

PATENT ASSIGNMENT COVER SHEET

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 Stylesheet Version v1.2

EPAS ID: PAT5492913

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	PATENT SECURITY AGREEMENT (TERM LOAN)
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
MKS INSTRUMENTS, INC.	04/11/2019
ELECTRO SCIENTIFIC INDUSTRIES, INC.	04/11/2019
NEWPORT CORPORATION	04/11/2019

RECEIVING PARTY DATA

Name:	BARCLAYS BANK PLC
Street Address:	745 SEVENTH AVENUE
City:	NEW YORK
State/Country:	NEW YORK
Postal Code:	10019

PROPERTY NUMBERS Total: 25

Property Type	Number
Application Number:	62800441
Application Number:	16289203
Application Number:	13756212
Application Number:	62823454
Application Number:	62808742
Application Number:	62799218
Application Number:	16318092
Application Number:	62788216
Application Number:	62746364
Application Number:	62745777
Application Number:	29666312
Application Number:	62742694
Application Number:	62718236
Application Number:	62711308
Application Number:	16067693
Application Number:	16067711
Application Number:	16020592

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Property Type	Number
Application Number:	62688484
Application Number:	62680856
Application Number:	15780072
Application Number:	62824592
Application Number:	62825777
Application Number:	16273595
Application Number:	16297799
Application Number:	16261900

CORRESPONDENCE DATA

Fax Number:

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: 2123186532
Email: alanagramer@paulhastings.com
Correspondent Name: ALANA GRAMER
Address Line 1: C/O PAUL HASTINGS LLP
Address Line 4: NEW YORK, NEW YORK 10166

NAME OF SUBMITTER:	ALANA GRAMER
SIGNATURE:	/s/ AG
DATE SIGNED:	04/25/2019

Total Attachments: 7

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PATENT SECURITY AGREEMENT

Patent Security Agreement, dated as of April 11, 2019 (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Patent Security Agreement"), by ELECTRO SCIENTIFIC INDUSTRIES, INC. ("ESI"), MKS INSTRUMENTS, INC., and NEWPORT CORPORATION (each a "Grantor"), in favor of BARCLAYS BANK PLC, in its capacity as collateral agent pursuant to the Credit Agreement (in such capacity, the "Collateral Agent").

WITNESSETH:

WHEREAS, (i) ESI is party to that certain Security Agreement Supplement (the "Supplement") dated as of February 1, 2019 by and among ESI, the other Grantors party thereto and the Collateral Agent and (ii) the Grantors are party to that certain Security Agreement dated as of April 29, 2016 (as modified by the Supplement and as further amended, amended and restated, supplemented or otherwise modified from time to time, the "Security Agreement"), by and among the Borrower, the other Grantors party thereto and the Collateral Agent, in favor of the Collateral Agent, pursuant to which the Grantors are required to execute and deliver to the Collateral Agent this Patent Security Agreement and (ii) certain of the Grantors are party to that Patent Security Agreement dated as of April 29, 2016 among the Grantors party thereto in favor of the Collateral Agent (the "Existing Patent Security Agreement");

NOW, THEREFORE, in consideration of the premises and to induce the Collateral Agent, for the benefit of the Secured Parties, to enter into the Credit Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and with the intent to be legally bound hereby, the Grantors hereby agree with the Collateral Agent as follows:

SECTION 1. Defined Terms. Unless otherwise defined herein, terms defined in the Credit Agreement or the Security Agreement and used herein have the respective meanings assigned thereto in the Credit Agreement or the Security Agreement, in each case, as applicable.

SECTION 2. Grant of Security Interest in Patent Collateral. As security for the payment or performance, as the case may be, in full of the Secured Obligations, including the Guarantees, each Grantor hereby pledges to the Collateral Agent, its successors and assigns, for the benefit of the Secured Parties, and hereby grants to the Collateral Agent, its successors and assigns, for the benefit of the Secured Parties, a security interest in, all right, title or interest in or to any and all of the following assets and properties now owned or at any time hereafter acquired by such Grantor or in which such Grantor now has or at any time in the future may acquire any right, title or interest (in addition to the pledges and security interests granted by the Existing Patent Security Agreement):

- (a) all Patents of the Grantors listed on Schedule I attached hereto; and
- (b) all products and Proceeds of any of the foregoing (together with clause (a), collectively, the "Patents").

SECTION 3. The Security Agreement. The security interests granted pursuant to this Patent Security Agreement are granted in conjunction with the security interests granted to the Collateral Agent pursuant to the Security Agreement, and the Grantors hereby acknowledge and affirms that the rights and remedies of the Collateral Agent with respect to the security interests in the Patents made and granted hereby are more fully set forth in the Security Agreement. In the event that any provision of this Patent Security Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control.

SECTION 4. Termination. Upon the termination of the Security Agreement in accordance with, or as otherwise required pursuant to, Section 6.11 thereof, the Collateral Agent shall, at the expense of the Grantors, execute, acknowledge, and deliver to the Grantors an instrument in writing in recordable form releasing the liens on and security interests in the applicable Patents under this Patent Security Agreement and any other documents required to evidence the termination of the Collateral Agent's interests in the applicable Patents.

SECTION 5. GOVERNING LAW; JURISDICTION; VENUE; WAIVER OF JURY TRIAL; CONSENT TO SERVICE OF PROCESS.

(A) THE TERMS OF SECTION 10.13 OF THE CREDIT AGREEMENT WITH RESPECT TO GOVERNING LAW, SUBMISSION OF JURISDICTION, VENUE AND WAIVER OF JURY TRIAL ARE INCORPORATED HEREIN BY REFERENCE, *MUTATIS MUTANDIS*, AND THE PARTIES HERETO AGREE TO SUCH TERMS.

(B) EACH PARTY TO THIS PATENT SECURITY AGREEMENT IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 6.01 OF THE SECURITY AGREEMENT. NOTHING IN THIS PATENT SECURITY AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY TO THIS PATENT SECURITY AGREEMENT TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY LAW.

SECTION 6. Waivers; Amendments; Modifications. Neither this Patent Security Agreement nor any provision hereof may be waived, amended or modified except pursuant to an agreement or agreements in writing entered into by the Collateral Agent and the Grantor or Grantors with respect to which such waiver, amendment or modification is to apply, subject to any consent required in accordance with Section 10.01 of the Credit Agreement and subject to Section 6.02 of the Security Agreement.

SECTION 7. Notices; Communications. All communications and notices under this Patent Security Agreement shall be in writing and given as provided in Section 6.01 of the Security Agreement.

SECTION 8. Counterparts; Effectiveness. This Patent Security Agreement may be executed in any number of counterparts, all of which shall constitute one and the same instrument, and any party hereto may execute this Patent Security Agreement by signing and delivering to the other party hereto one or more counterparts. Delivery by facsimile or other electronic communication of an executed counterpart (including portable document format (PDF)) of a signature page to this Patent Security Agreement shall be effective as delivery of an original executed counterpart of this Patent Security Agreement. This Patent Security Agreement shall become effective as to the Grantors when a counterpart hereof executed on behalf of the Grantors shall have been delivered to the Collateral Agent and a counterpart hereof shall have been executed on behalf of the Collateral Agent, and thereafter shall be binding upon the Grantors and the Collateral Agent and their respective permitted successors and assigns, and shall inure to the benefit of the Grantors, the Collateral Agent and the other Secured Parties and their respective permitted successors and assigns, except that the Grantors shall not have the right to assign or transfer its rights or obligations hereunder or any interest herein or in the Collateral (and any such assignment or transfer shall be void) except as expressly contemplated by the Security Agreement or the Credit Agreement.

[Signature Pages Follow]

MKS INSTRUMENTS, INC.,
as a Grantor

By: *Seth H. Bagshaw*
Name: Seth H. Bagshaw
Title: Senior Vice President, Chief Financial
Officer and Treasurer

NEWPORT CORPORATION,
as a Grantor

By: *Seth H. Bagshaw*
Name: Seth H. Bagshaw
Title: President and Treasurer

ELECTRO SCIENTIFIC INDUSTRIES, INC.
as a Grantor

By: *Seth H. Bagshaw*
Name: Seth H. Bagshaw
Title: President and Treasurer

[Signature Page to Patent Security Agreement]

BARCLAYS BANK PLC,
as the Collateral Agent

By: Robert Walsh
Name: **Robert Walsh**
Title: **Assistant Vice President**

[Signature Page to Patent Security Agreement]

PATENT
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Schedule I
to
PATENT SECURITY AGREEMENT
UNITED STATES PATENTS AND PATENT APPLICATIONS

Patents:

Issued Patents, Pending Patent Applications, Patent Applications:

Ref.	Case	Owner	Title	Status	Appl. No.	Filed	Patent No.	Issued
0211-300SAN-18P		Newport Corporation	Low Repetition Rate Infrared Tunable Femtosecond Laser Source	Pending	62/800,441	2/2/19	n/a	n/a
0198-300SAN-18UT		Newport Corporation	Optical Components having Hybrid Nano-Textured Anti-Reflective Coatings and Methods of Manufacture	Pending	16/289,203	2/28/19	n/a	n/a
E117-US2		Electro Scientific Industries, Inc.	METHOD AND APPARATUS FOR RELIABLY LASER MARKING ARTICLES	Issued	13/756,212	1/31/2013	10,112,263	10/30/2018
E268-P2		Electro Scientific Industries, Inc.	PHASED-ARRAY BEAM STEERING FOR MATERIALS PROCESSING	Pending	62/823,454	3/25/2019		
E268-P1		Electro Scientific Industries, Inc.	PHASED-ARRAY BEAM STEERING FOR MATERIALS PROCESSING	Pending	62/808,742	2/21/2019		
E275-P0		Electro Scientific Industries, Inc.	LASER PROCESSING APPARATUS, METHODS OF OPERATING THE SAME, AND METHODS OF PROCESSING WORKPIECES USING THE SAME	Pending	62/799,218	1/31/2019		
E257-US1		Electro Scientific Industries, Inc.	LASER PROCESSING APPARATUS AND METHODS OF LASER-	Pending	16/318,092	1/15/2019		

E110-US7		Electro Scientific Industries, Inc.	METHOD AND APPARATUS FOR RELIABLY LASER MARKING ARTICLES	Pending	16/020,592	6/27/2018		
E273-P1		Electro Scientific Industries, Inc.	Laser Processing Apparatus Incorporating a Workpiece Handling Apparatus and Methods of Operating the Same	Pending	62/688,484	6/22/2018		
E273-P0		Electro Scientific Industries, Inc.	Laser Processing Apparatus Incorporating a Workpiece Handling Apparatus and Methods of Operating the Same	Pending	62/680,856	6/5/2018		
E252-US1		Electro Scientific Industries, Inc.	SYSTEM ISOLATION AND OPTICS BAY SEALING	Pending	15/780,072	5/30/2018		
0213-800BLD-19P		MKS Instruments, Inc.	Pipe Insulators for High Temperature Applications and Methods of Manufacture	Pending	62/824,592	3/27/2019		
0214-800BLD-19P		MKS Instruments, Inc.	Low Profile Heater Apparatus and Method of Manufacture	Pending	62/825,777	3/28/2019		
3197-P00117	C1	MKS Instruments, Inc.	ADAPTIVE PERIODIC WAVEFORM CONTROLLER	Pending	16/273,595	2/12/2019		
3197-P00129		MKS Instruments, Inc.	ADAPTIVE CONTROL FOR A POWER GENERATOR	Pending	16/297,799	3/11/2019		
MAC-015		MKS Instruments, Inc.	Converter Control Apparatus and Method for High Stability and Power Factor Improvement in the Presence of High Source Impedances	Pending	16/261,900	1/30/2019		