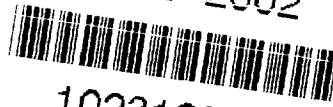


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Application Number(s) or Patent Number(s) Mark if additional numbers attached Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

Patent Application Number(s)

Patent Number(s)

Table with 6 columns: Patent Application Number(s) and Patent Number(s). Includes entries like 60/364,636, 29/142,752, 09/724,770, 5,999,672, 6,289,155 B1, 6,236,780 B1, etc.

Patent Cooperation Treaty (PCT)

Enter PCT application number only if a U.S. Application Number has not been assigned. PCT [] PCT [] PCT [] PCT [] PCT [] PCT []

Number of Properties Enter the total number of properties involved. # 32

Fee Amount Fee Amount for Properties Listed (37 CFR 3.41): \$1,280.00

Method of Payment: Enclosed [X] Deposit Account []

Deposit Account (Enter for payment by deposit account or if additional fees can be charged to the account)

Deposit Account Number # 20-0531

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Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Joseph A. Capraro, Jr. Name of Person Signing

[Signature] Signature

12/12/02 Date

PATENT AND PATENT APPLICATIONS ASSIGNMENT

WHEREAS, LightChip, Inc., a company organized under the laws of Delaware, hereinafter "ASSIGNOR," is the owner and assignee of all interest in the inventions disclosed in the United States patents and patent applications listed in Exhibits A and B (collectively, the "Letters Patents"), which are attached hereto and incorporated by reference herein.

WHEREAS, Confluent Photonics Corporation, a company organized under the laws of Delaware, hereinafter "ASSIGNEE," desires to acquire an interest therein.

WHEREAS, the ASSIGNOR and ASSIGNEE have entered into a certain Asset Purchase Agreement of even date herewith pursuant to which the ASSIGNOR has sold and the ASSIGNEE has, among others, purchased all right, title, and interest in, to and under the Letters Patents.

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNOR has sold, assigned and transferred and by these presents does hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns, and legal representatives, ASSIGNOR's entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to the inventions as described in said Letters Patents, together with ASSIGNOR's entire right, title and interest in and to said Letters Patents, and such Letters Patents as may issue thereon or claim priority under law or international convention; including but not limited to conversions, continuations, divisionals, reissues, renewals, reexaminations, and other filings related to such Letters Patents; said inventions and Letters Patents to be held and enjoyed by said ASSIGNEE for its own use and behalf, and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patents may be granted as fully and entirely as the same would have been held by ASSIGNOR had this assignment and sale not been made; ASSIGNOR hereby conveys all of ASSIGNOR's rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by such Letters Patents. ASSIGNOR hereby acknowledges that this assignment, being of ASSIGNOR's entire right, title and interest in and to said inventions, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patents by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all Letters Patents to ASSIGNEE for its own name as assignee of ASSIGNOR's entire right, title and interest therein. ASSIGNOR also hereby acknowledges that this assignment carries with it the right in ASSIGNEE to sue for damages for infringement of said Letters Patents.

AND, ASSIGNOR hereby further agrees for itself and its successors, assigns and legal representatives to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid inventions to said ASSIGNEE, its successors, assigns, and legal representatives, but at its expense and charges,

ASSIGNEE, its successors, assigns, and legal representatives, but at its expense and charges, including: the execution of applications for patents in foreign countries; the execution of substitution, reissue, divisional or continuation applications; and preliminary or other statements or the giving of testimony in any interference or other proceeding in which said inventions or any application or patent directed thereto may be involved.

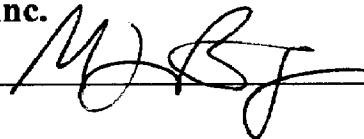
AND, ASSIGNOR hereby authorizes and requests the Director of the United States Patent and Trademark Office and the empowered officials of all other governments to record ASSIGNEE as the owner of the Letters Patents and to issue any applications as shall be granted upon such Letters Patents, notices and any other communications and documents bearing on the Letters Patents based thereon, to said ASSIGNEE, its successors, assigns, and legal representatives.

AND, this assignment is binding on ASSIGNOR, and its successors and assigns, and will inure to the benefit of ASSIGNEE, its successors and assigns, and shall be construed and enforced in accordance with the laws of the Commonwealth of Massachusetts without regard to the conflict or choice of law rules of Massachusetts or any other jurisdiction.

IN WITNESS WHEREOF, ASSIGNOR hereby caused this Assignment to be duly executed and set its hand and affixed its seal on the date set forth below.

LightChip, Inc.

By: _____



Name: _____

MICHAEL BAYER

Title: _____

CFO

State of Massachusetts)
County of Suffolk) ss

Subscribed and sworn to before me, by the above-named Michael Bayer
this 8th day of October, 2002.



Notary Public

My Commission Expires: 9-25-09

Exhibit A

Issued Patents

<u>Issued Patent Number</u>	<u>Subject</u>	<u>Issue Date</u>
5,999,672	Integrated Bi-directional Dual Axial Gradient Refractive Index/Diffraction Grating Wavelength Division Multiplexer	12/7/99
6,137,933	Integrated Bi-directional Dual Axial Gradient Refractive Index/Diffraction Grating Wavelength Division Multiplexer	10/24/00
6,011,885	Integrated Bi-directional Gradient Refractive Index Wavelength Division Multiplexer	1/4/00
6,011,884	Integrated Bi-directional Axial Gradient Refractive Index/Diffraction Grating Wavelength Division Multiplexer	1/4/00
6,343,169 B1	Ultra-dense Wavelength Division Multiplexing/Demultiplexing Devices	1/29/02
6,263,135 B1	Wavelength Division Multiplexing/Demultiplexing Devices Using High Index of Refraction Crystalline Lenses	7/17/01
6,289,155 B1	Wavelength Division Multiplexing/Demultiplexing Devices Using Dual High Index of Refraction Crystalline Lenses	9/11/01
6,404,945 B1	Wavelength Division Multiplexing/Demultiplexing Devices Using Homogeneous Refractive Index Lenses	6/11/02
6,271,970	Wavelength Division Multiplexing/Demultiplexing Devices Using Dual Homogeneous Refractive Index Lenses	8/7/01
6,434,299	Wavelength Division Multiplexing/Demultiplexing Devices Having Concave Diffraction Gratings	8/13/02
6,415,073 B1	Wavelength Division Multiplexing/Demultiplexing Devices Employing Pattern Optical Components	7/2/02
6,243,513 B1	Wavelength Division Multiplex/Demultiplexing Devices Using Diffractive Optic Lenses	6/5/01
6,236,780 B1	Wavelength Division Multiplexing/Demultiplexing Devices Using Dual Diffractive Optic Lenses	5/22/01
6,298,182	Wavelength Division Multiplexing/Demultiplexing Devices Using Polymer Lenses	10/2/01
6,181,853 B1	Wavelength Division Multiplexing/Demultiplexing Devices Using Dual Polymer Lenses	1/30/01

Exhibit B

Patent Applications

<u>Proprietary Rights</u>	<u>Subject</u>	<u>Number</u>	<u>Filing Date</u>
Provisional Patent Application	Support Mechanism for a DWDM to De-Couple External Bending Moments, Torsion Moments, and Thermal Gradients from Internal Optics	No. 60/364,636	3/18/02
Provisional Patent Application	Opto-Mechanical Platform	No. 60/364,635	3/18/02
Provisional Patent Application	Attachment Method Between Structural and Optical Components of Differing Thermal Expansion Rates Using Flexure Pads	No. 60/364,634	3/18/02
Provisional Patent Application	Attachment Method Between Structural and Optical Components of Differing Thermal Expansion Rates Using An Intermediate Layer	No. 60/364,637	3/18/02
Design Patent Application	Fiber Optic Jumper	No. 29/140,472	4/17/01
Design Patent Application	Optical Communications Device Housing Portion	No. 29/142,796	6/1/01
Design Patent Application	Optical Communications Device Housing Portion	No. 29/142,752	6/1/01
Patent Application	Bi-directional Wavelength Division Multiplexing Demultiplexing Devices	No. 09/605,162	6/27/00
Patent Application	Ultra-dense Wavelength Division Multiplexing/Demultiplexing Devices	No. 10/056,487	1/28/02
Patent Application	Wavelength Division Multiplexing/Demultiplexing Devices Using Homogeneous Refractive Index Lenses	No. 10/134,398	4/30/02
Patent Application	Wavelength Division Multiplexing/Demultiplexing Devices Employing Patterned Optical Components	No. 09/903,613	7/13/01
Patent Application	Athermalization and Pressure of Desensitization of Diffraction Grating Based WDM Devices	No. 09/724,771	11/28/00
Patent Application	Athermalization and Pressure Desensitization of Diffraction Grating Based WDM Devices	No. 09/724,770	11/28/00
Patent Application	Thermally Stable Mounting for a Diffraction Grating Device	No. 09/751,042	12/29/00
Patent Application	Low Loss Fiber Optic Jumper with Electronic Presence Detection	No. 09/866,272	5/25/01
Patent Application	Improved Diffraction Grating for Wavelength Division Multiplexing/Demultiplexing Devices	No. 09/587,266	6/5/00

<u>Proprietary Rights</u>	<u>Subject</u>	<u>Number</u>	<u>Filing Date</u>
Patent Application	Diffraction Grating for Wavelength Division Multiplexing/Demultiplexing Devices	No. 09/724,803	11/28/00

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