

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5815381

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
ELLIOTT BROWN	11/08/2019
WEIDONG ZHANG	11/08/2019
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<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15714749
<b>Application Number:</b>	62398950
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<b>NAME OF SUBMITTER:</b>	JENNIFER S. WARNER
<b>SIGNATURE:</b>	/Jennifer S. Warner/
<b>DATE SIGNED:</b>	11/12/2019
<b>Total Attachments: 3</b>	
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**Attorney Docket No.: 50370-0006-US**

**Inventors: Brown et al.**

**Application Title: Gallium Nitride Cross-Gap Light Emitters Based on Unipolar-Doped Tunneling Structures**

## ASSIGNMENT OF APPLICATION

This ASSIGNMENT AGREEMENT ("**Assignment**") is made by and between **Elliott Brown and Weidong Zhang** (the "**Inventors**") and **Wright State University** whose street address is 3640 Colonel Glenn Highway, Dayton, OH 45435 (the "**Assignee**") regarding a patent application titled GALLIUM NITRIDE CROSS-GAP LIGHT EMITTERS BASED ON UNIPOLAR-DOPED TUNNELING STRUCTURES.

WHEREAS, the Inventor(s) have invented one or more inventions disclosed and/or claimed in the Application (the "**Inventions**") filed in the United States Patent and Trademark Office ("USPTO") on September 25, 2017 and given U.S. Patent Application No. 15/714,749 and which claims the benefit or priority of U.S. Provisional Application No. 62/398,950 filed on September 25, 2017.

WHEREAS, Assignee, together with its successors and assigns, and further in accordance with such agreement(s) as may have been previously entered into with the Inventor(s), desires to acquire, and/or the evidence the acquisition of, the entire right, title and interest in and to the Inventions and to the Applications (as defined herein).

NOW, THEREFORE, the parties agree as follows:

For good and valuable consideration from the Assignee to the Inventor(s) the receipt of which is hereby acknowledged, and in accordance with such agreements as may exist between them, Inventors have conveyed, assigned, transferred, and set over, and hereby do convey, assign, transfer and set over unto the Assignee, the entire and exclusive right, title and interest in and to the Inventions and all patents that may be granted therefor in the United States and in all other countries, territories, and jurisdictions in the world (collectively, the "**Countries**"), and to all existing or future related applications, divisions, substitutes, renewals, reissues, continuing applications, conversions, re-examinations, extensions, and any resulting patents thereof in all Countries (collectively, the "**Applications**") for the full terms for which the same may be granted and any rights associated therewith, including, but not limited to, any and all royalties, profits,

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damages, fees, income, payments, and other proceeds now or hereafter due or payable, and to the right to claim benefit and priority from the Applications in all of the Countries thereon.

Inventors hereby authorize and request the Commissioner for Patents of the United States and any official of any foreign country whose duty it is to issue patents on the Applications as described above, to issue all Letters Patent for this Invention to Assignee in accordance with the terms of this assignment;

Inventors hereby covenant that they have the full right to convey all rights and interests assigned by this Assignment, that there are no rights or interests outstanding inconsistent with the rights and interests granted herein, and that we have not and will not execute any instrument or grant or transfer any rights or interests inconsistent with the rights and interests granted herein.

Inventors hereby further covenant and agree that [I/we] will, without further consideration, communicate with Assignee any facts known to us respecting this invention, and testify in any legal proceeding, sign all lawful papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce Letters Patent for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

This Assignment inures to the benefit of the Assignee and its successors, assigns, and other legal representatives, and is binding on the Inventor(s) and their respective heirs, legal representatives, and assigns.

The Inventor(s) hereby grant(s) Assignee or its legal representative the power to insert on this Assignment any further identification information, including an application number and filing date, which may be necessary or desirable.

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IN WITNESS WHEREOF and INTENDING TO BE LEGALLY BOUND, we hereunto set our hands having read and understood this Assignment.

Elliott R. BROWN

E.R. Brown 8 Nov. 2019  
Assignor Date

Weidong Zhang 11/08/2019  
Witness Date

Robert Lyffe 11/08/2019  
Witness Date

Weidong ZHANG

Weidong Zhang 11/08/2019  
Assignor Date

E.R. Brown 8 Nov. 2019  
Witness Date

Robert Lyffe 11/08/2019  
Witness Date