503775814 04/08/2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT3822460

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|-----------------|----------------|
| Kazuo TACHIWANA | 02/24/2016 |
| Junko AKOJIMA | 03/08/2016 |
| TERUO YAMASHITA | 02/19/2016 |

RECEIVING PARTY DATA

| Name: | HOYA CORPORATION |
|-----------------|--------------------------------------|
| Street Address: | 7-5, NAKAOCHIAI 2-CHOME, SHINJUKU-KU |
| City: | TOKYO |
| State/Country: | JAPAN |
| Postal Code: | 1618525 |

PROPERTY NUMBERS Total: 1

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14648821 |

CORRESPONDENCE DATA

Fax Number: (703)836-2787

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 703-836-6400 Email: email@oliff.com **Correspondent Name:** JAMES A. OLIFF Address Line 1: **OLIFF PLC**

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| ATTORNEY DOCKET NUMBER: | 166281 | |
|-------------------------|--|--|
| NAME OF SUBMITTER: | ANNALYNN H. STEIN | |
| SIGNATURE: | /Annalynn H. Stein/ for Leon T. Cain II | |
| DATE SIGNED: | 04/08/2016 | |
| | This document serves as an Oath/Declaration (37 CFR 1.63). | |

Total Attachments: 2

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> **PATENT** REEL: 038230 FRAME: 0774 503775814

ASSIGNMENT (BEING FILED FOR DUAL PURPOSE UNDER 37 CFR 1.63(e)) For Application with Filing Date on or after September 16, 2012

ASSIGNMENT

| | Insert | (1) | Kazuo TACHIWANA | (2 | 2) Junko AKOJIMA |
|--------------------------|--|----------------------------|---|--|---|
| (1-8) | Legal Name(s) | (3) | Teruo YAMASHITA | (4) | 4) |
| | of Inventor(s) | (5) | | (6 | 5) |
| | | (7) | | (8) | 3) |
| | V (N C | the un | | fficiency of which ar | other good and valuable consideration paid to each of are hereby acknowledged, each undersigned agrees to |
| (9) | Insert Name of Assignee | (9) HOYA CORPORATION | | | |
| (10) | Insert Address of Assignee | | | | |
| | | the en invent contin | tire right, title and interest for ion, and in all applications fo | r the United States of or patent including an ite and reissue applic | s heirs, successors, assigns and legal representatives, of America as defined in 35 U.S.C. §100, in the my and all provisional, non-provisional, divisional, cation(s), and all Letters Patent, extensions, reissues the invention known as |
| such as Tit Number, o | Insert Identification such as Title, Case Number, or Foreign | (11) | GLASS ARTICLE | | |
| | Application Number | (Attor | mey Docket No. 166281 |) |), filed on even date herewith or as |
| (12) | Alternative | (12) | U.S. Application Number | 14/648,821 | · |
| | Identification for | a | | | |
| | filed applications | filed | on June 1, 2015 | | |

- 1) Each undersigned agrees to execute all papers necessary in connection with any application and/or patent for the invention and also to execute separate assignments in connection with such applications and patents as the Assignee may deem necessary.
- 2) Each undersigned agrees to execute all papers necessary in connection with any interference or post-grant proceeding which may be declared concerning any application or patent for the invention and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference or post-grant proceeding.
- 3) Each undersigned agrees to execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.
- 4) Each undersigned agrees to perform all affirmative acts which may be necessary to obtain, maintain or confirm by reissue or reexamination a grant of a valid United States patent to the Assignee.
- 5) Each undersigned authorizes and requests the Commissioner of the U.S. Patent and Trademark Office to issue any and all patents resulting from said application(s) to the said Assignee, as Assignee of the entire interest, and covenants that he or she has full right to convey the entire interest herein assigned, and that he or she has not executed, and will not execute, any agreement(s) in conflict herewith, and agrees that this assignment is binding on Assignor and Assignor's heirs, successors, assigns and legal representatives.
- 6) Each undersigned hereby grants the firm of OLIFF PLC the power to insert on this assignment any further identification that 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.

(13) Declaration

As an above named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of a claimed invention (or claimed design) in the above-identified application for which this declaration is being submitted.

The application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified application, including the claims, and am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

In witness whereof, executed by the undersigned on the date(s) opposite the undersigned name(s).

| Date | 24-Feb-2016 | Inventor Signature | Kagno Tachwam | SEAL) |
|----------|---|--|--|-----------|
| Date | 8 - Mar - 2016 | | Turka Abaiima | SEAL) |
| Date | 19-Feb-2016 | Inventor Signature | Terrio Jamestito | SEAL) |
| Date | | Inventor Signature | (5 | SEAL) |
| Date | | Inventor Signature | (| SEAL) |
| Date | | Inventor Signature | | SEAL) |
| Date | | Inventor Signature | (| SEAL) |
| Date | | Inventor Signature | (| SEAL) |
| neither, | This assignment should preferably be signed then it should be signed before at least two wi | before: (a) a Notary Publ tnesses who also sign her | lic if within the U.S.A. (b) a U.S. Consul if outside the Ure: | I.S.A. II |
| Date | | Witness | | |
| Date | | Witness | · · · · · · · · · · · · · · · · · · · | |