

## PATENT ASSIGNMENT COVER SHEET

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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>
SHANE H. WOODSIDE	03/15/2019
JIAMIN ZHENG	03/14/2019
<b>RECEIVING PARTY DATA</b>	
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<b>Postal Code:</b>	95035
<b>PROPERTY NUMBERS Total: 2</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16299807
<b>Application Number:</b>	62645554
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<b>ATTORNEY DOCKET NUMBER:</b>	0100-0180
<b>NAME OF SUBMITTER:</b>	SARA STESNEY
<b>SIGNATURE:</b>	/Sara Stesney/
<b>DATE SIGNED:</b>	03/18/2019
<b>Total Attachments: 2</b>	
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**ASSIGNMENT  
(Joint)  
Worldwide Rights**

THIS ASSIGNMENT, by Shane H. WOODSIDE, and Jiamin ZHENG, having offices at 61 Bill Leatham Drive, Ottawa, ON, K2J 0P7 CA and 61 Bill Leatham Drive, Ottawa, ON, K2J 0P7 CA (hereinafter referred to as "the Assignors"), respectively, witnesseth:

WHEREAS, the Assignors have invented certain new and useful improvements in IMPROVED DYNAMIC RANGE FOR A HETERODYNE OPTICAL CHANNEL MONITOR set forth in an application for Letters Patent of the United States,

- (1)  which is a provisional application  
     (a)  filed herewith; or  
     (b)  bearing Application No. \_\_\_\_\_, and filed on \_\_\_\_\_; or
- (2)  which is a non-provisional application  
     (a)  bearing Application No. 16/299,807, and filed on March 12, 2019; or  
     (b)  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.

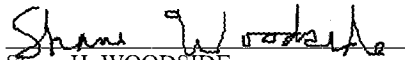
WHEREAS, Lumentum Operations LLC, a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 400 North McCarthy Blvd, Milpitas, CA 95035 US (hereinafter referred to as "the Assignee"), is desirous of acquiring the entire right, title, and interest 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, at the time of execution and delivery of these presents, the Assignors are the sole and lawful owners of the entire right, title, and interest in and to the inventions set forth in said applications and said applications, including provisional applications, above-mentioned, and that the same are unencumbered, and that the Assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth;

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;


AND the Assignors hereby request the Commissioner of Patents to issue any and all said Letters Patent of the United States to the Assignee as the Assignee of said inventions, the Letters Patent to be issued for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

  
Shane H. WOODSIDE

3/15/2019  
Date: \_\_\_\_\_

  
Jiamin ZHENG

3/14/2019  
Date: \_\_\_\_\_

  
Russell Latham  
Authorized Signatory for Lumentum Operations LLC

3/14/2019  
Date: \_\_\_\_\_