

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT								
NATURE OF CONVEYANCE:	ASSIGNMENT								
CONVEYING PARTY DATA									
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Michael A. Haase</td> <td>02/24/2011</td> </tr> <tr> <td>Thomas J. Miller</td> <td>12/21/2010</td> </tr> <tr> <td>Xiaoguang Sun</td> <td>12/21/2010</td> </tr> </tbody> </table>		Name	Execution Date	Michael A. Haase	02/24/2011	Thomas J. Miller	12/21/2010	Xiaoguang Sun	12/21/2010
Name	Execution Date								
Michael A. Haase	02/24/2011								
Thomas J. Miller	12/21/2010								
Xiaoguang Sun	12/21/2010								
RECEIVING PARTY DATA									
Name:	3M INNOVATIVE PROPERTIES COMPANY								
Street Address:	P.O. BOX 33427								
City:	ST. PAUL								
State/Country:	MINNESOTA								
Postal Code:	55133-3427								
PROPERTY NUMBERS Total: 1									
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13060554</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13060554				
Property Type	Number								
Application Number:	13060554								
CORRESPONDENCE DATA									
Fax Number:	(651)736-3833								
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>									
Phone:	651-733-1500								
Email:	anewhouse@mmm.com								
Correspondent Name:	3M INNOVATIVE PROPERTIES COMPANY								
Address Line 1:	PO BOX 33427								
Address Line 4:	ST. PAUL, MINNESOTA 55133-3427								
ATTORNEY DOCKET NUMBER:	64116US006								
NAME OF SUBMITTER:	Andrea Newhouse								
Total Attachments: 2 source=ExecutedAssignment_64116US006#page1.tif source=ExecutedAssignment_64116US006#page2.tif									

CH \$40.00 13060554

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

II-VI MQW VCSEL ON A HEAT SINK OPTICALLY PUMPED BY A GAN LD

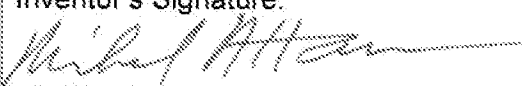
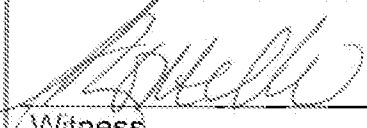
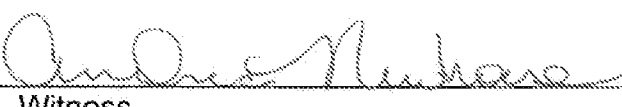
- for which an application for a United States Patent is being filed contemporaneously herewith;
- for which an application for a United States Patent identified as U.S. Patent Application No. ; was filed on
- which application is identified as PCT International Patent Application No. **PCT/US2009/054140**; filed **AUGUST 18, 2009**;


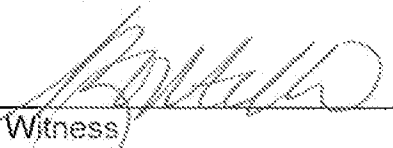
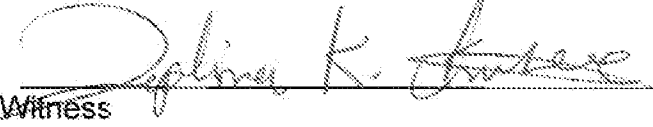
Now, therefore, for good and valuable consideration, receipt of which is acknowledged, I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made;

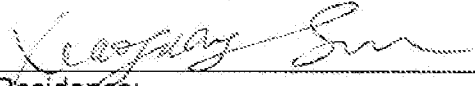
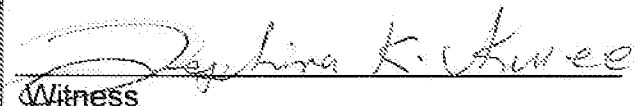
I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

Given Name (first and middle [if any]): MICHAEL A.		Family Name or Surname: HAASE	
Inventor's Signature: 		Date: 24 Feb 11	
Residence: ST. PAUL, MN		Country: USA	Citizenship: United States of America
Witness: 		Witness: 	

Given Name (first and middle [if any]): THOMAS J.		Family Name or Surname: MILLER	
Inventor's Signature: 		Date: 12/21/2010	
Residence: WOODBURY, MN		Country: USA	Citizenship: United States of America
Witness: 		Witness: 	

Given Name (first and middle [if any]): XIAO GUANG		Family Name or Surname: SUN	
Inventor's Signature: 		Date: 12/21/2010	
Residence: WOODBURY, MN		Country: USA	Citizenship: PEOPLE'S REPUBLIC OF CHINA
Witness: 		Witness: 