04-04-2002

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| To the Director of the U.S. Patent a. 102043 | 818 ched original documents or copy thereof. | | |
|---|---|--|--|
| 1. Name of conveying party(ies): Masanori Goto Tohru Kineri Additional name(s) of conveying party(ies) attached □ Yes ☒ No 3. Nature of Conveyance: ☒ Assignment □ Merger □ Security Agreement □ Change of Name □ Other: Execution Date: March 6, 2002 | 2. Name and address of receiving party(ies): TDK Corporation 1-13-1, Nihonbashi, Chuo-ku, Tokyo, 103-8272 Japan A Japanese corporation Additional name(s) & addresses attached? □ Yes ☒ No | | |
| 4. Application number(s) or patent number(s): | | | |
| If this document is being filed together with a new application, the ex | vacution data of the application is March 6, 2002 | | |
| A. Patent Application No.(s) 10, 10 4 5 9 4 | B. Patent No.(s) | | |
| Additional number | rs attached 🛘 Yes 🗵 No | | |
| 5. Name and address of party to whom correspondence concerning document should be mailed: | 6. Total number of applications and patents involved: _1 | | |
| Gregory J. Lavorgna, Esq. Drinker Biddle & Reath LLP One Logan Square 18 th & Cherry Streets Philadelphia, PA 19103-6996 | 7. Total fee (37 CFR 3.41) \$40.00 ☑ Enclosed ☐ authorized to be charged to deposit account 8. Deposit Account Number: 50-0573 | | |
| Attorney Docket No. 165987 | | | |
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| 9. To the best of my knowledge and belief, the foregoing information original document. Gregory J. Lavorgna Name of Person Signing Signa Total nu | | | |
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PATENT REEL: 012738 FRAME: 0722

A S S I G N M E N T

WHEREAS, we,

Masanori Goto, a citizen of Japan, c/o TDK Corporation, 1-13-1,

Nihonbashi, Chuo-ku, Tokyo, 103-8272, Japan

Tohru Kineri, a citizen of Japan, c/o TDK Corporation, 1-13-1,

Nihonbashi, Chuo-ku, Tokyo, 103-8272, Japan

have invented certain new and useful improvements in

OPTICAL WAVEGUIDE MODULE-MOUNTED PACKAGE

for which we have on March 6, 2002 executed an application for United States Letters Patent; and

WHEREAS, TDK Corporation, a Japanese Corporation, located at 1-13-1, Nihonbashi, Chuo-ku, Tokyo, 103-8272, Japan (hereinafter called the "Assignee"), is desirous of acquiring the entire right, title and interest in and to said application and the inventions and improvements therein disclosed so far as the United States of America is concerned.

NOW, THEREFORE, in good and valuable consideration paid to us by said Assignee, receipt whereof is hereby acknowledged, we do hereby assign, sell, transfer and set over unto said Assignee the entire right, title and interest in and to said application and the inventions and improvements therein disclosed for the United States and any Letters Patent which may issue therefor in the United States and all divisions, re-issues, continuations, renewals and/or extensions thereof, said Assignee to have and to hold the interests herein assigned to the full ends of the terms of said Letters Patent and any and all divisions, re-issues, continuations, renewals and/or extensions thereof, respectively, a fully and entirely as the same would have been held and enjoyed by us had this Assignment not been made.

The Commissioner of Patents and Trademarks is requested to issue such Letters Patent in accordance herewith. We covenant that we are the lawful owners of the said application, and of the right to make, use or sell the inventions and improvements disclosed therein within the United States and that we have the full right to make this Assignment.

PATENT REEL: 012738 FRAME: 0723 And for the consideration aforesaid, we agree that we will communicate to said Assignee or the representatives thereof any facts known to us respecting the inventions and improvements of the said United States application and will, upon request, but without expense to us, testify in any legal proceedings, sign all lawful papers, execute all divisional, re-issue, continuation, renewal and/or extension applications, make all rightful oaths, and generally do all other and further lawful acts deemed necessary or expedient by said Assignee or by counsel for said Assignee, to assist or enable said Assignee to obtain and enforce full benefits from the rights and interest herein assigned. This Assignment shall be binding upon our heirs, executors, administrators and/or assigns, and shall inure to the benefit of the heirs, executors, administrators, successors, and/or assigns, as the case may be, of said Assignee.

| | Executed at Tokyo, | | |
|--------|--------------------|---------------|--|
| this _ | 6th day of March | , 2002 | |
| | | Masancri Goto | |
| | | Masanori Goto | |
| | Executed atTokyo, | | |
| this _ | 6th day of March | | |
| | | Tohra Kinen | |
| | | Tohru Kineri | |

RECORDED: 03/22/2002

PATENT REEL: 012738 FRAME: 0724