

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7000385

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
BENJAMIN KESLER	10/29/2021
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	LUMENTUM OPERATIONS LLC
<b>Street Address:</b>	1001 RIDDER PARK DRIVE
<b>City:</b>	SAN JOSE
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95131
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	17453057
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
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<b>ATTORNEY DOCKET NUMBER:</b>	0100-0489
<b>NAME OF SUBMITTER:</b>	KIMBERLY ROBINSON
<b>SIGNATURE:</b>	/Kimberly Robinson/
<b>DATE SIGNED:</b>	11/01/2021
This document serves as an Oath/Declaration (37 CFR 1.63).	
<b>Total Attachments: 2</b>	
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**DECLARATION AND ASSIGNMENT  
FOR PATENT APPLICATION**

Declaration of Inventor

As a below named inventor, I hereby declare that:

- the above-identified application was made or authorized to be made by me;
- I believe that I am the original inventor or an original joint inventor of a claimed invention in the above-referenced application; and
- 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.

Inventor Assignment Acknowledgement

The terms of this patent rights Assignment are as follows:

WHEREAS, the Assignors made the inventions described in a patent application entitled BI-DIRECTIONAL VERTICAL CAVITY SURFACE EMITTING LASERS which has been or will be filed in US, which has a November 1, 2021 filing date and a 17/453,057 Serial Number that are stated herein if this information is available; and

WHEREAS, Lumentum Operations LLC, a corporation duly organized under and pursuant to the laws of Delaware and having its principal place of business at 1001 Ridder Park Drive, San Jose, CA, 95131 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 owner(s) 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.

Full legal name of Inventor: Benjamin KESLER

Signature:  Date: 10/29/2021