06/20/2018 504969260

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5016006

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
BRPHOTONICS PRODUTOS OPTOELETRONICOS S.A.	06/12/2018

#### **RECEIVING PARTY DATA**

Name:	LIGHTWAVE LOGIC, INC.
Street Address:	369 INVERNESS PKWY
City:	ENGLEWOOD
State/Country:	COLORADO
Postal Code:	80112

### **PROPERTY NUMBERS Total: 15**

Property Type	Number
Patent Number:	6716995
Patent Number:	7206490
Patent Number:	6864375
Patent Number:	7019453
Patent Number:	7738745
Patent Number:	7796855
Patent Number:	7888387
Patent Number:	8483524
Patent Number:	7902322
Patent Number:	8442360
Patent Number:	8618241
Patent Number:	8934741
Patent Number:	9535215
Patent Number:	9703128
Patent Number:	9590334

### **CORRESPONDENCE DATA**

Fax Number: (206)623-7022

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 206-623-7580

> **PATENT** REEL: 046147 FRAME: 0207

504969260

Email: sepatents@klgates.com

**Correspondent Name:** K&L GATES LLP **Address Line 1:** 925 4TH AVE.

Address Line 4: SEATTLE, WASHINGTON 98104-1158

NAME OF SUBMITTER:	BRETT O. WHITE
SIGNATURE:	/Brett O. White/
DATE SIGNED:	06/20/2018

**Total Attachments: 3** 

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> PATENT REEL: 046147 FRAME: 0208

#### ASSIGNMENT

WHEREAS, the undersigned, BrPhotonics Produtos Optoeletronicos S.A., formerly known as BrPhotonics Produtos Optoeletronicos Ltda., a legal entity incorporated under the laws of the Federative Republic of Brazil, (hereinafter "ASSIGNOR"), is the lawful owner of the issued U.S. patents listed in the attached Exhibit A;

AND WHEREAS, Lightwave Logic, Inc., a Nevada corporation (hereinafter "ASSIGNEE"), and having its principal office and place of business at 369 Inverness Pkwy, Suite 350 Englewood, CO 80112, desires to acquire the entire right, title, and interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, said ASSIGNOR hereby sells, assigns, and transfers to ASSIGNEE and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States, in and to said patents, non-provisional applications, utility applications, divisional applications, continuation applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States on the inventions defined by said patents and applications listed in Exhibit A; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States on the inventions defined by said patents and applications listed in Exhibit A; and in and to all rights of priority resulting from the filing of the applications leading to said patents;

ASSIGNOR hereby agrees that said ASSIGNOR will generally assist said ASSIGNEE, its successors, assigns, or representatives in vesting title to said patents and applications in said ASSIGNEE, its successors, assigns, and legal representatives; and

ASSIGNOR furthermore covenants with said ASSIGNEE, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

ASSIGNOR .	ASSIGNEE
Name: <u>Cristiane Contano filia</u>	Name:
Title: <u>CEO</u>	Title:
Address: 1000, De Rivander Benedlen	Address:
Martins Staut Date: June, 12th - 2018	Date:

#### **ASSIGNMENT**

WHEREAS, the undersigned, BrPhotonics Produtos Optoeletronicos S.A., formerly known as BrPhotonics Produtos Optoeletronicos Ltda., a legal entity incorporated under the laws of the Federative Republic of Brazil, (hereinafter "ASSIGNOR"), is the lawful owner of the issued U.S. patents listed in the attached Exhibit A;

AND WHEREAS, Lightwave Logic, Inc., a Nevada corporation (hereinafter "ASSIGNEE"), and having its principal office and place of business at 369 Inverness Pkwy, Suite 350 Englewood, CO 80112, desires to acquire the entire right, title, and interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, said ASSIGNOR hereby sells, assigns, and transfers to ASSIGNEE and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States, in and to said patents, non-provisional applications, utility applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States on the inventions defined by said patents and applications listed in Exhibit A; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States on the inventions defined by said patents and applications listed in Exhibit A; and in and to all rights of priority resulting from the filing of the applications leading to said patents;

ASSIGNOR hereby agrees that said ASSIGNOR will generally assist said ASSIGNEE, its successors, assigns, or representatives in vesting title to said patents and applications in said ASSIGNEE, its successors, assigns, and legal representatives; and

ASSIGNOR furthermore covenants with said ASSIGNEE, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

<u>ASSIGNOR</u>	ASSIGNEE
Name:	Name: <u>James S Marcellí</u>
Title:	Title: President & COO
Address:	369 Inverness Pkwy, Address: Suite 350
Date:	Englewood, OO 80118 Date:
	06/12/18

# Exhibit A

Title	Serial No.	Patent No.
DESIGN AND SYNTHESIS OF ADVANCED NLO	09/932,831	US 6,716,995
MATERIALS FOR ELECTRO-OPTIC	·	
APPLICATIONS		
ELECTRO-OPTIC POLYMER WAVEGUIDE	10/341,828	US 7,206,490
DEVICES INCORPORATING ORGANICALLY		
MODIFIED SOL-GEL CLADS		
HIGHLY STABLE AND EFFICIENT NONLINEAR	10/439,621	US 6,864,375
OPTICAL CHROMOPHORES FOR ELECTRO-OPTIC		
POLYMERS		
POLYMERS HAVING PENDANT NONLINEAR	10/625,371	US 7,019,453
OPTICAL CHROMOPHORES AND ELECTRO-OPTIC		
DEVICES THEREFROM		
METHOD OF BIASING AND OPERATING	11/539,397	US 7,738,745
ELECTRO-OPTIC POLYMER OPTICAL		
MODULATORS		
ELECTRO-OPTIC POLYMER DEVICES WITH	11/739,271	US 7,796,855
SEMICONDUCTING OLIGOMER CLADS		
ELECTRO-OPTIC CHROMOPHORE HAVING AN	12/110,256	US 7,888,387
EDOT STRUCTURE, AND RELATED METHODS		
AND APPARATUSES		
INTEGRATED ELECTRO-OPTIC DEVICE AND	12/246,957	US 8,483,524
METHOD OF MAKING	ĺ	
NONLINEAR OPTICAL CHROMOPHORES WITH	12/270,714	US 7,902,322
STABILIZING SUBSTITUENT AND ELECTRO-	·	
OPTIC DEVICES		
INTRINSICALLY LOW RESISTIVITY HYBRID SOL-	12/612,540	US 8,442,360
GEL POLYMER CLADS AND ELECTRO-OPTIC		
DEVICES MADE THEREFROM		
STABILIZED ELECTRO-OPTIC MATERIALS AND	12/959,898	US 8,618,241
ELECTRO-OPTIC DEVICES MADE THEREFROM		
INTEGRATED CIRCUIT WITH OPTICAL DATA	12/963,479	US 8,934,741
COMMUNICATION		
FLUORINATED SOL-GEL LOW REFRACTIVE	13/432,973	US 9,535,215
INDEX HYBRID OPTICAL CLADDING AND		
ELECTRO-OPTIC DEVICES MADE THEREFROM		
METHOD FOR MAKING AN INTEGRATED	14/551,454	US 9,703,128
CIRCUIT HAVING OPTICAL DATA		
COMMUNICATION		
SOLDERLESS ELECTRICAL INTERCONNECTIONS	15/204,220	US 9,590,334
IN A HIGH SPEED PHOTONIC PACKAGE		

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**RECORDED: 06/20/2018**