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PATENTS ONLY	
To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.	
Name of conveying party(ies)	2. Name and address of receiving party(ies)
Lars Gruener-Nielsen Torben Erik Veng	Name: Furukawa Electric North America, Inc.
Tobal Lik velig	Internal Address:
Additional name(s) of conveying party(ies) attached? Yes No	
3. Nature of conveyance/Execution Date(s):	Street Address: 2000 Northeast Expressway
Execution Date(s) May 16, 2007 Assignment Merger	
Security Agreement Change of Name	City: Norcross
☐ Joint Research Agreement	State: Georgia
Government Interest Assignment	
Executive Order 9424, Confirmatory License	Country: US Zip: 30071
Under	Additional name(s) & address(es) attached? Yes Vo
A. Patent Application No.(s) Additional numbers at	B. Patent No.(s)
5. Name and address to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved: 1
Name: Daniel Kim	7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40.00
Internal Address:	Authorized to be charged by credit card
	✓ Authorized to be charged to deposit account
Street Address: 26 Winchester Drive	Enclosed None required (government interest not affecting title)
City: Freehold	8. Payment Information
State: NJ Zip: 07728	a. Credit Card Last 4 Numbers
Phone Number: 732 625 0674	
Fax Number: 732 333 4392	b. Deposit Account Number 50-2074
Email Address:	Authorized User Name <u>Daniel Kim</u> 👼 🥏
9. Signature: Duco G	May 16, 2002
Signature `	Date 5
Daniel Kim Name of Person Signing	Total number of pages including cover sheet, attachments, and documents

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

> **PATENT REEL: 019367 FRAME: 0608**

ASSIGNMENT AND AGREEMENT

For value received, we, Lars Grüner-Nielsen, of Copenhagen, Denmark, and Torben Erik Veng, of Roskilde, Denmark, hereby sell, assign and transfer to Furukawa Electric North America, Inc., a corporation of the State of Delaware, having an office at 2000 Northeast Expressway, Norcross, Georgia 30071, U.S.A., and its successors, assigns and legal representatives, the entire right, title and interest, for the United States of America, in and to certain inventions related Systems and Methods for Creating Localized Refractive Index Modulations in an Optical Fiber, described in an application for Letters Patent of the United States, executed by us of even date herewith, and all the rights and privileges in said application and under any and all Letters Patent that may be granted in the United States for said inventions; and we also concurrently hereby sell, assign and transfer to Furukawa Electric North America, Inc. the entire right, title and interest in and to said inventions for all countries foreign to the United States, including all rights of priority arising from the application aforesaid, and all the rights and privileges under any and all forms of protection, including Letters Patent, that may be granted in said countries foreign to the United States for said inventions.

We authorize Furukawa Electric North America, Inc. to make application for such protection in its own name and maintain such protection in any and all countries foreign to the United States, and to invoke and claim for any application for patent or other form of protection for said inventions, without further authorization from us, any and all benefits, including the right of priority provided by any and all treaties, conventions, or agreements.

We hereby consent that a copy of this assignment shall be deemed a full legal and formal equivalent of any document which may be required in any country in proof of the right of Furukawa Electric North America, Inc. to apply for patent or other form of protection for said inventions and to claim the aforesaid benefit of the right of priority.

We request that any and all patents for said inventions be issued to Furukawa Electric North America, Inc. in the United States and to Furukawa Electric North America, Inc. in all countries foreign to the United States, or to such nominees as they may designate.

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We agree that, when requested, we shall, without charge to Furukawa Electric North America, Inc. but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient in connection with said applications, patents, or other forms of protection.

First joint inventor:

16/5-07

Second joint inventor:

Torben Erik Veng

Date: 16th Hay 2007

Furukawa Electric North America, Inc.

RECORDED: 05/16/2007

2000 Northeast Expressway

Suite 2H02

Norcross, Georgia 30071

PATENT **REEL: 019367 FRAME: 0610**