PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
CHANGMENG HSIUNG	08/23/2016
CHRISTOPHER G. PEDERSON	08/24/2016
PENG ZOU	08/23/2016
LAN SUN	08/24/2016

RECEIVING PARTY DATA

Name:	VIAVI SOLUTIONS INC.
Street Address:	6001 AMERICA CENTER DRIVE
City:	SAN JOSE
State/Country:	CALIFORNIA
Postal Code:	95002

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16405050

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: 5714320800

Email: jhitt@harrityllp.com

Correspondent Name: HARRITY & HARRITY, LLP
Address Line 1: 11350 RANDOM HILLS ROAD

Address Line 2: SUITE 600

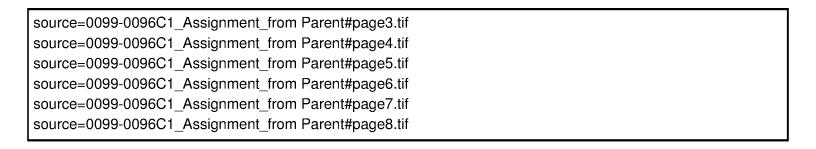
Address Line 4: FAIRFAX, VIRGINIA 22030

ATTORNEY DOCKET NUMBER:	0099-0096C1
NAME OF SUBMITTER:	RACHEL ALLEN
SIGNATURE:	/Rachel Allen/
DATE SIGNED:	05/07/2019

Total Attachments: 8

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PATENT REEL: 049100 FRAME: 0432



PATENT REEL: 049100 FRAME: 0433

THIS ASSIGNMENT, by <u>Changmeng HSIUNG</u>, <u>Christopher G. PEDERSON</u>, <u>Peng ZOU</u>, and <u>Lan SUN</u>, residing at <u>789 Mediterranean Lane</u>, <u>Redwood City</u>, <u>CA 94065 US</u>, <u>2174 Wolfberry Way</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u>, <u>32 Tally Ho Road</u>, <u>Ridgefield</u>, <u>CT 06877 US</u>, and <u>3772 Sherbrook Drive</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u> (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in <u>IDENTIFICATION USING SPECTROSCOPY</u> set forth in an application for Letters Patent of the United States,

(1) which is a provisional application

(1)	(a) filed herewith; or (b) bearing Application No, and filed on	_; or
(2)	which is a non-provisional application (a) bearing Application No. $\underline{15/247,554}$, and filed on $\underline{8/25/2016}$ (b) filed herewith; and	_; or

We hereby authorize Applicants' representative to fill in the preceding information relating to the filing date and/or serial number, as appropriate.

WHEREAS, Viavi Solutions Inc., a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 430 N. McCarthy Boulevard, Milpitas, CA 95035 (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including any previously or subsequently filed provisional applications, for Letters Patent of the United States or other countries claiming priority to said application or from which said application claims priority, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

NOW, THEREFORE, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, provisional applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, 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 Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

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Changmeng HSIUNG	Witness Signature
Date: <u>184923, 2</u> 016	Witness Name
Christopher G. PEDERSON	Witness Signature
Date:	Witness Name
Peng ZOU	Witness Signature
Date:	Witness Name
Lan SUN	Witness Signature
Date:	Witness Name

THIS ASSIGNMENT, by <u>Changmeng HSIUNG</u>, <u>Christopher G. PEDERSON</u>, <u>Peng ZOU</u>, and <u>Lan SUN</u>, residing at <u>789 Mediterranean Lane</u>, <u>Redwood City</u>, <u>CA 94065 US</u>, <u>2174 Wolfberry Way</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u>, <u>32 Tally Ho Road</u>, <u>Ridgefield</u>, <u>CT 06877 US</u>, and <u>3772 Sherbrook Drive</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u> (hereinafter referred to as "the Assignors"), respectively, witnesseth:

We hereby authorize Applicants' representative to fill in the preceding information relating to the filing date and/or serial number, as appropriate.

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NOW, THEREFORE, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, provisional applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

Joint Assignment Attorney's Docket No.: 0099-0096

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, 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 Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

Changmeng HSIUNG	Witness Signature
Date:	Witness Name
Christopher G. PEDERSON	Mithes Signature Light,
Date: 8/24/2016	Maria Light Witness Name
Peng ZOU	Witness Signature
Date:	Witness Name
Lan SUN	Witness Signature
Date:	Witness Name

THIS ASSIGNMENT, by <u>Changmeng HSIUNG</u>, <u>Christopher G. PEDERSON</u>, <u>Peng ZOU</u>, and <u>Lan SUN</u>, residing at <u>789 Mediterranean Lane</u>, <u>Redwood City</u>, <u>CA 94065 US</u>, <u>2174 Wolfberry Way</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u>, <u>32 Tally Ho Road</u>, <u>Ridgefield</u>, <u>CT 06877 US</u>, and <u>3772 Sherbrook Drive</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u> (hereinafter referred to as "the Assignors"), respectively, witnesseth:

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NOW, THEREFORE, be it known that for good and sufficient consideration, the receipt of which is hereby acknowledged, the Assignors have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns the entire right, title, and interest in and to the above-mentioned inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications for Letters Patent of the United States or other countries claiming priority to said applications, and any and all Letters Patent or Patents of the United States of America and all foreign countries that may be granted therefor and thereon, and in and to any and all applications claiming priority to said applications, provisional applications, divisions, continuations, and continuations-in-part of said applications, and reissues and extensions of said Letters Patent or Patents, and all rights under the International Convention for the Protection of Industrial Property, the same to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted as fully and entirely as the same would have been held and enjoyed by the Assignors had this sale and assignment not been made;

Joint Assignment Attorney's Docket No.: <u>0099-0096</u>

AND for the same consideration, the Assignors hereby covenant and agree to and with the Assignee, its successors, legal representatives, and assigns that the Assignors will, whenever counsel of the Assignee, or the counsel of its successors, legal representatives, and assigns, shall advise that any proceeding in connection with said inventions or said applications for Letters Patent or Patents, or any proceeding in connection with Letters Patent or Patents for said inventions in any country, including interference proceedings, is lawful and desirable, or that any application claiming priority to said application, division, continuation, or continuation-in-part of any applications for Letters Patent or Patents, or any reissue or extension of any Letters Patent or Patents to be obtained thereon, is lawful and desirable, 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 Letters Patent or Patents for said inventions, without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns;

Changmeng HSIUNG	Witness Signature
Date:	Witness Name
Christopher G. PEDERSON	Witness Signature
Date:	Witness Name
Peng ZOU	Witness Signature
Peng 200) Date: 8/23/2016	JULIE M. FLORES Witness Name
Lan SUN	Witness Signature
Date:	Witness Name

THIS ASSIGNMENT, by <u>Changmeng HSIUNG</u>, <u>Christopher G. PEDERSON</u>, <u>Peng ZOU</u>, and <u>Lan SUN</u>, residing at 789 <u>Mediterranean Lane</u>, <u>Redwood City</u>, <u>CA 94065 US</u>, 2174 <u>Wolfberry Way</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u>, <u>32 Tally Ho Road</u>, <u>Ridgefield</u>, <u>CT 06877 US</u>, and <u>3772 Sherbrook Drive</u>, <u>Santa Rosa</u>, <u>CA 95404 US</u> (hereinafter referred to as "the Assignors"), respectively, witnesseth:

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(1) which is a provisional application

(a) filed herewith; or

(b) bearing Application No. ______, and filed on _____; or

(2) \boxtimes which is a non-provisional application

(a) \boxtimes bearing Application No. 15/247,554, and filed on 8/25/2016; or (b) \square filed herewith; and

We hereby authorize Applicants' representative to fill in the preceding information relating to the filing date and/or serial number, as appropriate.

WHEREAS, Viavi Solutions Inc., a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 430 N. McCarthy Boulevard, Milpitas, CA 95035 (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest in and to said inventions, the right to file applications on said inventions and the entire right, title and interest in and to any applications, including any previously or subsequently filed provisional applications, for Letters Patent of the United States or other countries claiming priority to said application or from which said application claims priority, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon.

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Changmeng HSIUNG	Witness Signature
Date:	
	Witness Name
Christopher G. PEDERSON	Witness Signature
Date:	
	Witness Name
Peng ZOU	Witness Signature
Date:	Witness Name
∕	witness name
Mun V	2 P
Lan SUN	Witness Signature
Lan SUN Date: 8/24/2016	Jinhui Yang
-, , ,	Witness Name