patents involved: Name: Mark J. Thronson DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP 7. Total fee (37 CFR 3.41) 40.00 Enclosed Internal Address: Atty. Dkt.: R2184.0166/P166 Street Address: Authorized to be charged to deposit account 2101 L Street NW Authorized to be charged to credit card (Form 2038 enclosed) 8. Deposit account number: City: State: Zip: 04-1073 Washington 20037-1526 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. June 24, 2002 Mark J. Thronson (33,082) Name of Person Signing Signature Date Total number of pages including cover sheet, attachments, and documents: 06/27/2002 BABRAHA1 00000028 10095516 40.00 OP

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ASSIGNMENT BY INVENTORS

THIS ASSIGNMENT, made by TAKASHI TAKAHASHI and SHUNICHI SATO
and (hereinafter referred to as
"Assignors"), respectively residing at: Miyagi, Japan and Miyagi, Japan
and
WHEREAS, Assignors have invented certain new and useful improvements in SEMICONDUCTOR OPTICAL MODULATOR, AN OPTICAL AMPLIFIER AND AN INTEGRATED SEMICONDUCTOR LIGHT-FMITTING DEVICE
set forth in an application for Letters Patent of the United States, executed concurrently
herewith; and

WHEREAS, Ricoh Company, Ltd., a corporation organized under and pursuant to the laws of Japan, having its principal place of business at 3-6, Nakamagome 1-chome, Ohta-ku, Tokyo 143-8555, Japan (hereinafter referred to as "Assignee"), is desirous of acquiring the entire right, title and interest in and to said inventions and said Application for Letters Patent of the United States, and in and to any Letters Patent of the United States to be obtained therefor and thereon.

NOW, THEREFORE, in consideration of One Dollar (\$1.00) and other good and sufficient consideration, the receipt of which is hereby acknowledged, Assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions and application for Letters Patent, and in and to any and all direct and indirect divisions, continuations and continuations-in-part of said application, and any and all Letters Patent in the United States which may be granted therefor and thereon, and reissues, reexaminations and extensions of said Letters Patent, and all rights under the International Convention for

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the Protection of Industrial Property, the same to be held and enjoyed by Assignee, for its own use and benefit and the use and benefit of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent may be granted and/or extended, as fully and entirely as the same would have been held and enjoyed by Assignor, had this sale and assignment not been made.

AND for the same consideration, Assignors hereby represent and warrant to Assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, except for any rights, titles and/or interests that have arisen to Assignee under law or that have already been transferred to Assignee, Assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and application for Letters Patent above-mentioned, and that the same are unencumbered and that Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, Assignors hereby covenant and agree to and with Assignee, its successors, legal representatives and assigns, that Assignors will sign all papers and documents, take all lawful oaths and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of any Letters Patent and applications for Letters Patent for said inventions, without charge to Assignee, its successors, legal representatives and assigns, whenever counsel of Assignee, or counsel of its successors, legal representatives and assigns, shall advise: that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with any Letters Patent or applications for Letters Patent for said inventions, including but not limited to interference proceedings, is lawful and desirable; or, that any division, continuation or continuation-in-part of any application for Letters Patent, or any reissue, reexamination or extension of any Letters Patent, to be obtained thereon, is lawful and desirable.

AND Assignors hereby request the Commissioner of Patent and Trademarks to issue said Letters Patent of the United States to Assignee, as Assignee of said inventions

Page 2 of 3

and the Letters Patent to be issued thereon, for the sole use and benefit of Assignee, its successors, legal representatives and assigns.

AND Assignors hereby grant the following individuals 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 United States Patent and Trademark Office for recordation of this document:

Dickstein Shapiro Morin & Oshinsky LLP

Gary M. Hoffman, 26,411; Thomas J. D'Amico, 28371; Donald A. Gregory, 28,954; James W. Brady, Jr., 32,115; Jon D. Grossman, 32,699; Mark J. Thronson, 33,082; Laurence D. Fisher, 37, 131; John R. Fuisz, 37327; Juliana Haydoutova, P43,313; James M. Heintz, P41,828; Herbert V. Kerner, P42,721; Gianni Minutoli, 41,198; Eric Oliver, 35,307; William E. Powell, III, 39,803; James M. Silbermann, 40,413; Richard Veltman, 36,957 and Darius Gambino, 41,472.

AND Assignors acknowledge an obligation of assignment of this invention to Assignee at the time the invention was made.

Date:	Assignor: Jakahashi TAKASHI TAKAHASHI
Date: May . 10 . 2002	Assignor: Shunichi Sato SHUNICHI SATO
Date:	Assignor:
Date:	Assignor:
Witnesses:	
Date: May 10, 2002	Witness: withis It
Date: May 10, 2002	Witness.