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| MRD 8-6-03 08-13-1  | 2003   |
| Form PTO-1595   | U.S. DEPARTMENT OF COMMERCE                                    |
| (Rev. 10/02)  | U.S. Patent and Trademark Office                               |
| OMB No. 0651-0027 (exp. 6/30/2005) 102658   Tab settings ⇒ ⇒ ⇒ ▼ 102658                   | 3197 🖉 🖌 🖌   |
|   | Please record the attached original documents or copy thereof. |
| 1. Name of conveying party(ies):  | 2. Name and address of receiving party(ies)                    |
| David W. Vernooy Oskar J. Painter   | Name: Xponent Photonics Inc                                    |
| Kerry J. Vahala Guido Hunziker  | Internal Address:  |
| Peter C. Sercel   |  |
| Additional name(s) of conveying party(ies) attached? Yes                                  |  |
| 3. Nature of conveyance:  |  |
| Assignment Merger   | Street Address: 425 East Huntington Drive                      |
| Security Agreement Change of Name   |  |
| Other   |  |
| Vernooy - 03/17/2003; Painter - 03/19/2003<br>Vahala - 03/21/2003; Hunziker - 03/17/2003  | City: <u>Monrovia</u> State: <sup>CA</sup> _Zip: <u>91016</u>  |
| Execution Date: Sercel - 03/13/2003   | Additional name(s) & address(es) attached? Yes 🖌 No            |
| 4. Application number(s) or patent number(s):   |  |
| If this document is being filed together with a new appli                                 | cation, the execution date of the application is:              |
| A. Patent Application No.(s) 10/037,146   | B. Patent No.(s)   |
|   |  |
| Additional numbers at   | ached? Yes ? No  |
| 5. Name and address of party to whom correspondence concerning document should be mailed: | 6. Total number of applications and patents involved: 1        |
| Name: David S. Alavi  | 7. Total fee (37 CFR 3.41) \$ 40.00                            |
| Ngille  |  |
| Internal Address:   |  |
|   | Authorized to be charged to deposit account                    |
|   | 8. Deposit account number:                                     |
| Street Address:3762 West 11th Ave #408  |  |
|   |  |
|   |  |
| City: EugeneState: OR Zip: 97402  |  |
| DO NOT USE  | THIS SPACE   |
| 9. Signature.   |  |
|   | 2/1/   |
| David S. Alavi Reg. No. 40310 🥢   | 03/15/2004   |
| Name of Person Signing  | Signature Date   |
| Total number of pages including cove  |  |
| Mall documents to be recorded with  | required cover sheet information to:                           |
| Commissioner of Patents & T<br>Washington,  | -  |

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PATENT REEL: 014417 FRAME: 0408 • • •

|  | Sample Form (former PTO/SB/15) (05-01   |
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| ASSIGNMENT OF APPLICATION  | Docket Number (Optional)<br>CQC13NP   |
| Whereas, I/We, David W. Vernooy of Sierra M  |   |
| referred to as applicant, have invented certain new and useful improvement   | ts in   |
| Resonant optical modulators  |   |
| for which an application for a United States Patent was filed on <u>12/21/</u><br>Application Number <u>10 / 037,146</u> .   | 2001  |
| for which an application for a United States Patent was executed on  | , and   |
| Whereas,Xponent Photonics IncofMonrovia, CAto"assignee" whose mailing address is425 East Huntington Drive, Mon   | herein referred<br>rovia, CA 91016 is   |
| desirous of acquiring the entire right, title and interest in the same;  |   |
| United States, I/We hereby authorize and request the Commissioner of Pate<br>United States Patent to said assignee, of the entire right, title, and interest<br>use and behoof; and for the use and behoof of his legal representatives, to<br>said Patent may be granted, as fully and entirely as the same would h<br>assignment and sale not been made.<br>Executed this <u>7 TF</u> day of <u>MAKCH</u><br>at <u>MOMROUTA</u> <u>CALIFOR MIZ</u> | t in and to the same, for his sole<br>the full end of the term for which<br>have been held by me had this |
| State of <u>AUFORNIL</u><br>County of <u>LOS AMICLES</u> SS:<br>Before me personally appeared said <u>DAVID VERNIDOY</u>   | Of Uny<br>(Signature)   |
| and acknowledged the foregoing instrument to be his top act and deed this<br>day of <u>MARCH</u> , 2003.<br>Seal   | WEDRING CELLUL - HO CL-   |
| Note: Signatures of all the inventors or assignees of record of the entire interest or their represe   | ntative(s) are required. Submit multiple  |
| orms if more than one signature is required, See below*.   |   |

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| ACCI   | GNMENT OF APPLIC                  | ATION   |  |   | ber (Optional)  |
| A221   | GNMENT OF APPLIC                  |   |  | C   | QC13NP  |
| Whereas, I/We,   | Kerry J. Vahala                   | of  | San Gal  | oriel, CA   | ,hereafter  |
| referred to as applica   | nt, have invented certain ne      | w and useful  | improvement  | s in  |   |
|  | Resonant o                        | optical mod   | ulators  |   |   |
|  | ication for a United States F     |   |  | 2001  |   |
| Application Numb   | per10 / 037,146                   | <u></u>   | ·'   |   |   |
|  | ication for a United States F     |   |  |   |   |
| Whereas, Xpone   | ent Photonics Inc of              | 5 East Hunting  | Monrovia, CA   |   | herein referred   |
| -  | the entire right, title and inte  |   |  |   | <u> </u>  |
| desirous of acquiring i  | the entire right, the and line    | iest in the sa  | me,  |   |   |
| acknowledged, and ot<br>assign and transfer ur<br>and the entire right, ti<br>United States, I/We he<br>United States Patent ti<br>use and behoof; and fi<br>said Patent may be<br>assignment and sale n |                                   | sideration, I/V<br>nd exclusive<br>any and all F<br>t the Commis<br>tire right, title<br>is legal represence<br>yely as the s | Ve, the applica<br>right to the sa<br>Patents which<br>sioner of Pate<br>, and interest<br>sentatives, to<br>ame would h | ant(s), by the<br>id invention i<br>may be gra<br>ent and Trade<br>in and to the<br>the full end o<br>ave been he | se presents do sell,<br>in the United States<br>nted therefor in the<br>marks to issue said<br>e same, for his sole<br>f the term for which<br>eld by me had this |
| Executed this  | 1155 day of                       | MARO  | e H  | , 20  | 03  |
| State of CALIFORP  | Via)                              |   | K  | /i<br>(Signati  | )00   |
| County of LOS AN   | SS:                               |   | 1  |   |   |
| Before me personally a   |                                   | RRY L   | Ahala  | 2   |   |
| and acknowledged the day of <u>MALCH</u><br>Seal   | foregoing instrument to be        | Com<br>NOTARY<br>Los  | MELA STOCK<br>m. # 1238780<br>PUBLIC-CALSPORN<br>Angeles County  | (Note   | uel toch  |
|  | rentors or assignees of record of | Hy Comm.  | Explose April 23,2   | 003 5   | uired. Submit multiple  |
| forms if more than one signat  |                                   |   |  |   |   |
|  | forms are submitted.              |   |  |   |   |

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|  | Sample Form (former PTO/SB/15) (05-0  |
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| ASSIGNMENT OF APPLICATION  | Docket Number (Optional)<br>CQC13NP   |
| Whereas, I/We, Peter C. Sercel of P  | asadena, CA,hereafter   |
| referred to as applicant, have invented certain new and useful improve   | ements in   |
| Resonant optical modulators  | L   |
| for which an application for a United States Patent was filed on _1  | 2/21/2001   |
| Application Number10 / 037,146   |   |
| for which an application for a United States Patent was executed of  |   |
| Whereas, Xponent Photonics Inc of Monrovia<br>to"assignee" whose mailing address is 425 East Huntington Drive,   | Monrovia, CA 91016  |
| desirous of acquiring the entire right, title and interest in the same;  |   |
|  |   |
| and the entire right, title and interest in and to any and all Patents of<br>United States, I/We hereby authorize and request the Commissioner of<br>United States Patent to said assignee, of the entire right, title, and infuse<br>use and behoof; and for the use and behoof of his legal representative<br>said Patent may be granted, as fully and entirely as the same wo<br>assignment and sale not be | f Patent and Trademarks to issue said<br>terest in and to the same, for his sole<br>is, to the full end of the term for which<br>huld have been held by me had this |
| Executed this 13 TH day of MALCH<br>at MONROVIA, CALIFORNIA  | , 20 <u><i>03</i></u>   |
| State of <u>LALIFORNIC</u>   | AAAAA<br>(Signature)  |
| Sounty of <u>KUS</u> / <u>FILLES</u>   | 1   |
| Before me personally appeared said <u>TETLE VERCE</u>  | TH TH   |
| Seal   | 15K Annel Stuck   |
| Wy Coran, Expire April   |   |
| te: Signatures of all the inventors or assignees and the second state the second state is required. See below*.  | (Notary Public)<br>123,2003 년<br>presentative(s) are required. Submit multiple  |

|   |   |  | Sample Form (former PTO/SB/15) (05-01   |
|---|---|--|---|
| ASS   |   | CATION   | Docket Number (Optional)<br>CQC13NP   |
| Whereas, I/We,  | Oskar J. Painter  | of   | Pasadena, CA,hereafter  |
| referred to as applica  | ant, have invented certain n  | ew and useful impro  | vements in  |
|   | Resonant  | optical modulato   | rs  |
| 🗹 for which an app  | lication for a United States  | Patent was filed on  | 12/21/2001  |
| Application Num   | ber 10 / 037,146  | <u></u> .  |   |
|   | lication for a United States<br>ent Photonics Inc of  |  | d on, and<br>via, CA herein referred  |
| to"assignee" whose n  | nailing address is42  | 25 East Huntington Driv  | /e, Monrovia, CA 91016 is   |
| desirous of acquiring   | the entire right, title and int   | erest in the same;   |   |
| and the entire right, f<br>United States, I/We had<br>United States Patent<br>use and behoof; and f | itle and interest in and to<br>ereby authorize and reques<br>to said assignee, of the er<br>for the use and behoof of h<br>granted, as fully and enti | any and all Patents<br>at the Commissioner<br>ntire right, title, and i<br>is legal representation | the said invention in the United States<br>s which may be granted therefor in the<br>of Patent and Trademarks to issue said<br>interest in and to the same, for his sole<br>ves, to the full end of the term for which<br>yould have been held by me had this |
| Executed this   | 1974 day of   | MALCH  | , 20 <u><i>0</i>3</u>   |
| <u> </u>  |   |  | $\square$   |
| State of <u>CALIFOLN</u><br>County of <u>LOS ANSE</u>   | · · ·   | ta la  | (Signature)   |
| Before me personally  | appeared said   | SKAR YAIN  | TER OTH   |
| and acknowledged the<br>day of <u>MALCH</u><br>Seal   | e foregoing instrument to be<br>, 2003  | Comm.<br>Notary PU   | LA STOCK<br># 1216780<br>BLIC-CALIFORNIA<br>Geles County<br>(Alotary Public)  |
| ote: Signatures of all the inv<br>orms if more than one signat                                      | entors or assignees of record of t<br>ure is required. See below*   | he entire interest or their  | representative(s) are required. Submit multiple   |
| Total of5_  | forms are submitted.  |  |   |

|  |  |  |   | Form (former PTO/SB/15) (05   |
|--|--|--|---|---|
| ASSI   | GNMENT OF APPLIC   | ATION  | Docket N  | umber (Optional)<br>CQC13NP   |
|  |  |  |   |   |
| Whereas, I/We,   | Guido Hunziker   | of   | Altadena, CA  | ,hereafter  |
| referred to as applica   | nt, have invented certain ne   | w and useful in  | nprovements in  | ······  |
|  | Resonant o   | ptical modul   | ators   |   |
| for which an appl  | ication for a United States F  | atent was filed  | on 12/21/2001   |   |
|  | per 10 / 037,146   |  |   |   |
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| 🗖 for which an appli   | ication for a United States P  | 'atent was exec  | uted on   | , and   |
|  |  |  |   |   |
| Vhereas, Xpone   | ent Photonics Inc of<br>ailing address is425   | Mo   | onrovia, CA   | herein referred   |
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| esirous of acquiring t   | the entire right, title and inte   | rest in the same   | 9;  |   |
| Inited States, I/We he<br>Inited States Patent t<br>se and behoof; and f<br>aid Patent may be g<br>ssignment and sale n  |  | the Commission<br>tire right, title, a<br>s legal represen<br>ely as the sam | oner of Patent and Tra<br>and interest in and to<br>ntatives, to the full end<br>ne would have been   | demarks to issue said<br>the same, for his sole<br>I of the term for which<br>held by me had this |
| Executed this /  | 7 <u>7</u> <u>H</u> day of   | MARCH  | /   | 20123   |
|  | in CALIFORNI   | 1 <u>1 111001.</u>   |   | 20 <u>0_</u> .  |
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| 4  | (() ( <sup>(</sup> – )   | ( h  |   |   |
| tate of <u>CALIFOR</u> A   | <u>(() &amp; )</u>   | 1 m  | - G H   |   |
| tate of <u>CALIFORM</u><br>ounty of <u>LOS ANS</u>   | <u>ure</u> )<br><u>Eles</u> ) ss:  | , 1  | - G H<br>(SIG)<br>VEIKER  |   |
| tate of <u>CALIFORM</u><br>county of <u>LOS ANS</u><br>efore me personally a<br>nd acknowledged the  | <u>ure</u> )<br><u>Eles</u> ) ss:  | Do Hun   | <u><u><u><u></u></u><u><u></u><u><u></u><u></u><u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u></u></u> | 20 <u>2</u>   |
| itate of <u>CALIFORM</u><br>county of <u>LOS ANS</u><br>efore me personally a  | $\frac{U(1)}{U(2)}$ SS:<br>appeared said $\underline{GU(1)}$                           | DO HUM<br>PA   | <u><u><u><u></u></u><u><u></u><u><u></u><u></u><u><u></u><u></u><u><u></u><u></u><u></u><u><u></u><u></u><u></u><u></u><u></u><u></u></u></u></u></u></u></u></u> | ud-Asch   |
| tate of <u>CALIFOR</u><br>ounty of <u>LOS ANS</u><br>efore me personally a<br>nd acknowledged the  | $\frac{U(1)^{2}}{U(2)}$ SS:<br>appeared said <u>UI</u><br>foregoing instrumenty by the | DO HUM<br>PA<br>COT<br>NOTAR<br>LO   | HELA STOCK<br>Y PUBLIC-CALIFORNIA<br>Angeles & arty   | Ucl Ach<br>otary Public)  |
| tate of <u>CALIFORP</u><br>ounty of <u>LOS ANS</u><br>efore me personally and<br>acknowledged the<br>ay of <u>MARCH</u><br>Seal<br>e: Signatures of all the inve | $\frac{U(1)^{2}}{U(2)}$ SS:<br>appeared said <u>UI</u><br>foregoing instrumenty by the | DO HUN<br>PA<br>Cor<br>NOTAR<br>Lo<br>NY COTAR                               | <u>HELA STOCK</u><br>Y PUBLIC-CALIFORMIA<br>Exologia Carty<br>Exologia April 22, 2003   | dture)<br>Ud-Joch<br>otary Public)  |