12-28-2006 Form PTO-1595 (Rev. 08/05) U.S. DEPARTMENT OF COMMERCE United Status Patient and Trademark Office OMB No. 0651-0027 (exp. 6/30/2008) ET 103354467 **PATENTS ONLY** 2004 DEC 26 SM 2: 4 To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the trademark office: Please record the attached documents or the trademark office: Please record the attached documents or the trademark of the U.S. Patent and Tradem 2. Name and address of receiving party(ies) 1. Name of conveying party(ies) J.A. WOOLLAM CO., INC. Name: THOMAS E. TIWALD Internal Address: Additional name(s) of conveying party(ies) attached? Yes 📉 No Street Address: 645 M ST. 3. Nature of conveyance/Execution Date(s): 3/30/06 Execution Date(s) Assignment Assignment Merger LINCOLN City: _____ Security Agreement State: NEBRASKA ___ Joint Research Agreement Government Interest Assignment Country: U.S.A. Zip: 68124 Executive Order 9424, Confirmatory License Other Additional name(s) & address(es) attached? L. Yes 💹 No 4. Application or patent number(s): This document is being filed together with a new application. A. Patent Application No.(s) B. Patent No.(s) 11/393,519 Additional numbers attached? Yes No 5. Name and address to whom correspondence 6. Total number of applications and patents concerning document should be mailed: involved: JAMES D. WELCH Name: 7. Total fee (37 CFR 1.21(h) & 3.41) \$ Internal Address: Authorized to be charged by credit card Authorized to be charged to deposit account Enclosed 10328 PINEHURST AVE. Street Address:____ None required (government interest not affecting title) 8. Payment Information City: a. Credit Card Last 4 Numbers _____ ___ Zip: 68124 NEBRASKA State: Expiration Date Phone Number: 402-391-4448 b. Deposit Account Number _____ 402-391-4448 Fax Number: Authorized User Name JDWSCMOS1@NETZERO.NET Email Address: 9. Signature: Signature

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

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JAMES D. WELCH

Name of Person Signing

PATENT REEL: 018712 FRAME: 0386

Total number of pages including cover sheet, attachments, and documents:

ASSIGNMENT

WHEREAS I, THOMAS E. TIWALD am the Inventor of the invention titled: "HORIZONTAL ATTENUATED TOTAL REFLECTION SYSTEM";

WHEREAS I am the owner of record of a United States Patent Application of the title recited above which is being submitted to the United States Patent Office, the Serial Number of which is 11/393,519; (to be filled-in when available), and

WHEREAS I might pursue Foreign Patent Applications under the Cooperation Treaty and directly in Non-Member Nations which concern the same Invention and Improvements thereto; and

WHEREAS I am, under the terms of an Agreement or Employment Contract with the J.A. WOOLLAM CO. INC., obligated to assign any and all Patent Applications and Patents which Issue thereon, Domestic and Foreign, Present and Future for said Invention and Improvements thereto to the J.A. WOOLLAM CO. INC.; and

WHEREAS the J.A. WOOLLAM CO. INC. is desirous of accepting an Assignment of any and all interest in said Application(s) for Patent(s) and Patent(s) which Issue thereon, Domestic and Foreign, Present and Future as provided for in said Agreement or Employment Contract with the Inventors;

NOW THEREFORE, in recognition of the receipt of One Dollar (\$1.00) and other good, valuable and sufficient consideration received from J.A. WOOLLAM CO. INC., I THOMAS E. TIWALD do:

- 1. Hereby Sell, Assign, Transfer and/or otherwise Set Over Without Reservation and Conditions other than those recited herein, to the J.A. WOOLLAM CO. INC., its Legal Representatives, Successors, Assigns etc. the entire interest in the Rights and Title to any Patent Applications and Patents which Issue thereon, Domestic and Foreign, Present and Future, for said Invention and Improvements; so that the J.A. WOOLLAM CO. INC. shall hereafter own all Rights and Title as fully and completely as WE would have owned said Rights and Title were the present Assignment not made, with the full understanding that the entire Rights and Title to said Invention shall immediately vest, irrevocably, in the J. A. WOOLLAM CO. INC., its Legal Representatives, Successors, Assigns etc.
- 2. Agree to execute all future documents as may be necessary to acquire issue of the Patent Application and additional Patents Applications for said Invention, and Improvements thereto, in the United States and in Foreign Countries.
- 3. Request that the Commissioner of Patents and Trademarks in the United States and the equivalent in Foreign Countries issue

PATENT REEL: 018712 FRAME: 0387 United States Patent Application, Serial Number $11/^{393,519}$, (to be filled-in when available), and such additional Patent Applications, Domestic or Foreign which result from future Patent Cooperation Treaty Patent Application, Foreign or Domestic Patent Applications to the J. A. WOOLLAM CO. INC., its Legal Representatives, Successors, Assigns etc., as the case might at the Issue Date thereof.

4. Agree that WE will, at no time, do anything to jeopardize the validity of any Patent or Patent Application, Domestic or Foreign, Present or Future other than as necessitated by the duty of Truthful Disclosure required during the normal course of Patent Application Prosecution or Litigation before an Examining or Judicial Authority.

IN AGREEMENT WITH THE FOREGOING, I, THOMAS E. TIWALD AS INVENTOR, HEREBY WILLINGLY AND FREELY, IN RECOGNITION OF GOOD, VALUABLE AND SUFFICIENT CONSIDERATION RECEIVED FROM THE J.A. WOOLLAM CO. INC. AND I, JOHN A. WOOLLAM, AS PRESIDENT OF THE J.A. WOOLLAM CO. INC., AFFIX OUR SIGNATURES TO EFFECT THE TERMS OF THIS ASSIGNMENT, SAID SIGNATURES EACH BEING AFFIXED IN THE PRESENCE OF A NOTARY PUBLIC.

THOMAS E. TIWALD

DATE

INVENTOR

NOTARY

J. D. WELCH
J. D. Sept. 5, 2007

My Comm. Exp. Sept. 5, 2007

JOHN A. WOOLLAM

DATE

PRESIDENT OF

THE J.A. WOOLLAM CO. INC.

NOTARY PUBLIC

DATE

GENERAL NOTARY - State of Nebraska J. D. WELCH My Comm. Exp. Sept. 5, 2007

> PATENT REEL: 018712 FRAME: 0388

JAMES D. WELCH

ATTORNEY AT LAW

PROFESSIONAL ENGINEER

ELLECTUAL PROPERTY 402-391-4448

10328 PINEHURST AVE OMAHA, NEBRASKA 68124

December 22, 2006

Mail Stop: Assignments Commissioner for Patents

Box: 1450

Alexandria, VA 22313-1450

RE: SUBMITTAL OF ASSIGNMENTS FOR APPLICATIONS, SERIAL NOS.:

11/374,771;	11/284,213;	11/326,060;	11/397,393;
11/452,483;	11/130,071;	11/497,921;	11/284,213;
11/447,247;	11/256,891;	11/439,491;	•
11/404,593;	11/257,866;	11/393,519;	
11/483,888;	11/257,867;	11/204,924;	
11/495,130;	11/103,229;	11/288,785;	
11/590,408;	11/452,618;	11/408,679;	
11/585,301;	11/453,656;	11/204,835;	

Dear Sir;

Please find enclosed Assignmetns for the identifeid Applications, each accompanied by a filled-in Cover Sheet, and a check for \$40.00.

Please provide Notice of REEL/FRAME for each.

WELCH JAMES D.

JW/hs enc.

CERTIFICATE OF MAILING

I HEREBY CERTIFY THAT THIS TRANSMITTAL IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE WITH SUFFICIENT POSTAGE FOR FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO THE COMMISSIONER FOR PATENTS, BOX: 1450, ALEXANDRIA VA. 22313-1450 ON THE DATE INDICATED BELOW.

JAMES D. WELCH

RECORDED: 12/26/2006 REEL: 018712 FRAME: 0389

PATENT