

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
TAKESHI UMEDA	04/19/2019
TOMOKI ITO	04/19/2019
ATSUSHI SHIBAYAMA	04/22/2019
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<b>Name:</b>	NIKON CORPORATION
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<b>City:</b>	MINATO-KU, TOKYO
<b>State/Country:</b>	JAPAN
<b>Postal Code:</b>	108-6290
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16334021
<b>CORRESPONDENCE DATA</b>	
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<b>ATTORNEY DOCKET NUMBER:</b>	XA-13445
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<b>SIGNATURE:</b>	/Mitchell W. Shapiro/
<b>DATE SIGNED:</b>	08/20/2019
<b>Total Attachments: 2</b>	
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## COMBINED DECLARATION AND ASSIGNMENT FOR UTILITY OR DESIGN PATENT APPLICATION

### DECLARATION

As a below-named inventor, I hereby declare that:

This Declaration is directed to:

the attached application,

OR

United States Application No. or PCT International Application No. 16/334,021,  
filed on March 17, 2019, and was amended on \_\_\_\_\_,

for the invention entitled ZOOM OPTICAL SYSTEM, OPTICAL APPARATUS AND  
METHOD FOR MANUFACTURING THE ZOOM OPTICAL SYSTEM.

The above-identified application was made or authorized to be made by me.

I believe I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. § 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

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.

### ASSIGNMENT

IN CONSIDERATION of the sum of One Dollar (\$1.00) or the equivalent thereof, and other good and valuable consideration, receipt and sufficiency of which are hereby acknowledged, paid to me by NIKON CORPORATION ("ASSIGNEE"), a corporation or other business entity duly organized under the laws of JAPAN, whose postal address is 15-3, Konan 2-chome, Minato-ku, Tokyo 108-6290 Japan,

I do hereby sell, assign, and transfer to ASSIGNEE, its successors, legal representatives, and assigns, all my right, title and interest, in the United States of America, in and to the above-entitled invention and the above-identified application, all applications claiming the benefit of the above-identified application, including but not limited to all divisions and continuations, all United States Letters Patent which may be granted for the invention, and any reissues or extensions thereof, to be held and enjoyed by ASSIGNEE, its successors, legal representatives, and assigns, to the full end of term for which said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me if this assignment and sale had not been made;



AND I further covenant and agree that upon request by ASSIGNEE, its successors, legal representatives, and/or assigns, and without further consideration, I will do all lawful acts that may be necessary or desirable to assist ASSIGNEE, its successors, legal representatives, and/or assigns to obtain and enforce patent protection for the invention in the United States of America, including, but not limited to, communicate with ASSIGNEE, its successors, legal representatives, and/or assigns any facts known to me regarding the invention, testify in any legal proceeding, sign all lawful papers, execute and deliver all papers that may be necessary or desirable to perfect the title to the invention in ASSIGNEE, its successors, legal representatives, and/or assigns, execute all divisional, continuation, and reissue applications, and make all rightful oaths, it being understood that any expense incident to the rendering of such assistance will be borne by ASSIGNEE, its successors, legal representatives, and/or assigns;

And I do hereby authorize and request the Director of the United States Patent and Trademark Office to issue all Letters Patent for the invention to ASSIGNEE, its successors, legal representatives, and assigns in accordance with the terms of this Assignment.

(1) Full name of sole or first inventor: Takeshi UMEDA  
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(2) Full name of second joint inventor: Tomoki ITO  
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(3) Full name of third joint inventor: Atsushi SHIBAYAMA  
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(4) Full name of fourth joint inventor: \_\_\_\_\_  
Date: \_\_\_\_\_ Signature: \_\_\_\_\_  
Citizenship: \_\_\_\_\_ Residence: \_\_\_\_\_  
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