

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

| | |
|---|--------------------------|
| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| Cubic Wafer, Inc. | 03/21/2008 |
| RECEIVING PARTY DATA | |
| Name: | Cufer Asset Ltd. L.L.C. |
| Street Address: | 1209 Orange Street |
| City: | Wilmington |
| State/Country: | DELAWARE |
| Postal Code: | 19801 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 12483609 |
| CORRESPONDENCE DATA | |
| Fax Number: | (608)258-4258 |
| <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> | |
| Phone: | (608)258-4292 |
| Email: | ptomailmadison@foley.com |
| Correspondent Name: | Paul S. Hunter |
| Address Line 1: | Foley & Lardner LLP |
| Address Line 2: | 150 East Gilman Street |
| Address Line 4: | Madison, WISCONSIN 53703 |
| ATTORNEY DOCKET NUMBER: | 088245-4882 |
| NAME OF SUBMITTER: | Paul S. Hunter |
| Total Attachments: 19 source=4882Assign#page1.tif source=4882Assign#page2.tif source=4882Assign#page3.tif source=4882Assign#page4.tif | |

OP \$40.00 12483609

501178307

**PATENT
 REEL: 024395 FRAME: 0456**

source=4882Assign#page5.tif
source=4882Assign#page6.tif
source=4882Assign#page7.tif
source=4882Assign#page8.tif
source=4882Assign#page9.tif
source=4882Assign#page10.tif
source=4882Assign#page11.tif
source=4882Assign#page12.tif
source=4882Assign#page13.tif
source=4882Assign#page14.tif
source=4882Assign#page15.tif
source=4882Assign#page16.tif
source=4882Assign#page17.tif
source=4882Assign#page18.tif
source=4882Assign#page19.tif

ASSIGNMENT OF PATENT RIGHTS

For good and valuable consideration, the receipt of which is hereby acknowledged, Cubic Wafer, Inc., a Delaware corporation, with an office at 205 Wildbasin Road, Building 3, Suite 200, Austin, TX 78746 ("*Assignor*"), does hereby sell, assign, transfer, and convey unto Cufer Asset Ltd. L.L.C., a Delaware limited liability company, with an address at 1209 Orange Street, Wilmington, DE 19801 ("*Assignee*"), or its designees, all right, title, and interest that exist today and may exist in the future in and to any and all of the following (collectively, the "*Patent Rights*");

(a) the provisional patent applications, patent applications and patents listed in the table below (the "*Patents*");

(b) all patents and patent applications (i) to which any of the Patents directly or indirectly claims priority, (ii) for which any of the Patents directly or indirectly forms a basis for priority, and/or (iii) that were co-owned applications that incorporate by reference, or are incorporated by reference into, the Patents;

(c) all reissues, reexaminations, extensions, continuations, continuations in part, continuing prosecution applications, requests for continuing examinations, divisions, registrations of any item in any of the foregoing categories (a) and (b);

(d) all foreign patents, patent applications, and counterparts relating to any item in any of the foregoing categories (a) through (c), including, without limitation, certificates of invention, utility models, industrial design protection, design patent protection, and other governmental grants or issuances;

(e) all items in any of the foregoing in categories (b) through (d), whether or not expressly listed as Patents below and whether or not claims in any of the foregoing have been rejected, withdrawn, cancelled, or the like;

(f) inventions, invention disclosures, and discoveries described in any of the Patents and/or any item in the foregoing categories (b) through (e) that (i) are included in any claim in the Patents and/or any item in the foregoing categories (b) through (e), (ii) are subject matter capable of being reduced to a patent claim in a reissue or reexamination proceedings brought on any of the Patents and/or any item in the foregoing categories (b) through (e), and/or (iii) could have been included as a claim in any of the Patents and/or any item in the foregoing categories (b) through (e);

(g) all rights to apply in any or all countries of the world for patents, certificates of invention, utility models, industrial design protections, design patent protections, or other governmental grants or issuances of any type related to any item in any of the foregoing categories (a) through (f), including, without limitation, under the Paris Convention for the Protection of Industrial Property, the International Patent Cooperation Treaty, or any other convention, treaty, agreement, or understanding;

(h) all causes of action (whether known or unknown or whether currently pending, filed, or otherwise) and other enforcement rights under, or on account of, any of the Patents and/or any item in any of the foregoing categories (b) through (g), including, without limitation, all causes of action and other enforcement rights for

- (1) damages,
- (2) injunctive relief, and
- (3) any other remedies of any kind

for past, current, and future infringement; and

(i) all rights to collect royalties and other payments under or on account of any of the Patents and/or any item in any of the foregoing categories (b) through (h).

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|---------------------------|--|
| 5,923,951 (08/688,131) | US | 7/13/1999 (7/29/1996) | METHOD OF MAKING A FLIP-CHIP BONDED GAS-BASED OPTO-ELECTRONIC DEVICE Goossen, Keith Wayne; Kuo, Jenn-Ming; Wang, Yu-Chi |
| 6,005,240 (09/032,545) | US | 12/21/1999 (2/26/1998) | Triggered receivers for optoelectronic-VLSI circuits Krishnamoorthy, Ashok V |
| 6,005,262 (09/014,196) | US | 12/21/1999 (1/27/1998) | Flip-chip bonded VCSEL CMOS circuit with silicon monitor detector Cunningham, John; Goossen, Keith; Krishnamoorthy, Ashok |
| 6,067,307 (09/096,802) | US | 5/23/2000 (6/12/1998) | Vertical cavity surface emitting laser driving circuit Krishnamoorthy, Ashok V |
| 6,388,322 (09/764,192) | US | 5/14/2002 (1/17/2001) | Article comprising a mechanically compliant bump Goossen, Keith W; Jan, William Y |
| 6,458,411 (09/971,764) | US | 10/1/2002 (10/5/2001) | Method of making a mechanically compliant bump Goossen, Keith W; Jan, William Y |
| 6,420,778 (09/872,569) | US | 7/16/2002 (6/1/2001) | Differential electrical transmission line structures employing crosstalk compensation and related methods Sinyansky, Victor |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|---------------------------|--|
| 6,424,450 (09/726,179) | US | 7/23/2002 (11/29/2000) | Optical modulator having low insertion loss and wide bandwidth Goossen, Keith W |
| 6,501,589 (09/791,247) | US | 12/31/2002 (2/22/2001) | Article comprising a metallic anti-mirror Goossen, Keith W |
| 6,604,866 (10/090,880) | US | 8/12/2003 (3/4/2002) | Optical fiber ferrule Kang, Keith; Trezza, John |
| CA2477801 | CA | 3/3/2003 | OPTICAL FIBER FERRULE Trezza, John; Kang, Keith |
| CN03805137.0 | CN | 3/3/2003 | Optical fiber ferrule Kang, Keith; Trezza, John |
| EP03716257.5 | EP | 3/3/2003 | OPTICAL FIBER FERRULE Kang, Keith; Trezza, John |
| KR10-2004-7013843 | KR | 3/3/2003 | OPTICAL FIBER FERRULE Kang, Keith; Trezza, John |
| SG105996 (SG200404751-8) | SG | (3/3/2003) | OPTICAL FIBER FERRULE Kang, Keith; Trezza, John |
| 6,913,397 (10/463,294) | US | 7/5/2005 (6/17/2003) | Method and system for insertion of fibers of a fiber cable into a ferrule Kang, Keith; Kang, Misu; Otto, Robert |
| CA2494726 | CA | 7/3/2003 | METHOD AND SYSTEM FOR INSERTION OF FIBERS OF A FIBER CABLE INTO A FERRULE Otto, Robert; Kang, Misu; Kang, Keith |
| CN03823231.6 | CN | 7/3/2003 | Method and system for insertion of fibers of a fiber cable into a ferrule Kang, Keith; Kang, Misu; Otto, Robert |
| EP03748945.7 | EP | 7/3/2003 | METHOD AND SYSTEM FOR INSERTION OF FIBERS OF A FIBER CABLE INTO A FERRULE Kang, Keith; Kang, Misu; Otto, Robert |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|--------------------------|--|
| 6,880,980 (10/623,435) | US | 4/19/2005 (7/18/2003) | Optical fiber ferrule Kang, Keith; Trezza, John |
| KR10-2005-7001778 | KR | 1/31/2005 | METHOD AND SYSTEM FOR INSERTION OF FIBERS OF A FIBER CABLE INTO A FERRULE Kang, Keith; Kang, Misu; Otto, Robert |
| 6,620,642 (09/896,189) | US | 9/16/2003 (6/29/2001) | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| 6,773,166 (09/896,664) | US | 8/10/2004 (6/29/2001) | MULTI-PIECE FIBER OPTIC COMPONENT AND MANUFACTURING TECHNIQUE Trezza, John; Dudoff, Greg; Kang, Keith; Olson, Ronald |
| 09/896,797 | US | 6/29/2001 | Redundant optical device array Trezza, John |
| 6,790,691 (09/896,983) | US | 9/14/2004 (6/29/2001) | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| 6,753,197 (09/897,158) | US | 6/22/2004 (6/29/2001) | OPTO-ELECTRONIC DEVICE INTEGRATION Greg Dudoff, Amherst, NH |
| 6,724,794 (09/897,160) | US | 4/20/2004 (6/29/2001) | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| CA2447373 | CA | 6/21/2002 | REDUNDANT OPTICAL DEVICE ARRAY Trezza, John |
| CN02813098.7 | CN | 6/21/2002 | Redundant optical device array Trezza, John |
| KR10-2003-7016817 | KR | 6/21/2002 | REDUNDANT OPTICAL DEVICE ARRAY Trezza, John |
| SG101696 (SG200307580-1) | SG | (6/21/2002) | REDUNDANT OPTICAL DEVICE ARRAY Trezza, John |
| 6,989,945 (10/180,241) | US | 1/24/2006 (6/26/2002) | LONG-THROW, TIGHT FOCUSING OPTICAL COUPLER Kang, Keith; Trezza, John |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|---------------------------|--|
| 6,731,665 (10/180,367) | US | 5/4/2004 (6/26/2002) | LASER ARRAYS FOR HIGH POWER FIBER AMPLIFIER PUMPS Trezza, John |
| 6,774,715 (10/180,369) | US | 8/10/2004 (6/26/2002) | BICMOS AC FILTER CIRCUIT Wyman, Ted; Kiamilev, Fouad |
| 6,753,199 (10/180,383) | US | 6/22/2004 (6/26/2002) | TOPSIDE ACTIVE OPTICAL DEVICE APPARATUS AND METHOD Faska, Tom; Dudoff, Greg |
| 6,775,308 (10/180,603) | US | 8/10/2004 (6/26/2002) | MULTI-WAVELENGTH SEMICONDUCTOR LASER ARRAYS AND APPLICATIONS THEREOF Hamster, Harald; Trezza, John |
| 6,633,421 (10/180,610) | US | 10/14/2003 (6/26/2002) | INTEGRATED ARRAYS OF MODULATORS AND LASERS ON ELECTRONICS Trezza, John |
| 6,613,597 (10/183,847) | US | 9/2/2003 (6/27/2002) | OPTICAL CHIP PACKAGING VIA THROUGH HOLE Stack, Richard |
| CA2447345 | CA | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Trezza, John; Dudoff, Greg |
| EP02749716.3 | EP | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| KR10-2003-7016822 | KR | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| SG101695 (SG20030757-1) | SG | (6/28/2002) | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| DE60216119 (DE60216119) | DE | 9/6/2007 (6/28/2002) | INTEGRATED ARRAYS OF MODULATORS AND LASERS ON ELECTRONICS Trezza, John |
| FR1417712 (FR02749717.1) | FR | 11/15/2006 (6/28/2002) | INTEGRATED ARRAYS OF MODULATORS AND LASERS ON ELECTRONICS Trezza, John |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|----------------------------------|----------------|---------------------------|--|
| GB1417712 (GB02749717.1) | GB | 11/15/2006 (6/28/2002) | INTEGRATED ARRAYS OF MODULATORS AND LASERS ON ELECTRONICS Trezza, John |
| KR10-2003-7016824 | KR | 6/28/2002 | OPTICAL CHIP PACKAGING VIA THROUGH HOLE Stack, Richard |
| CA2447364 | CA | 6/28/2002 | TOPSIDE ACTIVE OPTICAL DEVICE APPARATUS AND METHOD Faska, Tom; Dudoff, Greg |
| CN02813185.1 | CN | 6/28/2002 | Topside active optical device apparatus and method Faska, Tom; Dudoff, Greg |
| EP02749969.8 | EP | 6/28/2002 | TOPSIDE ACTIVE OPTICAL DEVICE APPARATUS AND METHOD Faska, Tom; Dudoff, Greg |
| KR10-2003-7016816 | KR | 6/28/2002 | TOPSIDE ACTIVE OPTICAL DEVICE APPARATUS AND METHOD Faska, Tom; Dudoff, Greg |
| SG101700 (SG200307584-3) | SG | (6/28/2002) | TOPSIDE ACTIVE OPTICAL DEVICE APPARATUS AND METHOD Faska, Tom; Dudoff, Greg |
| CA2447365 | CA | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| ZL02813097.9 (CN02813097.9) | CN | 9/6/2006 (6/28/2002) | Opto-electronic device integration Dudoff, Greg; Trezza, John |
| EP02753370.2 | EP | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| KR10-2003-7016812 | KR | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| SG200307578-5 | SG | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|---------------------------|--|
| CA2447368 | CA | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| CN02813089.8 | CN | 6/28/2002 | Opto-electronic device integration Trezza, John; Hamster, Harald |
| KR10-2003-7016813 | KR | 6/28/2002 | Opto-electronic device integration Trezza, John; Hamster, Harald |
| SG101307 (SG20030579-3) | SG | (6/28/2002) | Opto-electronic device integration Trezza, John; Hamster, Harald |
| DE60219161.0-08 | DE | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| FR02756474.9 | FR | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| GB1399953 (GB02756474.9) | GB | 3/28/2007 (6/28/2002) | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| CA2447369 | CA | 6/28/2002 | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| ZL02813100.2 (CN02813100.2) | CN | 11/15/2006 (6/28/2002) | Photoelectronic device integration Dudoff, Greg; Trezza, John |
| KR10-2003-701814 | KR | 6/28/2002 | Photoelectronic device integration Dudoff, Greg; Trezza, John |
| SG101693 (SG200307573-6) | SG | 11/15/2006 (6/28/2002) | Photoelectronic device integration Dudoff, Greg; Trezza, John |
| 6,619,855 (10/098,255) | US | 9/16/2003 (3/14/2002) | POST-FORMATION FEATURE OPTIMIZATION Dudoff, Greg; Kang, Keith; |
| 6,609,835 (10/098,652) | US | 8/26/2003 (3/14/2002) | Oxidized light guiding component and manufacturing technique Trezza, John; Kang, Keith; Dudoff, Greg |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|--------------------------|---|
| 6,629,780 (10/098,990) | US | 10/7/2003 (3/14/2002) | HIGH-PRECISION FEMALE FORMAT MULTIFIBER CONNECTOR Kang, Keith; Dudoff, Greg |
| 6,722,788 (10/180,239) | US | 4/20/2004 (6/26/2002) | INTEGRATION OF FUSED GLASS COLLIMATED COUPLER FOR USE IN OPTO-ELECTRONIC MODULES Kang, Keith; Trezza, John |
| CA2447370 | CA | 6/28/2002 | HIGH-PRECISION FEMALE FORMAT MULTIFIBER CONNECTOR Dudoff, Greg; Kang, Keith |
| CN02813096.0 | CN | 6/28/2002 | High-precision concave type multiple fiber optical connector Kang, Keith; Dudoff, Greg |
| KR10-2003-7016826 | KR | 6/28/2002 | HIGH-PRECISION FEMALE FORMAT MULTIFIBER CONNECTOR Kang, Keith; Dudoff, Greg |
| SG101694 (SG200307574-4) | SG | (6/28/2002) | HIGH-PRECISION FEMALE FORMAT MULTIFIBER CONNECTOR Kang, Keith; Dudoff, Greg |
| CA2447341 | CA | 6/28/2002 | POST-FORMATION FEATURE OPTIMIZATION Kang, Keith; Dudoff, Greg |
| ZL02813099.5 (CN02813099.5) | CN | 6/28/2006 (6/28/2002) | Method of linker feature optimization Dudoff, Greg; Kang, Keith |
| KR10-2003-7016825 | KR | 6/28/2002 | POST-FORMATION FEATURE OPTIMIZATION Dudoff, Greg; Kang, Keith |
| SG101699 (SG200307583-5) | SG | (6/28/2002) | POST-FORMATION FEATURE OPTIMIZATION Dudoff, Greg; Kang, Keith |
| 6,899,465 (10/260,034) | US | 5/31/2005 (6/26/2003) | MULTI-PIECE FIBER OPTIC COMPONENT AND MANUFACTURING TECHNIQUE Trezza, John; Kang, Keith; Dudoff, Greg; Olson, Ronald |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|---|----------------|---------------------------|--|
| 7,077,577 (10/260,032) | US | 7/18/2006 (6/27/2003) | MULTI-PIECE FIBER OPTIC COMPONENT AND MANUFACTURING TECHNIQUE Trezza, John; Kang, Keith; Dudoff, Greg; Olson, Ronald |
| 6,945,701 (10/260,033) | US | 9/20/2005 (6/27/2003) | MULTI-PIECE FIBER OPTIC COMPONENT AND MANUFACTURING TECHNIQUE Trezza, John; Kang, Keith; Dudoff, Greg; Olson, Ronald |
| 6,817,778 (10/607,620) | US | 11/16/2004 (6/27/2003) | HIGH-PRECISION FEMALE FORMAT MULTIFIBER CONNECTOR Kang, Keith; Dudoff, Greg |
| 7,092,424 (10/676,281) | US | 8/15/2006 (9/30/2003) | INTEGRATED ARRAYS OF MODULATORS AND LASERS ON ELECTRONICS Trezza, John |
| 6,956,244 (10/793,509) | US | 10/18/2005 (3/3/2004) | OPTO-ELECTRONIC DEVICE INTEGRATION Dudoff, Greg; Trezza, John |
| 6,814,498 (10/817,190) | US | 11/9/2004 (4/2/2004) | INTEGRATION OF FUSED GLASS COLLIMATED COUPLER FOR USE IN OPTO-ELECTRONIC MODULES Kang, Keith; Trezza, John |
| KR10-0709919 (KR10-2000- 0046691) | KR | 4/16/2007 (8/11/2000) | Apparatus for forming a TiN thin film and method of forming a MOCVD-TiN thin film using the same Kim, Byoung-Youp; Kim, Hyung-Seok |
| 6,643,052 (09/788,714) | US | 11/4/2003 (2/20/2001) | Apparatus comprising a micro-mechanical optical modulator Goossen, Keith W. |
| 6,702,480 (09/872,903) | US | 3/9/2004 (6/2/2001) | Opto-electronic chip package Sparacino, John |
| 6,707,840 (09/873,640) | US | 3/16/2004 (6/4/2001) | Vertical cavity surface emitting laser Goossen, Keith W. |
| 6,771,860 (10/183,495) | US | 8/3/2004 (6/27/2002) | Module mounted aligning optical connector Trezza, John; Kang, Keith |
| KR10-2003-7016823 | KR | 6/28/2002 | Module mounted aligning optical connector Trezza, John; Kang, Keith |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|---------------------------|---|
| 6,927,861 (10/183,766) | US | 8/9/2005 (6/27/2002) | Simple deterministic method for array based optical component packaging Zhou, Chuang; Kang, Keith |
| 6,804,438 (10/187,240) | US | 10/12/2004 (6/28/2002) | Method for relaxing mechanical tolerance in an opto-electronic unit Stack, Richard; Dugas, Roger |
| 6,857,788 (10/641,195) | US | 2/22/2005 (8/13/2003) | Removable coupling of an opto-electronic module into a front access rack Dugas, Roger |
| CA2534536 | CA | 8/11/2004 | REMOVABLE COUPLING OF AND OPTO-ELECTRONIC MODULE INTO A FRONT ACCESS RACK Dudoff, Greg |
| EP04780813.4 | EP | 8/11/2004 | REMOVABLE COUPLING OF AND OPTO-ELECTRONIC MODULE INTO A FRONT ACCESS RACK Roger, Dugas |
| KR10-2006-7002837 | KR | 2/10/2006 | REMOVABLE COUPLING OF AN OPTO-ELECTRONIC MODULE INTO A FRONT ACCESS RACK Dudoff, Greg |
| 7,027,203 (10/391,431) | US | 4/11/2006 (3/18/2003) | Combination micromachine and optical device array Trezza, John |
| CA2478238 | CA | 3/19/2003 | COMBINATION MICROMACHINE AND OPTICAL DEVICE ARRAY Trezza, John |
| CN03806074.4 | CN | 3/19/2003 | Combination micromachine and optical device array Trezza, John |
| KR10-2004-7014571 | KR | 3/19/2003 | Combination micromachine and optical device array Trezza, John |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|---------------------------|--|
| EP03726079.1 | HP | 3/19/2003 | COMBINATION MICROMACHINE AND OPTICAL DEVICE ARRAY Trezza, John |
| D466,865 (29/144,363) | US | 12/10/2002 (6/29/2001) | COMMUNICATION MODULE Stack, Richard; Dugas, Roger |
| D466,866 (29/144,365) | US | (6/29/2001) | COMMUNICATION MODULE Stack, Richard; Dugas, Roger |
| D476,978 (29/157,414) | US | 12/10/2002 (3/18/2002) | COMMUNICATION MODULE Dugas, Roger; Stack, Richard; Kang, Keith; Czoschke, Mark; Trezza, John |
| D476,979 (29/157,416) | US | 7/8/2003 (3/18/2002) | COMMUNICATION MODULE Dugas, Roger; Stack, Richard; Kang, Keith; Czoschke, Mark; Trezza, John |
| D476,980 (29/157,420) | US | 7/8/2003 (3/18/2002) | COMMUNICATION MODULE Dugas, Roger; Stack, Richard; Kang, Keith; Czoschke, Mark; Trezza, John |
| D477,312 (29/157,424) | US | 7/15/2003 (3/18/2002) | COMMUNICATION MODULE Dugas, Roger; Stack, Richard; Kang, Keith; Czoschke, Mark; Trezza, John |
| D476,981 (29/157,454) | US | 7/8/2003 (3/18/2002) | COMMUNICATION MODULE Dugas, Roger; Stack, Richard; Kang, Keith; Czoschke, Mark; Trezza, John |
| D476,982 (29/161,861) | US | 7/8/2003 (6/4/2002) | COMMUNICATION INTERFACE Roger Dugas , Chester, NH (US) |
| D479,828 (29/172,257) | US | 9/23/2003 (12/9/2002) | INSIDE-OUT HEAT SINK Dugas, Roger |
| D479,829 (29/172,258) | US | 9/23/2003 (12/9/2002) | INSIDE-OUT HEAT SINK Dugas, Roger |
| D490,382 (29/172,246) | US | 5/25/2004 (12/9/2002) | INSIDE-OUT HEAT SINK Dugas, Roger |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|--------------------------|--|
| D543,953 (29/189,322) | US | 6/5/2007 (9/2/2003) | WING PORTION OF A BUTTERFLY-STYLE INSIDE-OUT HEAT SINK Dugas, Roger; Frushour, Ross L. |
| JP1240344 (JP2004-032771) | JP | 4/1/2005 (10/28/2004) | BUTTERFLY-STYLE INSIDE-OUT HEAT SINK WING PORTION Dugas, Roger; Frushour, Ross L. |
| EM000145354 | EM | 2/27/2004 | BUTTERFLY-STYLE INSIDE-OUT HEAT SINK WING PORTION Dugas, Roger; Frushour, Ross L. |
| EM000145354-0001 | EM | 6/1/2004 0 | BUTTERFLY-STYLE INSIDE-OUT HEAT SINK WING PORTION Dugas, Roger; Frushour, Ross L. |
| (EM000145354-0002) | EM | 6/1/2004 0 | BUTTERFLY-STYLE INSIDE-OUT HEAT SINK WING PORTION Dugas, Roger; Frushour, Ross L. |
| (EM000145354-0003) | EM | 6/1/2004 0 | BUTTERFLY-STYLE INSIDE-OUT HEAT SINK WING PORTION Dugas, Roger; Frushour, Ross L. |
| (EM000145354-0004) | EM | 6/1/2004 0 | BUTTERFLY-STYLE INSIDE-OUT HEAT SINK WING PORTION Dugas, Roger; Frushour, Ross L. |
| (EM000145354-0005) | EM | 6/1/2004 0 | BUTTERFLY-STYLE INSIDE-OUT HEAT SINK WING PORTION Dugas, Roger; Frushour, Ross L. |
| 10/456,388 | US | 6/5/2003 | Optical receiver device and method Faska, Tom; Martin, Robert |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|--------------------|---|
| 11/329,481 | US | 1/10/2006 | Profiled contact Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/329,506 | US | 1/10/2006 | Rigid-backed, membrane-based chip tooling Trezza, John; Frushour, Ross |
| 11/329,539 | US | 1/10/2006 | Membrane-based chip tooling Dugas, Roger; Trezza, John |
| 11/329,540 | US | 1/10/2006 | Routingless chip architecture Misra, Abhay; Trezza, John |
| 11/329,556 | US | 1/10/2006 | Post & penetration interconnection Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/329,557 | US | 1/10/2006 | Remote chip attachment Trezza, John |
| 11/329,558 | US | 1/10/2006 | Chip-based thermo-stack Trezza, John |
| 11/329,574 | US | 1/10/2006 | Back-to-front via process Trezza, John |
| 11/329,575 | US | 1/10/2006 | Chip connector Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/329,576 | US | 1/10/2006 | Patterned contact Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/329,852 | US | 1/10/2006 | Through chip connection Trezza, John |
| 11/329,873 | US | 1/10/2006 | Post-attachment chip-to-chip connection Trezza, John |
| 11/329,874 | US | 1/10/2006 | Contact-based encapsulation Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/329,875 | US | 1/10/2006 | Inverse chip connector Trezza, John |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|-------------------------|--|
| 11/329,883 | US | 1/10/2006 | Pin-type chip tooling Trezza, John; Frushour, Ross |
| 11/329,885 | US | 1/10/2006 | Electronic chip contact structure Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/329,886 | US | 1/10/2006 | Chip spanning connection Trezza, John |
| 7,215,032 (11/329,887) | US | 5/8/2007 (1/10/2006) | TRIAXIAL THROUGH-CHIP CONNECTION Trezza, John |
| 11/329,952 | US | 1/10/2006 | Chip capacitive coupling Trezza, John |
| 7,157,372 (11/329,953) | US | 1/2/2007 (1/10/2006) | COAXIAL THROUGH CHIP CONNECTION Trezza, John |
| 11/329,955 | US | 1/10/2006 | Active packaging Trezza, John; Misra, Abhay |
| 11/330,011 | US | 1/10/2006 | Tack & fuse chip bonding Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/422,551 | US | 6/6/2006 | ISOLATING CHIP-TO-CHIP CONTACT John Trezza , Nashua, NH (US) |
| PCT/US2006/023174 | WO | 6/14/2006 | TACK & FUSE CHIP BONDING Trezza, John; Callahan, John; Dudoff, Gregory |
| PCT/US2006/023246 | WO | 6/14/2006 | CHIP CONNECTOR Trezza, John; Callahan, John; Dudoff, Gregory |
| PCT/US2006/023248 | WO | 6/14/2006 | THROUGH CHIP CONNECTION Trezza, John |
| PCT/US2006/023249 | WO | 6/14/2006 | CHIP SPANNING CONNECTION Trezza, John |
| PCT/US2006/023250 | WO | 6/14/2006 | ELECTRONIC CHIP CONTACT STRUCTURE Trezza, John; Callahan, John; Dudoff, Gregory |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|--------------------|---|
| PCT/US2006/023297 | WO | 6/14/2006 | ISOLATING CHIP-TO-CHIP CONTACT Trezza, John |
| PCT/US2006/023361 | WO | 6/14/2006 | CHIP-BASED THERMO-STACK Trezza, John |
| PCT/US2006/023362 | WO | 6/14/2006 | ROUTINGLESS CHIP ARCHITECTURE Trezza, John; Misra, Abhay |
| PCT/US2006/023363 | WO | 6/14/2006 | BACK-TO-FRONT VIA PROCESS Trezza, John |
| PCT/US2006/023364 | WO | 6/14/2006 | POST & PENETRATION INTERCONNECTION Trezza, John; Callahan, John; Dudoff, Gregory |
| PCT/US2006/023365 | WO | 6/14/2006 | CHIP TOOLING Trezza, John; Frushour, Ross |
| PCT/US2006/023366 | WO | 6/14/2006 | CHIP CAPACITIVE COUPLING Trezza, John |
| PCT/US2006/023367 | WO | 6/14/2006 | ACTIVE PACKAGING Trezza, John; Misra, Abhay |
| PCT/US2006/023368 | WO | 6/14/2006 | REMOTE CHIP ATTACHMENT Trezza, John |
| 11/556,747 | US | 11/6/2006 | Processed Wafer Via Trezza, John |
| 11/556,826 | US | 11/6/2006 | COAXIAL THROUGH CHIP CONNECTION Trezza, John |
| 11/675,746 | US | 2/16/2007 | THERMALLY BALANCED VIA Trezza, John |
| 11/675,756 | US | 2/16/2007 | STACKED CHIP-BASED SYSTEM AND METHOD Trezza, John |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|--------------------|--|
| 11/688,088 | US | 3/19/2007 | Side Stacking Apparatus and Method Trezza, John |
| 11/693,851 | US | 3/30/2007 | TRIAXIAL THROUGH-CHIP CONNECTION Trezza, John |
| 11/693,936 | US | 3/30/2007 | CHIP CONNECTOR Trezza, John; Callahan, John; Dudoff, Gregory |
| 11/693,984 | US | 3/30/2007 | MEMBRANE-BASED CHIP TOOLING Dugas, Roger; Trezza, John |
| 11/617,985 | US | 12/29/2006 | FRONT-END PROCESSED WAFER HAVING THROUGH-CHIP CONNECTIONS Trezza, John |
| 11/696,799 | US | 4/5/2007 | FRONT-END PROCESSED WAFER HAVING THROUGH-CHIP CONNECTIONS Trezza, John |
| 11/619,482 | US | 1/3/2007 | IMPROVED SENSITIVITY CAPACITIVE No inventor(s) info available |
| 11/675,268 | US | 2/15/2007 | POST-SEET DEPOSITION PROCESS No inventor(s) info available |
| 11/675,287 | US | 2/15/2007 | VARIABLE OFF-CHIP DRIVE No inventor(s) info available |
| 11/675,453 | US | 2/15/2007 | BOWED WAFER HYBRIDIZATION COMPENSATION No inventor(s) info available |
| 11/675,731 | US | 2/16/2007 | PLATED PILAR PACKAGE FORMATION No inventor(s) info available |
| 11/696,774 | US | 4/5/2007 | HEAT CYCLE-ABLE CONNECTION No inventor(s) info available |
| 11/696,796 | US | 4/5/2007 | ANTI-PHASE SEGREGATION CONNECTION No inventor(s) info available |

| <u>Patent or Application No.</u> | <u>Country</u> | <u>Filing Date</u> | <u>Title of Patent and Inventors</u> |
|--------------------------------------|----------------|----------------------------|--|
| 11/738,817 | US | 4/23/2007 | ULTRA-THIN CHIP PACKAGING No inventor(s) info available |
| 11/778,461 | US | 7/16/2007 | ELECTRICALLY CONDUCTIVE INTERCONNECT SYSTEM AND METHOD No inventor(s) info available |
| 11/872,083 | US | 10/15/2007 | WAFER VIA FORMATION No inventor(s) info available |
| PCT/US07/81380 | WO | 10/15/2007 | WAFER VIA FORMATION No inventor(s) info available |
| 7,289,547 (10/697,815) | US | 10/30/2007 (10/29/2003) | LASER AND DETECTOR DEVICE Trezza, John; Diagne, Mohamed |
| EP04816927.0 | EP | 10/18/2004 | LASER AND DETECTOR DEVICE TREZZA JOHN; DIAGNE MOHAMED |
| CN2004800321558 | CN | 10/18/2004 | LASER AND DETECTOR DEVICE TREZZA JOHN; DIAGNE MOHAMED |
| KR10-2006-7008317 | KR | 10/18/2004 | LASER AND DETECTOR DEVICE TREZZA JOHN; DIAGNE MOHAMED |

Assignor represents, warrants and covenants that:

(1) Assignor has the full power and authority, and has obtained all third party consents, approvals and/or other authorizations required to enter into this Agreement and to carry out its obligations hereunder, including the assignment of the Patent Rights to Assignee; and

(2) Assignor owns, and by this document assigns to Assignee, all right, title, and interest to the Patent Rights, including, without limitation, all right, title, and interest to sue for infringement of the Patent Rights. Assignor has obtained and properly recorded previously executed assignments for the Patent Rights as necessary to fully perfect its rights and title therein in accordance with governing law and regulations in each respective jurisdiction. The Patent Rights are free and clear of all liens, claims, mortgages, security interests or other encumbrances, and restrictions. There are no actions, suits, investigations, claims or proceedings threatened, pending or in progress relating in any way to the Patent Rights. There are no existing contracts, agreements, options, commitments, proposals, bids, offers, or rights with, to, or in any person to acquire any of the Patent Rights.

Assignor hereby authorizes the respective patent office or governmental agency in each jurisdiction to issue any and all patents, certificates of invention, utility models or other governmental grants or issuances that may be granted upon any of the Patent Rights in the name of Assignee, as the assignee to the entire interest therein.

