

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT7649116

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST	
CONVEYING PARTY DATA		
Name		Execution Date
TRUIST BANK (FORMERLY KNOWN AS BRANCH BANKING AND TRUST COMPANY))		11/16/2022
RECEIVING PARTY DATA		
Name:	APPLIED OPTOELECTRONICS, INC.	
Street Address:	13139 JESS PIRTLE BLVD.	
City:	SUGAR LAND	
State/Country:	TEXAS	
Postal Code:	77478	
PROPERTY NUMBERS Total: 109		
Property Type	Number	
Patent Number:	9703054	
Patent Number:	9698567	
Patent Number:	9696503	
Patent Number:	9685757	
Patent Number:	9684141	
Patent Number:	9671582	
Patent Number:	9614620	
Patent Number:	9606145	
Patent Number:	9523826	
Patent Number:	9509433	
Patent Number:	9502858	
Patent Number:	9479280	
Patent Number:	9479259	
Patent Number:	9455782	
Patent Number:	9448372	
Patent Number:	9448367	
Patent Number:	9432122	
Patent Number:	9356422	
Patent Number:	9343870	
Patent Number:	9341774	

Property Type	Number
Patent Number:	9306671
Patent Number:	9236949
Patent Number:	9236945
Patent Number:	9225428
Patent Number:	9214790
Patent Number:	9191111
Patent Number:	9170383
Patent Number:	9160455
Patent Number:	9083468
Patent Number:	9039303
Patent Number:	9002214
Patent Number:	8995484
Patent Number:	8899846
Patent Number:	8891974
Patent Number:	8831433
Patent Number:	8818208
Patent Number:	8805191
Patent Number:	8787772
Patent Number:	8718489
Patent Number:	8670675
Patent Number:	8655183
Patent Number:	8606116
Patent Number:	8406631
Patent Number:	8358937
Patent Number:	8320773
Patent Number:	8165475
Patent Number:	8165474
Patent Number:	8126329
Patent Number:	8121493
Patent Number:	8121170
Patent Number:	8091876
Patent Number:	8079222
Patent Number:	8073340
Patent Number:	8055138
Patent Number:	8045164
Patent Number:	7978985
Patent Number:	7925170
Patent Number:	7766686

Property Type	Number
Patent Number:	7627012
Patent Number:	7583719
Patent Number:	7573923
Patent Number:	7542503
Patent Number:	7519260
Patent Number:	7478955
Patent Number:	7468286
Patent Number:	7226218
Patent Number:	7026178
Patent Number:	7010013
Patent Number:	7010012
Patent Number:	6859481
Patent Number:	6795478
Patent Number:	6788466
Patent Number:	6782019
Patent Number:	6765948
Patent Number:	6765939
Patent Number:	6763053
Patent Number:	6763046
Patent Number:	6746777
Patent Number:	6736550
Patent Number:	6735224
Patent Number:	6724796
Patent Number:	6697413
Patent Number:	6696307
Patent Number:	6669367
Patent Number:	6652707
Patent Number:	6638773
Patent Number:	6636544
Patent Number:	6611543
Patent Number:	6608855
Patent Number:	6603184
Patent Number:	6560265
Patent Number:	6560259
Patent Number:	6549556
Patent Number:	6455908
Patent Number:	6406795
Patent Number:	6263002

Property Type	Number
Patent Number:	7290943
Application Number:	13916652
Application Number:	14295459
Application Number:	14551353
Application Number:	14590456
Application Number:	14661772
Application Number:	14665639
Application Number:	14837993
Application Number:	14838017
Application Number:	14974492
Application Number:	14983773
Application Number:	15204174
Application Number:	15241979

CORRESPONDENCE DATA

Fax Number: (404)522-8409

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: 404-523-5300

Email: sls@phrd.com

Correspondent Name: STEVE SCHAAF

Address Line 1: PARKER, HUDSON, RAINER & DOBBS LLP

Address Line 2: 303 PEACHTREE STREET, SUITE 3600

Address Line 4: ATLANTA, GEORGIA 30308

ATTORNEY DOCKET NUMBER:	676.221
NAME OF SUBMITTER:	KATHLEEN O. CURREY
SIGNATURE:	/KOC/
DATE SIGNED:	11/16/2022
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 12

source=Release of Security Interest in Patents (Applied Optoelectronics)#page1.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page2.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page3.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page4.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page5.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page6.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page7.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page8.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page9.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page10.tif
source=Release of Security Interest in Patents (Applied Optoelectronics)#page11.tif

RELEASE OF SECURITY INTEREST IN PATENTS

November 16, 2022

FOR VALUE RECEIVED, the undersigned, **TRUIST BANK**, a North Carolina banking corporation formerly known as Branch Banking and Trust Company, having an address at 333 Clay Street, Suite 3800, Houston, Texas 77002 (“Lender”), hereby releases and terminates all of Lender's liens and security interests in and to all Patent Collateral of **APPLIED OPTOELECTRONICS, INC.**, a Delaware corporation having a mailing address at 13139 Jess Pirtle Blvd., Sugar Land, Texas 77478 (the “Company”), including, without limitation, all of the patents and patent applications listed on Exhibit A attached hereto, and Lender hereby reassigns all right, title and interest (if any) that Lender may have in the Patent Collateral to Company, **without any representation or warranty by, or recourse to**, Lender, arising under that certain Patent Security Agreement between Lender and Company dated as of September 28, 2017, as recorded in the United States Patent and Trademark Office on September 29, 2017, at Reel 044061 Frame 0812 (the “Patent Security Agreement”). Capitalized terms used herein, unless otherwise defined herein, shall have the meanings ascribed to such terms in the Patent Security Agreement.

This Release of Security Interest in Patents (this “Release”) is intended to operate as a release of all liens and security interests granted and conveyed by Company to Lender pursuant to the terms of the Patent Security Agreement and to reassign to Company all of Lender's right, title, and interest, if any, acquired pursuant to the terms of such Patent Security Agreement, in each case without any representation, warranty, recourse or undertaking by Lender.

[Remainder of page intentionally left blank;
signature appears on the following page]

IN WITNESS WHEREOF, Lender has caused this Release to be signed by its duly authorized officer on the date first written above.

TRUIST BANK

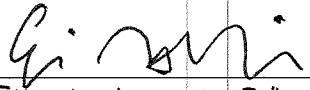
By: 
Name: Elizabeth H. Riley
Title: Vice President

EXHIBIT A

U.S. Patents and Patent Applications

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Aligning and directly optically coupling photodetectors to optical demultiplexer outputs in a multichannel receiver optical subassembly	9,703,054	July 11, 2017
Wavelength-selectable laser device providing spatially-selectable wavelength(S)	9,698,567	July 4, 2017
Multi-channel transmitter optical subassembly (TOSA) with an optical coupling receptacle providing an off-center fiber	9,696,503	July 4, 2017
System, method and fixture for performing both optical power and wavelength measurements of light emitted from a laser diode	9,685,757	June 20, 2017
Techniques for reducing ingress of foreign matter into an optical subassembly	9,684,141	June 20, 2017
Pluggable optical transceiver module	9,671,582	June 6, 2017
Coaxial transmitter optical subassembly (TOSA) with cuboid type to laser package and optical transceiver including same	9,614,620	April 4, 2017
Test fixture with thermoelectric cooler and spring-operated holding pin	9,606,145	March 28, 2017
Pluggable optical transceiver module	9,523,826	December 20, 2016
Aligning and directly optically coupling photodetectors to	9,509,433	November 29, 2016

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
optical demultiplexer outputs in a multichannel receiver optical subassembly		
Laser array mux assembly with external reflector for providing a selected wavelength or multiplexed wavelengths	9,502,858	November 22, 2016
Extended cavity fabry-perot laser assembly capable of high speed optical modulation with narrow mode spacing and WDM optical system including same	9,479,280	October 25, 2016
Multi-channel optical transceiver module including thermal arrayed waveguide grating multiplexer and athermal arrayed waveguide grating demultiplexer	9,479,259	October 25, 2016
Monitoring a multiplexed laser array in an optical communication system	9,455,782	September 27, 2016
Optical coupling element and optical module having the same	9,448,372	September 20, 2016
Multi-channel optical transceiver module including dual fiber type direct link adapter for optically coupling optical subassemblies in the transceiver module	9,448,367	September 20, 2016
Optical networking unit (ONU) packaging	9,432,122	August 30, 2016
Scribe etch process for semiconductor laser chip manufacturing	9,356,422	May 31, 2016
Semiconductor laser diode with integrated heating region	9,343,870	May 17, 2016
Optically matched laser array coupling assembly for coupling laser array to arrayed waveguide grating	9,341,774	May 17, 2016

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Thermally isolated multi-channel transmitter optical subassembly and optical transceiver module including same	9,306,671	April 5, 2016
Laser transceiver with improved bit error rate	9,236,949	January 12, 2016
Thermally shielded multi-channel transmitter optical subassembly and optical transceiver module including same	9,236,945	January 12, 2016
Method and system for alignment of photodetector array to optical demultiplexer outputs	9,225,428	December 29, 2015
Filtered laser array assembly with external optical modulation and WDM optical system including same	9,214,790	December 15, 2015
Reducing cross-modulation in multichannel modulated optical systems	9,191,111	November 17, 2015
Multi-channel optical transceiver module including dual fiber type direct link adapter for optically coupling optical subassemblies in the transceiver module	9,170,383	October 27, 2015
External cavity laser array system and WDM optical system including same	9,160,455	October 13, 2015
Heated laser package with increased efficiency for optical transmitter systems	9,083,468	July 14, 2015
Compact multi-channel optical transceiver module	9,039,303	May 26, 2015
Wavelength-selectable laser device and apparatus and system including same	9,002,214	April 7, 2015

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Temperature controlled multi-channel transmitter optical subassembly and optical transceiver module including same	8,995,484	March 31, 2015
Receptacle diplexer	8,899,846	December 2, 2014
Distortion compensation circuit including tunable phase path	8,891,974	November 18, 2014
Temperature controlled multi-channel transmitter optical subassembly and optical transceiver module including same	8,831,433	September 9, 2014
Laser mux assembly for providing a selected wavelength	8,818,208	August 26, 2014
Optical transceiver including optical fiber coupling assembly to increase usable channel wavelengths	8,805,191	August 12, 2014
Laser package including semiconductor laser and memory device for storing laser parameters	8,787,772	July 22, 2014
Distortion compensation circuit including one or more phase invertible distortion paths	8,718,489	May 6, 2014
System and method for distortion compensation including configureable delay	8,670,675	March 11, 2014
Optical transceiver that maintains a bend diameter of an internal optical fiber and method of assembling same	8,655,183	February 18, 2014
System and method for distortion compensation in response to frequency detection	8,606,116	December 10, 2013

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Network timing	8,406,631	March 26, 2013
Systems and methods for reducing clipping in multichannel modulated optical systems	8,358,937	January 22, 2013
Reducing cross-modulation in multichannel modulated optical systems	8,320,773	November 27, 2012
Systems and methods for reducing clipping in multichannel modulated optical systems	8,165,475	April 24, 2012
Reducing cross modulation in multichannel modulated optical systems with anti-clipping	8,165,474	April 24, 2012
Quad-port optical module with pass-through and add/drop configuration	8,126,329	February 28, 2012
Distortion compensation circuit and method based on orders of time dependent series of distortion signal	8,121,493	February 21, 2012
Gain-coupled distributed feedback semiconductor laser including first-order and second-order gratings	8,121,170	February 21, 2012
Fixture for securing optoelectronic packages for wire and/or component bonding	8,091,876	January 10, 2012
Thermoelectric cooler controller	8,079,222	December 20, 2011
Distortion compensation circuit including one or more phase invertible distortion paths	8,073,340	December 6, 2011
Photosensor operating point	8,055,138	November 8, 2011

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Position finding system and method for use in aligning laser device with an optical fiber	8,045,164	October 25, 2011
Clipping correction system and method for correcting clipped signals in a receiver	7,978,985	July 12, 2011
Predistortion circuit including distortion generator diodes with adjustable diode bias	7,925,170	April 12, 2011
Pluggable form factor release mechanism	7,766,686	August 3, 2010
Distributed feedback semiconductor laser including wavelength monitoring section	7,627,012	December 1, 2009
Complex-coupled distributed feedback semiconductor laser	7,583,719	September 1, 2009
Laser drive circuit and method providing high limit clipping corresponding to low limit clipping in a laser	7,573,923	August 11, 2009
Distributed feedback laser with improved optical field uniformity and mode stability	7,542,503	June 2, 2009
Coaxial optoelectronic device separation apparatus and method	7,519,260	April 14, 2009
Modular laser package system	7,478,955	January 20, 2009
System and method for securing optoelectronic packages for mounting components at a mounting angle	7,468,286	December 23, 2008
Method and apparatus for coupling a laser to a fiber in a two-lens laser system	7,226,218	June 5, 2007
Method for fabricating a VCSEL with ion-implanted current-confinement structure	7,026,178	April 11, 2006

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Assembly with tapered, threaded ferrule housing for improved alignment of fiber with laser	7,010,013	March 7, 2006
Method and apparatus for reducing specular reflections in semiconductor lasers	7,010,012	March 7, 2006
Optically-pumped multiple-quantum well active region with improved distribution of optical pumping power	6,859,481	February 22, 2005
VCSEL with antiguide current confinement layer	6,795,478	September 21, 2004
Multiple reflectivity band reflector	6,788,466	September 7, 2004
VCSEL with heat-spreading layer	6,782,019	August 24, 2004
VCSEL assembly with edge-receiving optical devices	6,765,948	July 20, 2004
Multiple reflectivity band reflector with non-uniform profile and laser system employing same for laser wavelength monitoring	6,765,939	July 20, 2004
Laser having multiple reflectivity band reflector	6,763,053	July 13, 2004
Method and system employing multiple reflectivity band reflector for laser wavelength monitoring	6,763,046	July 13, 2004
Alternative substrates for epitaxial growth	6,746,777	June 8, 2004
Housing for passively aligning an optical fiber with a lens	6,736,550	May 18, 2004
Planar lightwave circuit for conditioning tunable laser output	6,735,224	May 11, 2004

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Modified distributed bragg reflector (DBR) for vertical cavity surface-emitting laser (VCSEL) resonant wavelength tuning sensitivity control	6,724,796	April 20, 2004
Tunable vertical-cavity surface-emitting laser with tuning junction	6,697,413	February 24, 2004
Patterned phase shift layers for wavelength-selectable vertical cavity surface-emitting laser (VCSEL) arrays	6,696,307	February 24, 2004
Optical fiber with mirror for semiconductor laser	6,669,367	December 30, 2003
Method and apparatus for demounting workpieces from adhesive film	6,652,707	November 25, 2003
Method for fabricating single-mode DBR laser with improved yield	6,638,773	October 28, 2003
Overlapping wavelength-tunable vertical cavity surface-emitting laser (VCSEL) arrays	6,636,544	October 21, 2003
Vertical-cavity surface-emitting laser with metal mirror and method of fabrication of same	6,611,543	August 26, 2003
Single-mode DBR laser with improved phase-shift section	6,608,855	August 19, 2003
Double heterostructure photodiode with graded minority-carrier blocking structures	6,603,184	August 5, 2003
Method and apparatus for polarizing light in a VCSEL	6,560,265	May 6, 2003
Spatially coherent surface-emitting, grating coupled	6,560,259	May 6, 2003

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
quantum cascade laser with unstable resonance cavity		
Vertical-cavity surface-emitting laser with bottom dielectric distributed bragg reflector	6,549,556	April 15, 2003
Multispectral radiation detectors using strain-compensating superlattices	6,455,908	6,455,908 September 24, 2002
Compliant universal substrates for optoelectronic and electronic devices	6,406,795	June 18, 2002
Tunable fiber fabry-perot surface-emitting lasers	6,263,002	June 17, 2001
Modular laser package system and associated methods	7,290,943	November 6, 2007
Tunable laser with multiple in-line section	13/916,652	June 13, 2013
Monitoring nad controlling temperature across a laser array in a transmitter optical subassembly (TOSA) package	14/295,459	June 4, 2014
Tunable laser with multiple in-line section including sampled gratings	14/551,353	November 24, 2014
Two-section semiconductor laser with modulation-independent grating section to reduce chirp	14/590,456	January 6, 2015
Tunable laser including parallel lasing cavities with a common output	14/661,772	March 18, 2015
Multichannel receiver optical subassembly with improved sensitivity	14/665,639	March 23, 2015
Multi-channel transmitter optical subassembly (TOSA) with opposing placement of transistor outline (TO) can laser packages	14/837,993	August 27, 2015

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Receiver optical subassembly (ROSA) housing with sidewall receptacle to provide electrical isolation between an adjacent transmitter optical subassembly (TOSA) in a transceiver housing	14/838,017	August 27, 2015
Optical filter sub-assembly cartridge for use in a receiver optical subassembly (ROSA) housing	14/974,492	December 18, 2015
Optical transceiver assembly including thermal dual arrayed waveguide grating	14/983,773	December 30, 2015
Techniques for reducing the footprint of a multi-channel transmitter optical subassembly (TOSA) within an optical transceiver housing	15/204,174	July 7, 2016
Optical component assembly having a keyed structure for ensuring proper insertion orientation within an optical subassembly	15/241,979	August 19, 2016

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT4620296

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	SECURITY INTEREST	
CONVEYING PARTY DATA		
Name		Execution Date
APPLIED OPTOELECTRONICS, INC.		09/28/2017
RECEIVING PARTY DATA		
Name:	BRANCH BANKING AND TRUST COMPANY	
Street Address:	333 CLAY STREET	
Internal Address:	SUITE 3800	
City:	HOUSTON	
State/Country:	TEXAS	
Postal Code:	30303	
PROPERTY NUMBERS Total: 109		
Property Type	Number	
Patent Number:	9703054	
Patent Number:	9698567	
Patent Number:	9696503	
Patent Number:	9685757	
Patent Number:	9684141	
Patent Number:	9671582	
Patent Number:	9614620	
Patent Number:	9606145	
Patent Number:	9523826	
Patent Number:	9509433	
Patent Number:	9502858	
Patent Number:	9479280	
Patent Number:	9479259	
Patent Number:	9455782	
Patent Number:	9448372	
Patent Number:	9448367	
Patent Number:	9432122	
Patent Number:	9356422	
Patent Number:	9343870	

Property Type	Number
Patent Number:	9341774
Patent Number:	9306671
Patent Number:	9236949
Patent Number:	9236945
Patent Number:	9225428
Patent Number:	9214790
Patent Number:	9191111
Patent Number:	9170383
Patent Number:	9160455
Patent Number:	9083468
Patent Number:	9039303
Patent Number:	9002214
Patent Number:	8995484
Patent Number:	8899846
Patent Number:	8891974
Patent Number:	8831433
Patent Number:	8818208
Patent Number:	8805191
Patent Number:	8787772
Patent Number:	8718489
Patent Number:	8670675
Patent Number:	8655183
Patent Number:	8606116
Patent Number:	8406631
Patent Number:	8358937
Patent Number:	8320773
Patent Number:	8165475
Patent Number:	8165474
Patent Number:	8126329
Patent Number:	8121493
Patent Number:	8121170
Patent Number:	8091876
Patent Number:	8079222
Patent Number:	8073340
Patent Number:	8055138
Patent Number:	8045164
Patent Number:	7978985
Patent Number:	7925170

Property Type	Number
Patent Number:	7766686
Patent Number:	7627012
Patent Number:	7583719
Patent Number:	7573923
Patent Number:	7542503
Patent Number:	7519260
Patent Number:	7478955
Patent Number:	7468286
Patent Number:	7226218
Patent Number:	7026178
Patent Number:	7010013
Patent Number:	7010012
Patent Number:	6859481
Patent Number:	6795478
Patent Number:	6788466
Patent Number:	6782019
Patent Number:	6765948
Patent Number:	6765939
Patent Number:	6763053
Patent Number:	6763046
Patent Number:	6746777
Patent Number:	6736550
Patent Number:	6735224
Patent Number:	6724796
Patent Number:	6697413
Patent Number:	6696307
Patent Number:	6669367
Patent Number:	6652707
Patent Number:	6638773
Patent Number:	6636544
Patent Number:	6611543
Patent Number:	6608855
Patent Number:	6603184
Patent Number:	6560265
Patent Number:	6560259
Patent Number:	6549556
Patent Number:	6455908
Patent Number:	6406795

Property Type	Number
Patent Number:	6263002
Patent Number:	7290943
Application Number:	13916652
Application Number:	14295459
Application Number:	14551353
Application Number:	14590456
Application Number:	14661772
Application Number:	14665639
Application Number:	14837993
Application Number:	14838017
Application Number:	14974492
Application Number:	14983773
Application Number:	15204174
Application Number:	15241979

CORRESPONDENCE DATA

Fax Number: (404)522-8409

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: 404-681-5974

Email: bxha@phrd.com

Correspondent Name: BARBARA XHAJANKA

Address Line 1: 303 PEACHTREE STREET, NE

Address Line 2: SUITE 3600

Address Line 4: ATLANTA, GEORGIA 30303

NAME OF SUBMITTER:	KELLEY C. GASS
SIGNATURE:	/KCG/
DATE SIGNED:	09/29/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 15

source=Applied Optoelectronics, Inc - Patent Security Agreement#page1.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page2.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page3.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page4.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page5.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page6.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page7.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page8.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page9.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page10.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page11.tif

source=Applied Optoelectronics, Inc - Patent Security Agreement#page12.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page13.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page14.tif
source=Applied Optoelectronics, Inc - Patent Security Agreement#page15.tif

PATENT SECURITY AGREEMENT

This **PATENT SECURITY AGREEMENT** (this "Agreement") is made as of this 28th day of September, 2017, between **BRANCH BANKING AND TRUST COMPANY**, a North Carolina banking corporation (together with its successors and assigns, "Lender"), and **APPLIED OPTOELECTRONICS, INC.**, a Delaware corporation ("Company").

Recitals:

Company desires to obtain loans and other financial accommodations from Lender pursuant to that certain Loan Agreement dated the date hereof (as at any time amended, restated, supplemented or otherwise modified, the "Loan Agreement") by and between Company and Lender.

Lender is willing to make loans and other financial accommodations to Company from time to time pursuant to the terms of the Loan Agreement, provided that, among other things, Company executes this Agreement.

NOW, THEREFORE, for Ten Dollars (\$10.00) in hand paid and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Company hereby agrees with Lender as follows:

1. Capitalized terms used herein (including those used in the Recitals hereto), unless otherwise defined, shall have the meanings ascribed to them in the Loan Agreement. As used herein, the term "Full Payment" shall mean full and final payment of the Obligations (as defined in the Security Agreement) (hereinafter, the "Obligations") and termination of Lender's financing arrangements with Company; and the term "UCC" shall mean the Uniform Commercial Code as in effect from time to time in the State of Texas.

2. To secure the prompt payment and performance of all of the Obligations, Company hereby grants, assigns and pledges to Lender, a continuing security interest in and Lien upon all of the following property of Company, whether now existing or hereafter created or acquired (the "Patent Collateral");

(a) the entire right, title and interest of Company in and to the patent applications and patents listed in Exhibit A attached hereto (as the same may be amended from time to time), and all re-issues, divisions, continuations, renewals, extensions and continuations-in-part thereof, including, without limitation, the right to sue for past, present and future infringements and rights corresponding thereto throughout the world (all of the foregoing being herein collectively referred to as the "Patents"); and

(b) all proceeds of the foregoing (such as, by way of example, license royalties and proceeds of infringement suits).

3. Company covenants with and warrants to Lender that:

(a) The Patents are subsisting and have not been adjudged invalid or unenforceable, in whole or in part;

(b) Company is now and shall continue to be the sole and exclusive owner of the entire and unencumbered right, title and interest in and to each of the Patents, free and clear of any Liens;

(c) Company has the unqualified right to enter into this Agreement and perform its terms; and

(d) Company has used, and will continue to use for the duration of this Agreement, proper statutory notice in connection with its use of the Patents and has made, and will continue to make all appropriate filings with the United States Patent and Trademark Office and any applicable foreign filing offices to maintain the Patents in existence, including, without limitation, filing all necessary documents with the United States Patent and Trademark Office and any applicable foreign filing offices for each Patent to maintain it without loss of protection therefor.

4. Until Full Payment of all of the Obligations, Company shall not enter into any license agreement relating to any of the Patents with any Person except non-exclusive licenses to customers, vendors, suppliers, agents or other service providers of Company in the regular and ordinary course of Company's business as presently conducted and for reasonable and customary compensation, and shall not become a party to any agreement with any Person that is inconsistent with Company's obligations under this Agreement.

5. If, before Full Payment of all of the Obligations, Company shall obtain rights to any new patentable inventions, or become entitled to the benefit of any patent application or patent for any reissue, division, continuation, renewal, extension or continuation-in-part of any Patent or any improvement on any Patent, the provisions of paragraph 2 shall automatically apply thereto and Company shall give to Lender prompt notice thereof in writing.

6. Company irrevocably authorizes and empowers Lender to modify this Agreement by amending Exhibit A to include any future patents and patent applications under paragraph 2 or paragraph 5 hereof.

7. Company hereby grants to Lender and its employees the visitation, audit, and inspection rights with respect to Company and the Patent Collateral as set forth in Section DD.06(b) of Schedule DD to the Loan Agreement.

8. At any time that an Event of Default exists, Lender shall have, in addition to all other rights and remedies given it by this Agreement and the other Loan Documents, all rights and remedies of a secured party under the UCC and all other rights and remedies under applicable law. Without limiting the generality of the foregoing, Lender may immediately, without demand of performance and without other notice (except as described in the next sentence, if required by applicable law) or demand whatsoever to Company, each of which Company hereby expressly waives, and without advertisement (except as otherwise provided by applicable law), collect directly any payments due Company in respect of the Patent Collateral, or sell at public or private sale or otherwise realize upon the whole or from time to time any of the Patent Collateral, or any interest that Company may have therein. Company hereby agrees that ten (10) days notice to Company of any public or private sale or other disposition of any of the Patent Collateral shall be reasonable notice; provided, however, that no notice shall be required hereunder if not otherwise required by applicable law. At any such sale or disposition, Lender may, to the extent permitted by applicable law, purchase the whole or any part of the Patent Collateral sold, free from any right of redemption on the part of Company, which right Company hereby waives and releases. After deducting from the proceeds of such sale or other disposition of the Patent Collateral all reasonable costs and expenses incurred by Lender in enforcing its rights hereunder (including, without limitation, all reasonable attorneys' fees), Lender shall apply the remainder of such proceeds to the payment of the Obligations, in such order or manner as may be authorized or required by the Loan Agreement. Any remainder of the proceeds after Full Payment of all of the Obligations shall be paid over to Company. If any deficiency shall arise, Company shall remain liable therefor.

9. Company hereby makes, constitutes and appoints Lender, and any officer or agent of Lender as Lender may reasonably select, as Company's true and lawful attorney-in-fact, with full power to do any or all of the following if an Event of Default with respect to Company shall exist: to endorse Company's name on all applications, documents, papers and instruments necessary for Lender to continue the maintenance of or to use the Patents, or to grant or issue any exclusive or nonexclusive license under the Patents to any other Person, or to assign, pledge, convey or otherwise transfer title in or dispose of any Patent Collateral to any other Person. Company hereby ratifies all that such attorney shall lawfully do or cause to be done by virtue hereof. This power of attorney, being coupled with an interest, shall be irrevocable until Full Payment of all of the Obligations, upon which time such power of attorney will automatically terminate (unless sooner terminated by the parties).

10. Any and all reasonable fees, costs and expenses, of whatever kind or nature, (including, without limitation, reasonable attorneys' fees and legal expenses) incurred by Lender in connection with the preparation of this Agreement and any other documents relating hereto and the consummation of this transaction, the filing or recording of any documents (including, without limitation, all taxes in connection therewith) with the United States Patent and Trademark Office or in other public offices, the payment or discharge of any taxes, counsel fees, maintenance fees or Liens, or otherwise, in protecting, maintaining and preserving any Patent Collateral or in defending or prosecuting any actions or proceedings arising out of or related to any Patent Collateral, shall be borne and paid by Company (it being the intent of Company and Lender that Company shall be responsible for the payment of all sums, fees, costs and expenses, including, without limitation, all maintenance fees payable with respect to the Patents) or, if paid by Lender in its sole discretion, shall be reimbursed by Company to Lender **on demand** by Lender and until so paid shall be added to the principal amount of the Obligations and shall bear interest at the Default Rate then applicable to the Line of Credit.

11. Company shall use its commercially reasonable efforts to detect any infringers of the Patents and shall notify Lender in writing of material infringements detected. Company shall have the duty, through counsel reasonably acceptable to Lender, to prosecute diligently any patent application for a Patent pending as of the date of this Agreement or thereafter until Full Payment of all of the Obligations, to make application on unpatented but patentable inventions (subject to Company's reasonable discretion in the ordinary course of business, or, during the existence of an Event of Default, promptly upon Lender's request), to file and prosecute opposition and cancellation proceedings, to file and prosecute lawsuits to protect each Patent and to do any and all acts that are reasonably deemed necessary or desirable by Lender to preserve and maintain all rights in patent applications for each Patent, unless in any such case Company has determined that such Patent is no longer material to the conduct of its business.. Any expenses incurred in connection with such an application or proceedings shall be borne by Company. Company shall not abandon any pending patent application or Patent, without the prior written consent of Lender, unless Company has determined that such patent application or Patent is no longer material to the conduct of its business.

12. Notwithstanding anything to the contrary contained in paragraph 11 hereof, Lender shall have the right, at any time that an Event of Default exists, but shall in no way be obligated, to bring suit in its own name to enforce the Patents and any license hereunder, or to defend any suit or counterclaim in its own name to protect any Patents or license hereunder, in either of which events Company shall at the request of Lender do any and all lawful acts (including bringing suit) and execute any and all proper documents required by Lender in aid of such enforcement or defense and Company shall promptly, upon demand, reimburse and indemnify Lender for all reasonable costs and expenses incurred by Lender in the exercise of its rights under this paragraph 12.

13. If Company fails to comply with any of its obligations hereunder and at the time of such failure or as a result thereof an Event of Default exists, then to the extent permitted by applicable law,

Lender may discharge such obligations in Company's name or in Lender's name, in Lender's sole discretion, but at Company's expense, and Company agrees to reimburse Lender in full for all reasonable expenses, including, without limitation, reasonable attorneys' fees, incurred by Lender in prosecuting, defending or maintaining the Patents or Lender's interest therein pursuant to this Agreement.

14. No course of dealing between Company and Lender, nor any failure to exercise, nor any delay in exercising, on the part of Lender, any right, power or privilege hereunder or under any of the other Loan Documents shall operate as a waiver thereof; nor shall any single or partial exercise of any right, power or privilege hereunder or thereunder preclude any other or future exercise thereof or the exercise of any other right, power or privilege.

15. All of Lender's rights and remedies with respect to the Patent Collateral, whether established by this Agreement or any of the other Loan Documents, or by any other agreements or by applicable law, shall be cumulative and may be exercised singularly or concurrently.

16. The provisions of this Agreement are severable, and if any clause or provision shall be held invalid and unenforceable, in whole or in part, in any jurisdiction, the same shall be deemed severed herefrom and shall not in any manner affect such clause or provisions in any other jurisdiction, or any other clause or provision of this Agreement in any jurisdiction.

17. This Agreement, together with the other Loan Documents, constitutes and expresses the entire understanding of the parties hereto with respect to the subject matter hereof, and supersedes all prior agreements and understandings, inducements or conditions, whether express or implied, oral or written. This Agreement is subject to modification only by writing signed by the parties, except as provided in paragraph 6 hereof.

18. The benefits and burdens of this Agreement shall inure to the benefit of and be binding upon the successors and assigns of Lender and upon the successors and permitted assigns of Company. Company shall not assign its rights or delegate its rights or assign its duties hereunder without the prior written consent of Lender.

19. Company hereby waives notice of Lender's acceptance hereof.

20. This Agreement shall be governed by and construed in accordance with the internal laws of the State of Texas.

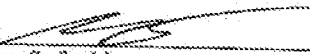
21. To the fullest extent permitted by applicable law, Company and Lender each waives the right to trial by jury in any action, suit, proceeding or counterclaim of any kind arising out of or related to this Agreement or the Patent Collateral.

22. Upon Full Payment, Lender shall execute and deliver to Company, at Company's request and at Company's expense, all releases, termination statements, and other instruments as may be necessary or proper to release or reflect the release of Lender's security interest in the Patent Collateral, including all documentation necessary to reflect such release in the United States Patent and Trademark Office.

[Remainder of page intentionally left blank; signatures appear on following pages.]

IN WITNESS WHEREOF, the parties hereto have executed this Agreement under seal as of the date first written above.

APPLIED OPTOELECTRONICS, INC.
("Company")

By: 
Name: Stefan Murry
Title: Chief Financial Officer

Accepted:

BRANCH BANKING AND TRUST
COMPANY
("Lender")

By: 
Name: Brandon E. Fitch
Title: SVP

EXHIBIT A

Patents

<u>Patent Name</u>	<u>Registration/Application Number</u>	<u>Registration/Application Date</u>
Aligning and directly optically coupling photodetectors to optical demultiplexer outputs in a multichannel receiver optical subassembly	9,703,054	July 11, 2017
Wavelength-selectable laser device providing spatially-selectable wavelength(S)	9,698,567	July 4, 2017
Multi-channel transmitter optical subassembly (TOSA) with an optical coupling receptacle providing an off-center fiber	9,696,503	July 4, 2017
System, method and fixture for performing both optical power and wavelength measurements of light emitted from a laser diode	9,685,757	June 20, 2017
Techniques for reducing ingress of foreign matter into an optical subassembly	9,684,141	June 20, 2017
Pluggable optical transceiver module	9,671,582	June 6, 2017
Coaxial transmitter optical subassembly (TOSA) with cuboid type to laser package and optical transceiver including same	9,614,620	April 4, 2017
Test fixture with thermoelectric cooler and spring-operated holding pin	9,606,145	March 28, 2017
Pluggable optical transceiver module	9,523,826	December 20, 2016

Aligning and directly optically coupling photodetectors to optical demultiplexer outputs in a multichannel receiver optical subassembly	9,509,433	November 29, 2016
Laser array mux assembly with external reflector for providing a selected wavelength or multiplexed wavelengths	9,502,858	November 22, 2016
Extended cavity fabry-perot laser assembly capable of high speed optical modulation with narrow mode spacing and WDM optical system including same	9,479,280	October 25, 2016
Multi-channel optical transceiver module including thermal arrayed waveguide grating multiplexer and athermal arrayed waveguide grating demultiplexer	9,479,259	October 25, 2016
Monitoring a multiplexed laser array in an optical communication system	9,455,782	September 27, 2016
Optical coupling element and optical module having the same	9,448,372	September 20, 2016
Multi-channel optical transceiver module including dual fiber type direct link adapter for optically coupling optical subassemblies in the transceiver module	9,448,367	September 20, 2016
Optical networking unit (ONU) packaging	9,432,122	August 30, 2016
Scribe etch process for semiconductor laser chip manufacturing	9,356,422	May 31, 2016
Semiconductor laser diode with integrated heating region	9,343,870	May 17, 2016
Optically matched laser array coupling assembly for coupling laser array to arrayed waveguide grating	9,341,774	May 17, 2016

Thermally isolated multi-channel transmitter optical subassembly and optical transceiver module including same	9,306,671	April 5, 2016
Laser transceiver with improved bit error rate	9,236,949	January 12, 2016
Thermally shielded multi-channel transmitter optical subassembly and optical transceiver module including same	9,236,945	January 12, 2016
Method and system for alignment of photodetector array to optical demultiplexer outputs	9,225,428	December 29, 2015
Filtered laser array assembly with external optical modulation and WDM optical system including same	9,214,790	December 15, 2015
Reducing cross-modulation in multichannel modulated optical systems	9,191,111	November 17, 2015
Multi-channel optical transceiver module including dual fiber type direct link adapter for optically coupling optical subassemblies in the transceiver module	9,170,383	October 27, 2015
External cavity laser array system and WDM optical system including same	9,160,455	October 13, 2015
Heated laser package with increased efficiency for optical transmitter systems	9,083,468	July 14, 2015
Compact multi-channel optical transceiver module	9,039,303	May 26, 2015
Wavelength-selectable laser device and apparatus and system including same	9,002,214	April 7, 2015

Temperature controlled multi-channel transmitter optical subassembly and optical transceiver module including same	8,995,484	March 31, 2015
Receptacle diplexer	8,899,846	December 2, 2014
Distortion compensation circuit including tunable phase path	8,891,974	November 18, 2014
Temperature controlled multi-channel transmitter optical subassembly and optical transceiver module including same	8,831,433	September 9, 2014
Laser mux assembly for providing a selected wavelength	8,818,208	August 26, 2014
Optical transceiver including optical fiber coupling assembly to increase usable channel wavelengths	8,805,191	August 12, 2014
Laser package including semiconductor laser and memory device for storing laser parameters	8,787,772	July 22, 2014
Distortion compensation circuit including one or more phase invertible distortion paths	8,718,489	May 6, 2014
System and method for distortion compensation including configureable delay	8,670,675	March 11, 2014
Optical transceiver that maintains a bend diameter of an internal optical fiber and method of assembling same	8,655,183	February 18, 2014
System and method for distortion compensation in response to frequency detection	8,606,116	December 10, 2013
Network timing	8,406,631	March 26, 2013

Systems and methods for reducing clipping in multichannel modulated optical systems	8,358,937	January 22, 2013
Reducing cross-modulation in multichannel modulated optical systems	8,320,773	November 27, 2012
Systems and methods for reducing clipping in multichannel modulated optical systems	8,165,475	April 24, 2012
Reducing cross modulation in multichannel modulated optical systems with anti-clipping	8,165,474	April 24, 2012
Quad-port optical module with pass-through and add/drop configuration	8,126,329	February 28, 2012
Distortion compensation circuit and method based on orders of time dependent series of distortion signal	8,121,493	February 21, 2012
Gain-coupled distributed feedback semiconductor laser including first-order and second-order gratings	8,121,170	February 21, 2012
Fixture for securing optoelectronic packages for wire and/or component bonding	8,091,876	January 10, 2012
Thermoelectric cooler controller	8,079,222	December 20, 2011
Distortion compensation circuit including one or more phase invertible distortion paths	8,073,340	December 6, 2011
Photosensor operating point	8,055,138	November 8, 2011
Position finding system and method for use in aligning laser device with an optical fiber	8,045,164	October 25, 2011

Clipping correction system and method for correcting clipped signals in a receiver	7,978,985	July 12, 2011
Predistortion circuit including distortion generator diodes with adjustable diode bias	7,925,170	April 12, 2011
Pluggable form factor release mechanism	7,766,686	August 3, 2010
Distributed feedback semiconductor laser including wavelength monitoring section	7,627,012	December 1, 2009
Complex-coupled distributed feedback semiconductor laser	7,583,719	September 1, 2009
Laser drive circuit and method providing high limit clipping corresponding to low limit clipping in a laser	7,573,923	August 11, 2009
Distributed feedback laser with improved optical field uniformity and mode stability	7,542,503	June 2, 2009
Coaxial optoelectronic device separation apparatus and method	7,519,260	April 14, 2009
Modular laser package system	7,478,955	January 20, 2009
System and method for securing optoelectronic packages for mounting components at a mounting angle	7,468,286	December 23, 2008
Method and apparatus for coupling a laser to a fiber in a two-lens laser system	7,226,218	June 5, 2007
Method for fabricating a VCSEL with ion-implanted current-confinement structure	7,026,178	April 11, 2006
Assembly with tapered, threaded ferrule housing for improved alignment of fiber with laser	7,010,013	March 7, 2006

Method and apparatus for reducing specular reflections in semiconductor lasers	7,010,012	March 7, 2006
Optically-pumped multiple-quantum well active region with improved distribution of optical pumping power	6,859,481	February 22, 2005
VCSEL with antiguide current confinement layer	6,795,478	September 21, 2004
Multiple reflectivity band reflector	6,788,466	September 7, 2004
VCSEL with heat-spreading layer	6,782,019	August 24, 2004
VCSEL assembly with edge-receiving optical devices	6,765,948	July 20, 2004
Multiple reflectivity band reflector with non-uniform profile and laser system employing same for laser wavelength monitoring	6,765,939	July 20, 2004
Laser having multiple reflectivity band reflector	6,763,053	July 13, 2004
Method and system employing multiple reflectivity band reflector for laser wavelength monitoring	6,763,046	July 13, 2004
Alternative substrates for epitaxial growth	6,746,777	June 8, 2004
Housing for passively aligning an optical fiber with a lens	6,736,550	May 18, 2004
Planar lightwave circuit for conditioning tunable laser output	6,735,224	May 11, 2004
Modified distributed bragg reflector (DBR) for vertical cavity surface-emitting laser (VCSEL) resonant wavelength tuning sensitivity control	6,724,796	April 20, 2004

Tunable vertical-cavity surface-emitting laser with tuning junction	6,697,413	February 24, 2004
Patterned phase shift layers for wavelength-selectable vertical cavity surface-emitting laser (VCSEL) arrays	6,696,307	February 24, 2004
Optical fiber with mirror for semiconductor laser	6,669,367	December 30, 2003
Method and apparatus for demounting workpieces from adhesive film	6,652,707	November 25, 2003
Method for fabricating single-mode DBR laser with improved yield	6,638,773	October 28, 2003
Overlapping wavelength-tunable vertical cavity surface-emitting laser (VCSEL) arrays	6,636,544	October 21, 2003
Vertical-cavity surface-emitting laser with metal mirror and method of fabrication of same	6,611,543	August 26, 2003
Single-mode DBR laser with improved phase-shift section	6,608,855	August 19, 2003
Double heterostructure photodiode with graded minority-carrier blocking structures	6,603,184	August 5, 2003
Method and apparatus for polarizing light in a VCSEL	6,560,265	May 6, 2003
Spatially coherent surface-emitting, grating coupled quantum cascade laser with unstable resonance cavity	6,560,259	May 6, 2003
Vertical-cavity surface-emitting laser with bottom dielectric distributed bragg reflector	6,549,556	April 15, 2003

Multispectral radiation detectors using strain-compensating superlattices	6,455,908	6,455,908 September 24, 2002
Compliant universal substrates for optoelectronic and electronic devices	6,406,795	June 18, 2002
Tunable fiber fabry-perot surface-emitting lasers	6,263,002	June 17, 2001
Modular laser package system and associated methods	7,290,943	November 6, 2007
Tunable laser with multiple in-line section	13/916,652	June 13, 2013
Monitoring nad controlling temperature across a laser array in a transmitter optical subassembly (TOSA) package	14/295,459	June 4, 2014
Tunable laser with multiple in-line section including sampled gratings	14/551,353	November 24, 2014
Two-section semiconductor laser with modulation-independent grating section to reduce chirp	14/590,456	January 6, 2015
Tunable laser including parallel lasing cavities with a common output	14/661,772	March 18, 2015
Multichannel receiver optical subassembly with improved sensitivity	14/665,639	March 23, 2015
Multi-channel transmitter optical subassembly (TOSA) with opposing placement of transistor outline (TO) can laser packages	14/837,993	August 27, 2015
Receiver optical subassembly (ROSA) housing with sidewall receptacle to provide electrical isolation between an adjacent transmitter optical subassembly (TOSA) in a transceiver housing	14/838,017	August 27, 2015

Optical filter sub-assembly cartridge for use in a receiver optical subassembly (ROSA) housing	14/974,492	December 18, 2015
Optical transceiver assembly including thermal dual arrayed waveguide grating	14/983,773	December 30, 2015
Techniques for reducing the footprint of a multi-channel transmitter optical subassembly (TOSA) within an optical transceiver housing	15/204,174	July 7, 2016
Optical component assembly having a keyed structure for ensuring proper insertion orientation within an optical subassembly	15/241,979	August 19, 2016



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/504,500	12/20/2016	9523826	AOIT003	5134

27543 7590 11/30/2016
APPLIED OPTOELECTRONICS, INC.
13115 JESS PIRTLE BLVD.
SUGAR LAND, TX 77478

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment is 88 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Chao-Hung Tsai, New Taipei City, TAIWAN;
Applied Optoelectronics, Inc., New Taipei City, TAIWAN
Chien-Te Lin, New Taipei City, TAIWAN;
Che-Shou Yeh, New Taipei City, TAIWAN;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax **(571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

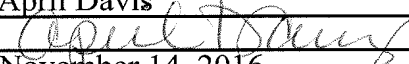
CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

27543 7590 08/12/2016
APPLIED OPTOELECTRONICS, INC.
13115 JESS PIRTLE BLVD.
SUGAR LAND, TX 77478

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

April Davis	(Depositor's name)
	(Signature)
November 14, 2016	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/504,500	10/02/2014	Chao-Hung Tsai	AOIT003	5134

TITLE OF INVENTION: PLUGGABLE OPTICAL TRANSCIEVER MODULE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	11/14/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
CONNELLY, MICHELLE R	2874	385-092000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

Grossman Tucker Perreault
2 & Pflieger, PLLC
3 Norman S. Kinsella

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

Applied Optoelectronics, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Sugar Land, Texas

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☒ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 50-1705 (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

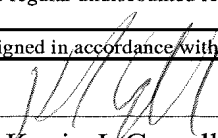
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature


 Kevin J. Carroll

Date November 14, 2016

Typed or printed name

Registration No. 36,384

Electronic Patent Application Fee Transmittal				
Application Number:		14504500		
Filing Date:		02-Oct-2014		
Title of Invention:		PLUGGABLE OPTICL TRANSCEIVER MODULE		
First Named Inventor/Applicant Name:		Chao-Hung Tsai		
Filer:		Kevin J. Carroll/April Davis		
Attorney Docket Number:		AOIT003		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				960

Electronic Acknowledgement Receipt

EFS ID:	27498874
Application Number:	14504500
International Application Number:	
Confirmation Number:	5134
Title of Invention:	PLUGGABLE OPTICL TRANSCEIVER MODULE
First Named Inventor/Applicant Name:	Chao-Hung Tsai
Customer Number:	27543
Filer:	Kevin J. Carroll/April Davis
Filer Authorized By:	Kevin J. Carroll
Attorney Docket Number:	AOIT003
Receipt Date:	14-NOV-2016
Filing Date:	02-OCT-2014
Time Stamp:	13:49:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$960
RAM confirmation Number	111516INTEFSW00000047501705
Deposit Account	501705
Authorized User	April Davis

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	AOIT003_IssueFee_Transmittal_111416.pdf	105605	no	1
			a84555866c480298ebe3ed06a71ff28e264fe5e4		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30652	no	2
			a6f5d8527574130b727cae9e118f884cbc01818f		

Warnings:

Information:

Total Files Size (in bytes):			136257
------------------------------	--	--	--------

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

27543 7590 08/12/2016
APPLIED OPTOELECTRONICS, INC.
13115 JESS PIRTLE BLVD.
SUGAR LAND, TX 77478

EXAMINER

CONNELLY, MICHELLE R

ART UNIT

PAPER NUMBER

2874

DATE MAILED: 08/12/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

14/504,500

10/02/2014

Chao-Hung Tsai

AOIT003

5134

TITLE OF INVENTION: PLUGGABLE OPTICAL TRANSCEIVER MODULE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	11/14/2016

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: **Mail** Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or **Fax** (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

27543 7590 08/12/2016
APPLIED OPTOELECTRONICS, INC.
13115 JESS PIRTLE BLVD.
SUGAR LAND, TX 77478

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/504,500	10/02/2014	Chao-Hung Tsai	AOIT003	5134

TITLE OF INVENTION: PLUGGABLE OPTICAL TRANSCEIVER MODULE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$960	\$0	\$0	\$960	11/14/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
CONNELLY, MICHELLE R	2874	385-092000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) The names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/504,500	10/02/2014	Chao-Hung Tsai	AOIT003	5134

27543	7590	08/12/2016
APPLIED OPTOELECTRONICS, INC.		
13115 JESS PIRTLE BLVD.		
SUGAR LAND, TX 77478		

EXAMINER
CONNELLY, MICHELLE R

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 08/12/2016

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 14/504,500	Applicant(s) TSAI ET AL.	
	Examiner MICHELLE R. CONNELLY	Art Unit 2874	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's Amendment filed August 1, 2016.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are 1-4 and 7-9. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) ☒ All b) ☐ Some *c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. ☐ Notice of References Cited (PTO-892) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 6. ☒ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/MICHELLE R. CONNELLY/
Primary Examiner, Art Unit 2874

DETAILED ACTION

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Response to Amendment

Applicant's Amendment filed August 1, 2016 has been fully considered and entered.

Allowable Subject Matter

Claims 1-4 and 7-9 are allowed.

The following is an examiner's statement of reasons for allowance: The prior art of record, which is the most relevant prior art known, does not disclose or render obvious the pluggable optical transceiver module defined in claim 1 or the pluggable optical transceiver module defined in claim 9, **wherein the elastic component is located in the limiting space and between the first limiting surface and the limited part and is covered by the extending arm such that the elastic component is confined by the main body and the sliding component** in combination with all of the limitations of claim 1 or of claim 9, respectively.

Claims 2-4, 7 and 8 depend from claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELLE R. CONNELLY whose telephone number is (571)272-2345. The examiner can normally be reached on 9:00 AM to 5:00 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Uyen-Chau N. Le can be reached on 571-272-2397. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHELLE R. CONNELLY/
Primary Examiner, Art Unit 2874

Search Notes 	Application/Control No. 14504500	Applicant(s)/Patent Under Reexamination TSAI ET AL.
	Examiner MICHELLE R CONNELLY	Art Unit 2874

CPC- SEARCHED		
Symbol	Date	Examiner

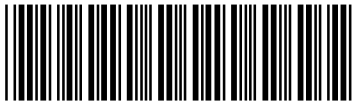
CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
USPTO EAST (see attached text search strategy)	3/24/16	MC
G02B 6/423, 4246, 4261, 4292 limited with text (see attached EAST text search strategy)	8/5/16	MC
USPTO EAST (see attached EAST text search strategy)	8/5/16	MC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
USPTO EAST	see attached EAST text search strategy	8/5/16	MC

	/MICHELLE R CONNELLY/ Primary Examiner.Art Unit 2874
--	---

Issue Classification 	Application/Control No. 14504500	Applicant(s)/Patent Under Reexamination TSAI ET AL.	
	Examiner MICHELLE R CONNELLY	Art Unit 2874	

CPC						
Symbol					Type	Version
G02B		6		423	F	2013-01-01
G02B		6		4284	I	2013-01-01
G02B		6		4292	I	2013-01-01
G02B		6		4246	I	2013-01-01
G02B		6		4261	I	2013-01-01
						
						
						
						
						
						
						
						
						
						

CPC Combination Sets					
Symbol		Type	Set	Ranking	Version
					
					

NONE		Total Claims Allowed: 7	
(Assistant Examiner)	(Date)		
/MICHELLE R CONNELLY/ Primary Examiner.Art Unit 2874	08/05/2016	O.G. Print Claim(s) 1	O.G. Print Figure 3, 4A
(Primary Examiner)	(Date)		



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 5134

SERIAL NUMBER 14/504,500	FILING or 371(c) DATE 10/02/2014 RULE	CLASS 385	GROUP ART UNIT 2874	ATTORNEY DOCKET NO. AOIT003	
APPLICANTS Applied Optoelectronics, Inc., New Taipei City, TAIWAN INVENTORS Chao-Hung Tsai, New Taipei City, TAIWAN; Chien-Te Lin, New Taipei City, TAIWAN; Che-Shou Yeh, New Taipei City, TAIWAN; ** CONTINUING DATA ***** ** FOREIGN APPLICATIONS ***** TAIWAN 102135723 10/02/2013 ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** 10/07/2014					
Foreign Priority claimed ☒ Yes ☐ No 35 USC 119(a-d) conditions met ☒ Yes ☐ No Verified and /MICHELLE R CONNELLY/ Acknowledged Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY TAIWAN	SHEETS DRAWINGS 8	TOTAL CLAIMS 9	INDEPENDENT CLAIMS 2
ADDRESS APPLIED OPTOELECTRONICS, INC. 13115 JESS PIRTLE BLVD. SUGAR LAND, TX 77478 UNITED STATES					
TITLE PLUGGABLE OPTICL TRANSCEIVER MODULE					
FILING FEE RECEIVED 1600	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:		☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit		

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	"20110081114"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:37
L2	1	14/504,500	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:44
L3	1	2 and (extend\$3 near2 arm)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:44
L4	2	((("20110081114") or ("7201520")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/05 10:45
L5	112	(G02B6/42\$3.cpc. or G02B6/43.cpc.) and (plug\$4 or pluggable) and (transceiv\$3) and module and socket and slid\$4 and pull\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L6	0	("2015/0093083").URPN.	USPAT	OR	ON	2016/08/05 10:46
L7	216	(G02B6/42\$3.cpc. or G02B6/43.cpc.) and (plug\$4 or pluggable) and (pull\$3 near3 (tab or handle))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L8	0	("2016/0004022").URPN.	USPAT	OR	ON	2016/08/05 10:46
L9	4	("7090523" "7402070" "8206043" "8226305").PN. OR ("9276358").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/08/05 10:46
L10	29	(US-20150093083-\$ or US-20160004022-\$ or US-20150349462-\$ or US-20150338588-\$ or US-20140348468-\$ or US-20140169749-\$ or US-20140168906-\$ or US-20140126957-\$ or US-	US-PGPUB; USPAT; DERWENT	OR	ON	2016/08/05 10:46

		20140035755-\$ or US-20130280932-\$ or US-20130183846-\$ or US-20120148198-\$ or US-20110267742-\$ or US-20110081114-\$ or US-20090274468-\$).did. or (US-9276358-\$ or US-8226305-\$ or US-8206043-\$ or US-7402070-\$ or US-7090523-\$ or US-9250402-\$ or US-9230416-\$ or US-8292518-\$ or US-8113723-\$ or US-7766679-\$).did. or (US-20150093083-\$ or US-20160004022-\$ or US-20150338588-\$ or US-20140219616-\$).did.				
L11	1	("20110081114").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/05 10:46
L12	0	L11 and socket	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L13	1	L11 and receptacle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L14	2	("2011/0081114").URPN.	USPAT	OR	ON	2016/08/05 10:46
L15	18	("20050260880" "20060078259" "20110081114" "4979909" "6648665" "6749448" "6824416" "6851867" "7040911" "7090523" "7309250" "8040687").PN. OR ("8545252").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/08/05 10:46
L16	16	("20050260880" "20120275120" "6824416" "6872010" "6991481" "7052306" "7090523" "7201520" "7300215" "7422457" "7445485" "7466544" "7513693" "7618199" "7643720" "8545252").PN. OR ("9182558").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/08/05 10:46
L17	3	("2012/0275120").URPN.	USPAT	OR	ON	2016/08/05 10:46
L18	31	("20030002823" "20030072539" "20030072540" "20030171022" "20040008954" "20040033030" "20040062493" "20040105239" "20040197055" "20040197056" "20050100292" "20050117854" "6439918" "6447170" "6556446" "6744963" "6786653").PN. OR ("7201520").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/08/05 10:46
L19	3	((("6749448") or ("7090523") or ("7201520")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/05 10:46
L20	1	14/504,500	US-PGPUB; USPAT; USOCR;	OR	ON	2016/08/05 10:46

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
L21	1	L20 and (bottom adj surface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L22	1	("7201520").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/05 10:46
L23	1	L22 and spring	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L24	1	("20110081114").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/08/05 10:46
L25	5	(chao-hung near2 tsai).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L26	2	(chien-te near2 lin).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L27	3	(che-shou near2 yeh).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L28	6	L25 or L26 or L27	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:46
L29	13	(2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 or 28) and @pd> "20160324"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:56
L30	1	(plug\$4 or pluggable) with (optic\$3 near2	US-PGPUB;	OR	ON	2016/08/05

		transceiv\$3) and ((limit\$3 near2 space) with (elastic or spring))	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			10:57
L31	5	(plug\$4 or pluggable) with (optic\$3 near2 transceiv\$3) and ((arm near3 cover\$3) with (elastic or spring))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:58
L32	24	(plug\$4 or pluggable) with (optic\$3 near2 transceiv\$3) and (cover\$3 near2 (elastic or spring))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 10:58
L33	2	G02B6/\$.cpc. and ((space or hole or groove or trench or recess) near3 (elastic or spring)) same (((cover\$3 near2 (space or hole or groove or trench or recess or elastic or spring)) with arm))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:00
L34	31	G02B6/\$.cpc. and ((arm near3 cover\$3) with (elastic or spring))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:00
L35	5	((chao-hung) near2 tsai).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:01
L36	2	(chien-te near2 lin).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:01
L37	3	(che-shou near2 yeh).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:02
L38	6	35 or 36 or 37	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	ON	2016/08/05 11:02

			IBM_TDB			
L49	4373	G02B6/423.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:28
L50	10992	G02B6/4246.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:28
L51	747	G02B6/4284.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:29
L52	436	G02B6/4261.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:29
L53	10217	G02B6/4292.cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:29
L54	21742	(49 or 50 or 51 or 52 or 53)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:29
L57	392	54 and (plug\$4 or pluggable) and (transceiv\$3) and (socket or receptacle) and (elastic or spring) and (slid\$4 or slidable)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:36
L58	392	54 and (plug\$4 or pluggable) and (transceiv\$3) and (socket or receptacle) and (elastic or spring) and (slid\$4 or slidable)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/08/05 11:36
S1	92	(G02B6/42\$3.cpc. or G02B6/43.cpc.) and (plug\$4 or pluggable) and (transceiv\$3) and module and socket and slid\$4 and pull\$3	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2016/03/24 14:31

			EPO; JPO; DERWENT; IBM_TDB			
S2	0	("2015/0093083").URPN.	USPAT	OR	ON	2016/03/24 14:31
S3	188	(G02B6/42\$3.cpc. or G02B6/43.cpc.) and (plug\$4 or pluggable) and (pull\$3 near3 (tab or handle))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 14:33
S4	0	("2016/0004022").URPN.	USPAT	OR	ON	2016/03/24 14:33
S5	4	("7090523" "7402070" "8206043" "8226305").PN. OR ("9276358").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/24 14:37
S6	29	(US-20150093083-\$ or US-20160004022- \$ or US-20150349462-\$ or US- 20150338588-\$ or US-20140348468-\$ or US-20140169749-\$ or US-20140168906-\$ or US-20140126957-\$ or US- 20140035755-\$ or US-20130280932-\$ or US-20130183846-\$ or US-20120148198-\$ or US-20110267742-\$ or US- 20110081114-\$ or US-20090274468- \$).did. or (US-9276358-\$ or US-8226305- \$ or US-8206043-\$ or US-7402070-\$ or US-7090523-\$ or US-9250402-\$ or US- 9230416-\$ or US-8292518-\$ or US- 8113723-\$ or US-7766679-\$).did. or (US- 20150093083-\$ or US-20160004022-\$ or US-20150338588-\$ or US-20140219616- \$).did.	US-PGPUB; USPAT; DERWENT	OR	ON	2016/03/24 14:41
S7	1	("20110081114").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 14:54
S8	0	S7 and socket	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 14:54
S9	1	S7 and receptacle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 14:54
S10	2	("2011/0081114").URPN.	USPAT	OR	ON	2016/03/24 15:45
S11	17	("20050260880" "20060078259" "20110081114" "4979909" "6648665" "6749448" "6824416" "6851867" "7040911" "7090523" "7309250" "8040687").PN. OR ("8545252").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/24 15:45
S12	16	("20050260880" "20120275120" "6824416" "6872010" "6991481"	US-PGPUB; USPAT;	OR	ON	2016/03/24 15:46

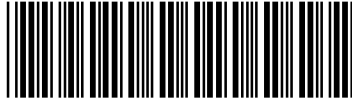
		"7052306" "7090523" "7201520" "7300215" "7422457" "7445485" "7466544" "7513693" "7618199" "7643720" "8545252").PN. OR ("9182558").URPN.	USOCR			
S13	2	("2012/0275120").URPN.	USPAT	OR	ON	2016/03/24 15:47
S14	31	("20030002823" "20030072539" "20030072540" "20030171022" "20040008954" "20040033030" "20040062493" "20040105239" "20040197055" "20040197056" "20050100292" "20050117854" "6439918" "6447170" "6556446" "6744963" "6786653").PN. OR ("7201520").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/24 15:48
S15	3	((("6749448") or ("7090523") or ("7201520"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 16:14
S16	1	14/ 504,500	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 17:24
S17	1	S16 and (bottom adj surface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 17:24
S18	1	("7201520").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 17:27
S19	1	S18 and spring	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 17:27
S20	1	("20110081114").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 17:30
S21	5	(chao-hung near2 tsai).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48
S22	2	(chien-te near2 lin).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48

S23	3	(che-shou near2 yeh).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48
S24	6	S21 or S22 or S23	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48

EAST Search History (I nterference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L39	5	((chao-hung) near2 tsai).in.	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L40	2	(chien-te near2 lin).in.	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L41	3	(che-shou near2 yeh).in.	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L42	27	G02B6/\$.cpc. and ((arm near3 cover\$3) with (elastic or spring))	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L43	2	G02B6/\$.cpc. and ((space or hole or groove or trench or recess) near3 (elastic or spring)) same (((cover\$3 near2 (space or hole or groove or trench or recess or elastic or spring)) with arm))	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L44	23	(plug\$4 or pluggable) with (optic\$3 near2 transceiv\$3) and (cover\$3 near2 (elastic or spring))	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L45	5	(plug\$4 or pluggable) with (optic\$3 near2 transceiv\$3) and ((arm near3 cover\$3) with (elastic or spring))	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L46	1	(plug\$4 or pluggable) with (optic\$3 near2 transceiv\$3) and ((limit\$3 near2 space) with (elastic or spring))	US-PGPUB; USPAT	OR	ON	2016/08/05 11:02
L47	57	(39 or 40 or 41 or 42 or 43 or 44 or 45 or 46)	US-PGPUB; USPAT	OR	ON	2016/08/05 11:03
L48	0	("2015/0093083").URPN.	USPAT	OR	ON	2016/08/05 11:04

8/ 5/ 2016 11:45:49 AM
C:\ Users\ mconnellycushwa\ Documents\ EAST\ Workspaces\ 14504500.wsp

<i>Index of Claims</i> 	Application/Control No. 14504500	Applicant(s)/Patent Under Reexamination TSAI ET AL.
	Examiner MICHELLE R CONNELLY	Art Unit 2874

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant				☐ CPA		☐ T.D.		☐ R.1.47		
CLAIM		DATE								
Final	Original	03/24/2016	08/05/2016							
1	1	✓	=							
2	2	✓	=							
3	3	✓	=							
4	4	✓	=							
-	5	✓	-							
-	6	✓	-							
5	7	✓	=							
6	8	✓	=							
7	9	✓	=							

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 14/504,500	Filing Date 10/02/2014	☐ To be Mailed
---	---	----------------------------------	---------------------------------------

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO**APPLICATION AS FILED – PART I**

(Column 1)

(Column 2)

FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X \$ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	08/01/2016	CLAIMS REMAINING AFTER AMENDMENT	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 7	Minus	** 20	= 0	X \$80 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0	X \$420 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

(Column 1)

(Column 2)

(Column 3)

AMENDMENT	CLAIMS REMAINING AFTER AMENDMENT	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	X \$ =	
	☐ Application Size Fee (37 CFR 1.16(s))					
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					
					TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
ERIC DANTZLER

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	: 14/504,500	Confirmation No. :	5134
Applicant	: Applied Optoelectronics, Inc.		
Filed	: Oct. 2, 2014		
TC/A.U.	: 2874		
Examiner	: Connelly		
Docket No.	: AOIT003		
Customer No.	: 27,543		

MS Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AND REPLY UNDER 37 CFR § 1.111

Sir:

In response to the Office Action dated March 31, 2016, please amend the application as follows and consider the included remarks.

Authorization to charge the deposit account has been provided upon electronic filing of this amendment to extend the term for response for 1 month, from June 30, 2016 to July 31, 2016. Applicant(s) believes that no other extension of time is required. However, Applicant(s) conditionally petitions for an extension of time to provide for the possibility that the need for such a petition has been inadvertently overlooked. As provided below, please charge Deposit Account No. 50-1705 for any required fee.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A pluggable optical transceiver module, for being inserted into a plugging slot of a socket, the socket comprising two first fastening parts located in the plugging slot, the pluggable optical transceiver module comprising:

a main body having two side surfaces that are opposite to each other and two sliding slots located at the two side surfaces, respectively, wherein the main body is configured to be inserted into the plugging slot, wherein the main body has at least one limiting space and two bottom surfaces forming the two sliding slots, respectively, the two bottom surfaces are parallel to the two side surfaces, the at least one limiting space is located at one of the two side surfaces; and

a sliding component comprising a linkage arm and two extending arms, wherein the two extending arms are connected to two ends of the linkage arm, respectively, each extending arm has a second fastening part, the main body is between the two extending arms, the two extending arms are slidably disposed on the two sliding slots to have a fastening position and a releasing position, the two first fastening parts are fastened to the two second fastening parts when the two extending arms are located at the fastening position, and the two second fastening parts press the two first fastening parts, respectively, to make the two first fastening parts be farther away from each other when the two extending arms are located at the releasing position, wherein each extending arm has a limited part configured to move in the at least one limiting space; and

an elastic component, wherein the main body has a first limiting surface and a second limiting surface forming the limiting space, the first limiting surface is closer to the head part than the second limiting surface, and the elastic component is located in the limiting space and between the first limiting surface and the limited part and is covered by the extending arm such that the elastic component is confined by the main body and the sliding component.

2. (Original) The pluggable optical transceiver module according to claim 1, wherein the main body comprises a head part and an inserted part connected to each other, the inserted part is configured to be inserted into the socket, the two side surfaces are located at two sides of the head part and the inserted part opposite to each other, respectively, wherein both the two sliding slots extend from the head part towards the inserted part, and the two extending arms are able to slide relative to the two sliding slots to have the fastening position which is farther away from the head part and the releasing position which is closer to the head part.

3. (Original) The pluggable optical transceiver module according to claim 2, wherein each second fastening part has a fastening surface, and a distance between one side of the fastening surface which is close to the side surface and the head part is less than a distance between another side of the fastening surface which is far away from the side surface and the head part.

4. (Original) The pluggable optical transceiver module according to claim 2, wherein the head part has at least one optical fiber terminal.

5. (Cancelled)

6. (Cancelled)

7. (Currently Amended) The pluggable optical transceiver module according to claim 1 [[5]], further comprising two elastic components, wherein the number of the at least one limiting surface is two, the main body has two first limiting surfaces and two second limiting surfaces forming the two limiting spaces together, respectively, the two first limiting surfaces are closer to the head part than the two second limiting surfaces, the two elastic components are located in the two limiting spaces, respectively, and each elastic component is between the first limiting surface and the limited part.

8. (Currently Amended) The pluggable optical transceiver module according to claim 1 [[5]], wherein the pluggable optical transceiver module further comprises a pull handle pivoted on the linkage arm of the sliding component.

9. (Currently amended) A pluggable optical transceiver module, comprising:

a main body having a head part and an inserted part that are connected to each other, wherein the main body further comprises opposite two side surfaces and two sliding slots which are located at two sides of the head part and the inserted part opposite to each other, respectively, the two sliding slots are located at the two side surfaces, and the two sliding slots extend from the head part to the inserted part, respectively, wherein the main body has at least one limiting space and two bottom surfaces forming the two sliding slots, respectively, the two bottom surfaces are parallel to the two side surfaces, the at least one limiting space is located at one of the two side surfaces; and

a sliding component comprising a linkage arm and two extending arms, wherein the linkage arm is connected between the two extending arms, each extending arm has a second fastening part, the main body is between the two extending arms, the two extending arms are able to slide relative to the two sliding slots to have a fastening position which is farther away from the head part and a releasing position which is closer to the head part, wherein each extending arm has a limited part configured to move in the at least one limiting space; and

an elastic component, wherein the main body has a first limiting surface and a second limiting surface forming the limiting space, the first limiting surface is closer to the head part than the second limiting surface, and the elastic component is located in the limiting space and between the first limiting surface and the limited part and is covered by the extending arm such that the elastic component is confined by the main body and the sliding component.

Remarks/Arguments

Please reconsider the application in view of the above amendments and the following remarks.

Status of Claims

Claims 1-9 stand rejected. Claims 1 and 9 have been amended to include the subject matter from dependent claims 5 and 6 and to provide further clarification. Claims 7 and 8 have been amended to correct dependency. Claims 5 and 6 have been cancelled. Claims 1-4 and 7-9 remain pending.

Rejections under 35 U.S.C. §102

Claims 1-4 and 9 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by U.S. Patent Application Pub. No. 2011/0081114 to Togami, et al. ("Togami"). The subject matter of dependent claims 5 and 6, which were not rejected as anticipated over Togami, have been added to independent claims 1 and 9. Accordingly, Applicant submits that this rejection is moot and requests that the rejection be withdrawn.

Rejections under 35 U.S.C. §103

Claims 5-8 are rejected under 35 U.S.C. 103 as being unpatentable over Togami in view of U.S. Patent No. 7,201,520 to Mizue, et al. ("Mizue"). Applicant respectfully requests reconsideration.

Independent claims 1 and 9, which now include the subject matter of dependent claims 5 and 6, are directed to a pluggable optical transceiver module including a main body, a sliding component, and an elastic component. The main body is between two extending arms of the sliding component and the elastic component is located in a limiting space of the main body between a first limiting surface of the main body and a limited part of the extending arm. Independent claims 1 and 9 have been amended to clarify that the elastic component is covered by the extending arm such that the elastic component is confined by the main body and the sliding component. Support for this may be found in the original disclosure, for example, in FIGS. 4A, 4B, 5A, and 5B.

Applicant submits that, even if Mizue and Togami could be combined as proposed in the Office Action, the proposed combination would not result in the pluggable optical transceiver

recited in amended independent claims 1 and 9. With respect to the teaching reference Mizue, the Office Action asserts that “each extending arm (20a) has a limited part (20g) configured to move in the at least one limitation space (26p) in cooperation with a spring (30).” Even if this structure in Mizue were combined with Togami, however, the spring 30 is exposed and not covered by the arm 20a. See Mizue, FIG. 9. As such, the proposed combination would not result in an elastic component being “covered by the extending arm such that the elastic component is confined by the main body and the sliding component,” as recited in amended independent claims 1 and 9.

Because the proposed combination of Togami and Mizue fails to result in the pluggable optical transceiver module recited in amended claims 1 and 9, Applicant submits that these claims, and the claims dependent therefrom, would not have been obvious over this proposed combination. Accordingly, Applicant requests that the rejection under 35 U.S.C. 103 be withdrawn.

Conclusion

The claims have been shown to be allowable over the prior art. Applicant believes that this paper is responsive to each and every ground of rejection cited by the Examiner in the Action dated March 31, 2016, and respectfully requests favorable action in this application. The examiner is invited to telephone the undersigned, applicant’s attorney of record, to facilitate advancement of the present application.

Please apply any charges not covered, or any credits, to Deposit Account 50-1705 (Reference Number AOIT003).

Respectfully submitted,

GROSSMAN, TUCKER, PERREAULT &
PFLEGER PLLC

Date: August 1, 2016

By: /Kevin J. Carroll/
Kevin J. Carroll, Reg. No. 36,384

55 S. Commercial Street
Manchester, NH 03101
Telephone: (603) 668-6560
Facsimile: (603) 668-2970

Electronic Patent Application Fee Transmittal				
Application Number:		14504500		
Filing Date:		02-Oct-2014		
Title of Invention:		PLUGGABLE OPTICL TRANSCEIVER MODULE		
First Named Inventor/Applicant Name:		Chao-Hung Tsai		
Filer:		Kevin J. Carroll/April Davis		
Attorney Docket Number:		AOIT003		
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension - 1 month with \$0 paid	1251	1	200	200
Miscellaneous:				
Total in USD (\$)				200

Electronic Acknowledgement Receipt

EFS ID:	26509900
Application Number:	14504500
International Application Number:	
Confirmation Number:	5134
Title of Invention:	PLUGGABLE OPTICL TRANSCEIVER MODULE
First Named Inventor/Applicant Name:	Chao-Hung Tsai
Customer Number:	27543
Filer:	Kevin J. Carroll/April Davis
Filer Authorized By:	Kevin J. Carroll
Attorney Docket Number:	AOIT003
Receipt Date:	01-AUG-2016
Filing Date:	02-OCT-2014
Time Stamp:	15:30:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$200
RAM confirmation Number	1757
Deposit Account	501705
Authorized User	CARROLL, KEVIN J.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 CFR 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 CFR 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 CFR 1.19 (Document supply fees)

Charge any Additional Fees required under 37 CFR 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		AOIT003_Amendment_asfiled_080116.pdf	45259	yes	6
			6fc344046a0e19b810c9575fc0ff4559b7d0879f		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment/Req. Reconsideration-After Non-Final Reject		1	1	
	Claims		2	4	
	Applicant Arguments/Remarks Made in an Amendment		5	6	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30646	no	2
			99f517e4313d1818134618e5dc2bc0184e45d165		
Warnings:					
Information:					
Total Files Size (in bytes):			75905		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	5	(chao-hung near2 tsai).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48
L2	2	(chien-te near2 lin).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48
L3	3	(che-shou near2 yeh).in.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48
L4	6	1 or 2 or 3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 18:48
S1	92	(G02B6/42\$3.cpc. or G02B6/43.cpc.) and (plug\$4 or pluggable) and (transceiv\$3) and module and socket and slid\$4 and pull\$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 14:31
S2	0	("2015/0093083").URPN.	USPAT	OR	ON	2016/03/24 14:31
S3	188	(G02B6/42\$3.cpc. or G02B6/43.cpc.) and (plug\$4 or pluggable) and (pull\$3 near3 (tab or handle))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 14:33
S4	0	("2016/0004022").URPN.	USPAT	OR	ON	2016/03/24 14:33
S5	4	("7090523" "7402070" "8206043" "8226305").PN. OR ("9276358").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/24 14:37
S6	29	(US-20150093083-\$ or US-20160004022-\$	US-PGPUB;	OR	ON	2016/03/24

		or US-20150349462-\$ or US-20150338588-\$ or US-20140348468-\$ or US-20140169749-\$ or US-20140168906-\$ or US-20140126957-\$ or US-20140035755-\$ or US-20130280932-\$ or US-20130183846-\$ or US-20120148198-\$ or US-20110267742-\$ or US-20110081114-\$ or US-20090274468-\$.did. or (US-9276358-\$ or US-8226305-\$ or US-8206043-\$ or US-7402070-\$ or US-7090523-\$ or US-9250402-\$ or US-9230416-\$ or US-8292518-\$ or US-8113723-\$ or US-7766679-\$.did. or (US-20150093083-\$ or US-20160004022-\$ or US-20150338588-\$ or US-20140219616-\$.did.	USPAT; DERWENT			14:41
S7	1	("20110081114").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 14:54
S8	0	S7 and socket	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 14:54
S9	1	S7 and receptacle	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 14:54
S10	2	("2011/0081114").URPN.	USPAT	OR	ON	2016/03/24 15:45
S11	17	("20050260880" "20060078259" "20110081114" "4979909" "6648665" "6749448" "6824416" "6851867" "7040911" "7090523" "7309250" "8040687").PN. OR ("8545252").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/24 15:45
S12	16	("20050260880" "20120275120" "6824416" "6872010" "6991481" "7052306" "7090523" "7201520" "7300215" "7422457" "7445485" "7466544" "7513693" "7618199" "7643720" "8545252").PN. OR ("9182558").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/24 15:46
S13	2	("2012/0275120").URPN.	USPAT	OR	ON	2016/03/24 15:47
S14	31	("20030002823" "20030072539" "20030072540" "20030171022" "20040008954" "20040033030" "20040062493" "20040105239" "20040197055" "20040197056" "20050100292" "20050117854" "6439918" "6447170" "6556446" "6744963" "6786653").PN. OR ("7201520").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2016/03/24 15:48
S15	3	((("6749448") or ("7090523") or ("7201520"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 16:14

S16	1	14/504,500	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 17:24
S17	1	S16 and (bottom adj surface)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 17:24
S18	1	("7201520").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 17:27
S19	1	S18 and spring	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/24 17:27
S20	1	("20110081114").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2016/03/24 17:30

EAST Search History (Interference)

< This search history is empty >

3/ 24/ 2016 6:52:05 PM
C:\ Users\ mconnellycushwa\ Documents\ EAST\ Workspaces\ 14504500.wsp



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/504,500	10/02/2014	Chao-Hung Tsai	AOIT003	5134

27543 7590 03/31/2016
APPLIED OPTOELECTRONICS, INC.
13115 JESS PIRTLE BLVD.
SUGAR LAND, TX 77478

EXAMINER

CONNELLY, MICHELLE R

ART UNIT	PAPER NUMBER
----------	--------------

2874

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

03/31/2016

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

kinsella@ao-inc.com
docketing@gtpp.com
kcarroll@gtpp.com

Office Action Summary	Application No. 14/504,500	Applicant(s) TSAI ET AL.	
	Examiner MICHELLE R. CONNELLY	Art Unit 2874	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims*

5) ☒ Claim(s) 1-9 is/are pending in the application.
5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6) ☐ Claim(s) _____ is/are allowed.

7) ☒ Claim(s) 1-9 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

9) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10) ☐ The specification is objected to by the Examiner.

11) ☒ The drawing(s) filed on 10/2/14 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

a) ☒ All b) ☐ Some** c) ☐ None of the:

1. ☒ Certified copies of the priority documents have been received.

2. ☐ Certified copies of the priority documents have been received in Application No. _____.

3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

** See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b)
Paper No(s)/Mail Date _____.

3) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

4) ☐ Other: _____.

DETAILED ACTION

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Priority

Receipt is acknowledged of certified copies of papers required by 37 CFR 1.55.

Drawings

Eight (8) sheets of drawings were filed on October 2, 2014 and have been accepted by the examiner.

Specification

Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a)(1) the claimed invention was patented, described in a printed publication, or in public use, on sale or otherwise available to the public before the effective filing date of the claimed invention.

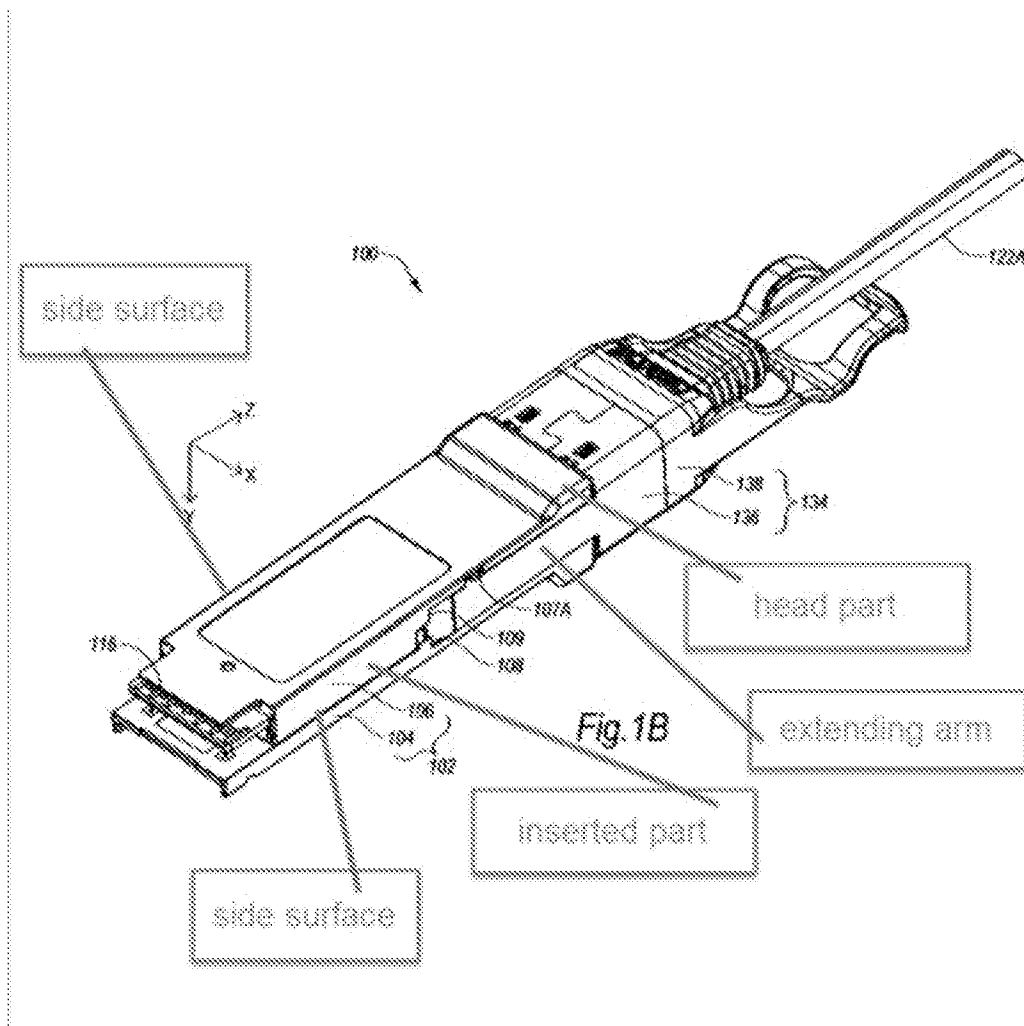
Claims 1-4 and 9 are rejected under 35 U.S.C. 102(a)(1) as being anticipated by Togami et al. (US 2011/0081114 A1).

Regarding claim 1; Togami et al. discloses a pluggable optical transceiver module (100; see Figures 1-5), for being inserted into a plugging slot of a socket(slot of receptacle 500; see Figures 5A and 5B), the socket (500) comprising two first fastening parts (502A and 502B) located in the plugging slot, the pluggable optical transceiver module comprising:

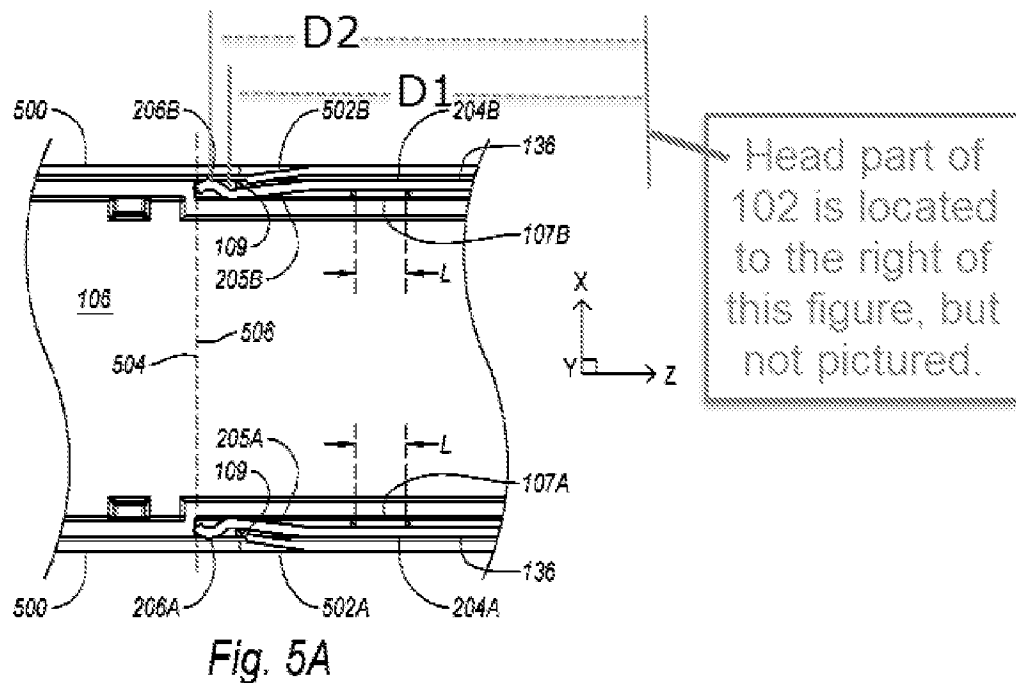
- a main body (102; see Figures 1A) having two side surfaces that are opposite to each other and two sliding slots (107A, 107B; see Figures 1A-1C and 5) located at the two side surfaces, respectively, wherein the main body (102) is configured to be inserted into the plugging slot (receptacle 500; see Figures 5A and 5B); and
- a sliding component (134) comprising a linkage arm (202; see Figure 2A) and two extending arms (204A, 204B), wherein the two extending arms are connected to two ends of the linkage arm, respectively, each extending arm has a second fastening part (205A and 206A form one of the second fastening parts, and 205B and 206B form the other of the second fastening parts), the main body (102) is between the two extending arms (204A, 204B), the two extending arms are slidably disposed on the two sliding slots (107A, 107B; see Figures 5A and 5B) to have a fastening position (see Figure 5A) and a releasing position (see Figure 5B), the two

first fastening parts (502A, 502B) are fastened to the two second fastening parts (205A/206A, 205B/206B) when the two extending arms (204A, 204B) are located at the fastening position (see Figure 4A), and the two second fastening parts (205A/206A, 205B/206B) press the two first fastening parts (502A and 502B), respectively, to make the two first fastening parts be farther away from each other when the two extending arms are located at the releasing position (see Figure 5B).

Regarding claim 2; the main body (102; see annotated Figure 1B annotated below) comprises a head part and an inserted part connected to each other, the inserted part is configured to be inserted into the socket (receptacle 500; see Figures 5A and 5B), the two side surfaces (see annotated Figure 1B below) are located at two sides of the head part and the inserted part opposite to each other, respectively, wherein both the two sliding slots (107A and 107B) extend from the head part towards the inserted part (see Figure 1B), and the two extending arms (204A, 204B; see Figures 2A and 2B) are able to slide relative to the two sliding slots (107A and 107B) to have the fastening position (see Figure 5B) which is farther away from the head part and the releasing position (see Figure 5B) which is closer to the head part.



Regarding claim 3; each second fastening part (205A/206A and 205B/206B) has a fastening surface, and a distance (D1; see annotated Figure 5A below) between one side of the fastening surface which is close to the side surface and the head part is less than a distance (D2; see annotated Figure 5A below) between another side of the fastening surface which is far away from the side surface and the head part.



Regarding claim 4; the head part has at least one optical fiber terminal (optical fiber cable assembly is inserted into the optical fiber terminal of the head; see Figures 1A-1C and paragraphs 42 and 43).

Regarding claim 9; Togami et al. discloses a pluggable optical transceiver module (100; see Figures 1-5), comprising:

- a main body (102) having a head part and an inserted part that are connected to each other (see annotated Figure 1B above), wherein the main body further comprises opposite two side surfaces and two sliding slots (107A, 107B) which are located at two sides of the head part and the inserted part opposite to each other, respectively, the two sliding slots (107A, 107B) are located at the two side

surfaces, and the two sliding slots (107A, 107B) extend from the head part to the inserted part, respectively; and

- a sliding component (134) comprising a linkage arm (202; see Figure 2A) and two extending arms (204A, 204B), wherein the linkage arm is connected between the two extending arms, each extending arm has a second fastening part (205A/206A, 205B/206B), the main body (102) is between the two extending arms (see Figures 5A and 5B), the two extending arms are able to slide relative to the two sliding slots to have a fastening position (see Figure 5A) which is farther away from the head part and a releasing position (see Figure 5B) which is closer to the head part.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102 of this title, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims the examiner presumes that the subject matter of the various claims was commonly owned as of the effective filing date of the claimed invention(s) absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and effective filing dates of each claim that was not commonly

owned as of the effective filing date of the later invention in order for the examiner to consider the applicability of 35 U.S.C. 102(b)(2)(C) for any potential 35 U.S.C. 102(a)(2) prior art against the later invention.

Claims 5-8 are rejected under 35 U.S.C. 103 as being unpatentable over Togami et al. (US 2011/0081114 A1) in view of Mizue et al. (US 7,201,520 B2).

Regarding claim 5; Togami et al. discloses the main body (102 of Togami et al.) includes two bottom surfaces forming the two sliding slots (107A and 107B), respectively, the two bottom surfaces are parallel to the two side surfaces, but does not disclose at least one limiting space, the at least one limiting space is located at one of the two side surfaces, wherein each extending arm has a limited part configured to move in the at least one limiting space.

Mizue et al. teaches that at least one limiting space (26p; see Figure 8) may be at each of the two side surfaces of a main body (26; see Figures 7 and 8) within sliding slots that receive extending arms (20a) of a sliding component (20), wherein each extending arm (20a) has a limited part (20g) configured to move in the at least one limitation space (26p) in cooperation with a spring (30) to secure the sliding component (20) within the slots of the main body (26) and prevent unintentional disconnection of the transceiver module from the socket (see Figures 7 and 8, and column 7, lines 4- 62 of Mizue et al.).

One of ordinary skill in the art, before the effective filing date of the claimed invention, would have found it obvious to incorporate at least one limiting space in each side surface of the main body (102) of Togami et al. within the sliding slots (107A and

Art Unit: 2874

107B) as suggested by the teachings of Mizue et al. and to provide limited parts on the extending arms (204A and 204B) to move within the limiting space in cooperation with a spring positioned therein for the purpose of providing a mechanism that prevents the transceiver from being unintentionally disconnected and holds the extending arms within the sliding slots of the main body of Togami et al. until a force is exerted by a user to compress the spring and remove the transceiver module from the socket.

Regarding claim 6; the spring (30) suggested by the teachings of Mizue et al. as discussed with respect to claim 5 comprises an elastic component (spring), wherein the main body (26 of Mizue et al., 102 of Togami et al.) has a first limiting surface (26q; see Figure 8 of Mizue et al.) and a second limiting surface (26r) forming the limiting space (26p), the first limiting surface is closer to the head part than the second limiting surface, and the elastic component (spring, 30) is located in the limiting space and between the first limiting surface and the limited part (20g; see Figure 8 of Mizue et al.).

Regarding claim 7; Mizue et al. also suggest two elastic components (springs 30; see Figure 8), wherein the number of the at least one limiting surface (26p) is two (one on each side of the main body), the main body (26) has two first limiting surfaces (26q) and two second limiting surfaces (26r) forming the two limiting spaces (26p) together, respectively, the two first limiting surfaces are closer to the head part than the two second limiting surfaces, the two elastic components (30) are located in the two limiting spaces, respectively, and each elastic component is between the first limiting surface and the limited part (see Figure 8 of Mizue et al.).

Regarding claim 8; Mizue et al. further teaches the use of a pull handle (22b) that pivots on a linkage arm of the sliding component, and one of ordinary skill in the art, before the effective filing date of the claimed invention, would have found it obvious to further provide a pull handle that pivots on the linkage arm of the sliding component for the purpose of allowing easy removal of the device with an alternative pull handle configuration that is known in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELLE R. CONNELLY whose telephone number is (571)272-2345. The examiner can normally be reached on 9:00 AM to 5:00 PM, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Uyen-Chau N. Le can be reached on 571-272-2397. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

Application/Control Number: 14/504,500

Page 11

Art Unit: 2874

USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHELLE R. CONNELLY/
Primary Examiner, Art Unit 2874

Notice of References Cited	Application/Control No. 14/504,500		Applicant(s)/Patent Under Reexamination TSAI ET AL.	
	Examiner MICHELLE R. CONNELLY		Art Unit 2874	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2011/0081114 A1	04-2011	Togami; Chris K.	G02B6/4246	385/76
*	B	US-7,201,520 B2	04-2007	Mizue; Toshio	G02B6/4292	385/92
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

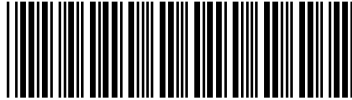
FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 14504500	Applicant(s)/Patent Under Reexamination TSAI ET AL.
	Examiner MICHELLE R CONNELLY	Art Unit 2874

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47										
CLAIM		DATE								
Final	Original	03/24/2016								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								

Search Notes 	Application/Control No. 14504500	Applicant(s)/Patent Under Reexamination TSAI ET AL.
	Examiner MICHELLE R CONNELLY	Art Unit 2874

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
USPTO EAST (see attached text search strategy)	3/24/16	MC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

--	--



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/504,500	10/02/2014	Chao-Hung Tsai	AOIT003

CONFIRMATION NO. 5134

PUBLICATION NOTICE



OC000000074380968

27543
APPLIED OPTOELECTRONICS, INC.
13115 JESS PIRTLE BLVD.
SUGAR LAND, TX 77478

Title:PLUGGABLE OPTICL TRANSCEIVER MODULE

Publication No.US-2015-0093083-A1

Publication Date:04/02/2015

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 14/504,500	
APPLICATION AS FILED - PART I							
(Column 1)		(Column 2)		SMALL ENTITY		OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(j))	9	minus 20 = *			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	2	minus 3 = *				x 420 =	0.00
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							0.00
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL		TOTAL	1600
APPLICATION AS AMENDED - PART II							
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY	
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)	RATE(\$)	ADDITIONAL FEE(\$)
	Total (37 CFR 1.16(i))	*	Minus **	=	x =	OR	x =
	Independent (37 CFR 1.16(h))	*	Minus ***	=	x =	OR	x =
	Application Size Fee (37 CFR 1.16(s))					OR	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					OR	
				TOTAL ADD'L FEE		TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.							



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
14/504,500	10/02/2014	2833	1600	AOIT003	9	2

CONFIRMATION NO. 5134

27543
APPLIED OPTOELECTRONICS, INC.
13115 JESS PIRTLE BLVD.
SUGAR LAND, TX 77478

FILING RECEIPT



OC000000071221718

Date Mailed: 10/08/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Chao-Hung Tsai, New Taipei City, TAIWAN;
Chien-Te Lin, New Taipei City, TAIWAN;
Che-Shou Yeh, New Taipei City, TAIWAN;

Applicant(s)

Applied Optoelectronics, Inc., New Taipei City, TAIWAN

Power of Attorney: The patent practitioners associated with Customer Number 32047

Domestic Applications for which benefit is claimed - None.

A proper domestic benefit claim must be provided in an Application Data Sheet in order to constitute a claim for domestic benefit. See 37 CFR 1.76 and 1.78.

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.)
TAIWAN 102135723 10/02/2013

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

If Required, Foreign Filing License Granted: 10/07/2014

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/504,500**

Projected Publication Date: 04/02/2015

Non-Publication Request: No

Early Publication Request: No

Title

PLUGGABLE OPTICAL TRANSCEIVER MODULE

Preliminary Class

439

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No**PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES**

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at <http://www.uspto.gov/web/offices/pac/doc/general/index.html>.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



中華民國經濟部智慧財產局

INTELLECTUAL PROPERTY OFFICE
MINISTRY OF ECONOMIC AFFAIRS
REPUBLIC OF CHINA

茲證明所附文件，係本局存檔中原申請案的副本，正確無訛，
其申請資料如下：

This is to certify that annexed is a true copy from the records of this office of
the application as originally filed which is identified hereunder：

申 請 日：西元 2013 年 10 月 02 日
Application Date Oct. 2, 2013

申 請 案 號：102135723
Application No.

申 請 人：祥茂光電科技股份有限公司
Applicant(s)

發 明 人：蔡昭宏、林建德、葉哲守
Inventor(s)

局 長

Director General

王美花

西元 2014 年 05 月 02 日
May. 2, 2014

發明摘要

※ 申請案號：

※ 申請日：

※IPC 分類：

【發明名稱】 可插拔光收發模組

PLUGGABLE ASSEMBLY FOR OPTICAL TRANSCEIVER

【中文】

一種可插拔光收發模組，用以插設於一插座。插座包含二第一卡扣部。可插拔光收發模組包含一本體及一滑動件。本體具有相對兩側面及二滑槽。二滑槽位於二側面。本體用以插設於插座。滑動件包含一銜接臂及二延伸臂。銜接臂連接於二延伸臂之間。二延伸臂各具有一第二卡扣部。本體介於該二延伸臂之間，且二延伸臂可滑移地設於二滑槽而具有一卡扣位置及一釋放位置。二延伸臂於卡扣位置時，二第一卡扣部勾扣於二第二卡扣部。二延伸臂於釋放位置時，第二卡扣部推抵二第一卡扣部，以令二第一卡扣部相對遠離。藉此提升可插拔光收發模組的插拔便利性。

【英文】

A pluggable assembly for optical transceiver is inserted into a plug socket. The plug socket includes two first locking parts. The pluggable includes a main body for inserting into the plug socket and a sliding element. The main body has two side surfaces and two sliding slots. Two sliding slots locate on two side surfaces. The main body is inserted into the plug socket. The sliding element includes a linkage arm and two extending arms. The linkage arm connects between two extending arms. Two extending has second locking part. The main body locates between two extending arms, and two extending arms dispose on two sliding slots and have locking location and releasing location. When two extending arms

locate on the locking location, two first locking parts lock two second locking parts.
When two extending arms locate on the releasing location, two locking parts push two first locking parts far away.

【代表圖】

【本案指定代表圖】：第（ 3 ）圖。

【本代表圖之符號簡單說明】：

10	可插拔光收發模組
100	本體
110	頭部
120	插入部
130	側面
140	滑槽
141	槽底面
150	限位槽
160	光纖插接口
200	滑動件
210	銜接臂
220	延伸臂
230	第二卡扣部
240	限位部
300	拉柄

400

彈性件

【本案若有化學式時，請揭示最能顯示發明特徵的化學式】：

無

發明專利說明書

【發明名稱】 可插拔光收發模組

PLUGGABLE ASSEMBLY FOR OPTICAL TRANSCEIVER

【技術領域】

【0001】 本發明係關於一種光通訊元件，特別是一種可插拔光收發模組。

【先前技術】

【0002】 在現代高速通訊網路中，一般設有光收發模組件，而光收發模組件通常安裝於電子通訊設備中。爲了增加系統設計的彈性及維修方便，光收發模組件以可插拔方式插入設置於通訊設備中對應的插座中。一般而言，此插座係設置於電路板上，爲了界定光收發模組件與對應的插座之間的電氣及機械介面，已提出各種不同的標準，例如用於 10 GB/s 通訊速率的 XFP (10 Gigabit Small Form Factor Pluggable)標準以及 QSFP(Quad Small Form-factor Pluggable)標準等標準。

【0003】 光收發模組件之對應的插座中設有卡鎖機構，以便光收發模組件插入至最終位置時，將其牢固地卡鎖於插座中。因此，光收發模組件須要設有脫離機構，以便自插座中脫離時，能夠容易地解除卡鎖機構的卡鎖而自插座中滑脫。

【0004】 另一方面，於常見的通訊設備中，例如集線器(hub)等網路設備，通常會設有至少一個光收發模組，用以將光訊號轉換爲電訊號。然而，一般架設在電腦機房裡的光收發模組或元件極易累積塵埃等污染物，當光纖纜線尚未與收發模組連接前或者自收發模組移出後，若無適當保護

處理，光收發模組便會受到粉塵或其他雜質的污染，造成模組元件損壞，損及訊號傳輸功能。

【0005】 有鑑於此，如何提升光收發模組件與插座之間的插拔便利性，以及兼顧光收發模組件的防塵功能，則是此光通訊技術領域者極需改善的問題之一。

【發明內容】

【0006】 本發明在於提供一種可插拔光收發模組，藉以提升光收發模組件與插座之間的插拔便利性，以及兼顧光收發模組件的防塵功能。

【0007】 本發明所揭露的可插拔光收發模組，用以插設於一插座之一插槽。插座包含二第一卡扣部，位於插槽內，可插拔光收發模組包含一本體及一滑動件。本體具有相對兩側面及二滑槽。二滑槽位於二側面。本體用以插設於插槽。滑動件包含一銜接臂及二延伸臂。銜接臂連接於二延伸臂之間。二延伸臂各具有一第二卡扣部。本體介於該二延伸臂之間，且二延伸臂可滑移地設於二滑槽而具有一卡扣位置及一釋放位置。二延伸臂於卡扣位置時，二第一卡扣部勾扣於二第二卡扣部。二延伸臂於釋放位置時，第二卡扣部推抵二第一卡扣部，以令二第一卡扣部相對遠離。

【0008】 本發明所揭露的可插拔光收發模組，包含一本體及一滑動件。本體包含相連的一頭部及一插入部。頭部與插入部分別具有相對兩側面及二滑槽。二滑槽位於二側面，且分別自頭部朝插入部延伸。滑動件包含一銜接臂及二延伸臂。銜接臂連接於二延伸臂之間。二延伸臂各具有一第二卡扣部。本體介於二延伸臂之間，且二延伸臂可滑移地設於二滑槽具有遠離頭部的一卡扣位置及靠近頭部的一釋放位置。

【0009】 根據上述本發明所揭露的可插拔光收發模組，滑動件可滑動地設於本體之滑槽，讓使用者可藉由拉動滑動件而輕易地改變第二卡扣部與第一卡扣部間之組合關係(卡扣與釋放)。

【0010】 以上關於本發明內容的說明及以下實施方式的說明係用以示範與解釋本發明的原理，並且提供本發明的專利申請範圍更進一步的解釋。

【圖式簡單說明】

【0011】

第 1 圖為根據本發明第一實施例之可插拔光收發模組插設於插座的立體示意圖。

第 2 圖為第 1 圖之分解示意圖。

第 3 圖為第 1 圖之分解示意圖。

第 4A 圖為第 1 圖之滑動件位於卡扣位置之剖面示意圖。

第 4B 圖為第 4A 圖之部分放大示意圖。

第 5A 圖為第 1 圖之滑動件位於釋放位置之剖面示意圖。

第 5B 圖為第 5A 圖之部分放大示意圖。

第 6 圖為第 2 圖之可插拔光收發模組之拉柄樞轉於本體上方的立體示意圖。

【實施方式】

【0012】 請參閱第 1 圖至第 2 圖，第 1 圖為根據本發明第一實施例之可插拔光收發模組插設於插座的立體示意圖。第 2 圖為第 1 圖之分解示意圖。

【0013】 本實施例之可插拔光收發模組 10 用以插設於一插座 20，以及將光訊號轉換為電訊號。插座 20 具有一插槽 22 及二第一卡扣部 24。每一第一卡扣部 24 具彈性變形能力，且第一卡扣部 24 之一端連接於插座 20 之殼體，另一端位於插槽 22 內。在本實施例中，第一卡扣部 24 為具彈性復位能力的簧片。

【0014】 請參閱第 3 圖至第 4B 圖。第 3 圖為第 1 圖之分解示意圖。第 4A 圖為第 1 圖之滑動件位於卡扣位置之剖面示意圖。第 4B 圖為第 4A 圖之部分放大示意圖。可插拔光收發模組 10 包含一本體 100、一滑動件 200、一拉柄 300 及二彈性件 400。

【0015】 本體 100 包含相連的一頭部 110 及一插入部 120。插入部 120 用以插入於插座 20 之插槽 22。本體 100 具有相對的二側面 130、二滑槽 140 及二限位槽 150。二側面 130 分別位於頭部 110 與插入部 120 之相對兩側。二滑槽 140 分別位於二側面 130，且自頭部 110 朝插入部 120 的方向延伸。二滑槽 140 各具有一槽底面 141，平行於側面 130，但並不以此為限，在其他實施例中，槽底面 141 也可以與側面 130 夾銳角。

【0016】 二限位槽 150 分別位於二滑槽 140 之槽底面 141，且每一該限位槽 150 具有一第一限位面 151 及一第二限位面 152。第一限位面 151 與第二限位面 152 皆連接於槽底面 141，且第一限位面 151 較第二限位面 152 靠近頭部 110。

【0017】 此外，在本實施例中，本體 100 用以容置光電轉換電路(未繪示)，且二滑槽 140 與二限位槽 150 係未貫穿本體 100 之內壁面，故能夠透過本體 100 來保護光電轉換電路免於環境之塵埃等污染物污染。

【0018】 頭部 110 具有至少一光纖插接口 160，用以供一光纖插頭(未繪示)沿光纖插接口 160 與本體 100 內部之光電轉換電路插接。

【0019】 滑動件 200 包含一銜接臂 210 及二延伸臂 220。銜接臂 210 連接於二延伸臂 220 之間。本體 100 介於二延伸臂 220 之間，且二延伸臂 220 可滑移地設於二滑槽 140。二延伸臂 220 各具有一第二卡扣部 230 及一限位部 240。二第二卡扣部 230 分別朝遠離側面 130 之方向延伸，且二第二卡扣部 230 各具有一卡扣面 231。卡扣面 231 位於第二卡扣部 230 面向頭部 110 之一側，且鄰近側面 130 之一側至頭部 110 的距離 $D1$ 小於卡扣面 231 遠離側面 130 之一側至頭部 110 的距離 $D2$ ，也就是說卡扣面 231 為與側面 130 夾一銳角的一傾斜表面。限位部 240 朝向側面 130 之方向延伸，且位於限位槽 150 內。限位部 240 可相對本體 100 於第一限位面 151 與第二限位面 152 之間滑動。滑動件 200 可相對本體 100 滑動而具有一卡扣位置及一釋放位置。二延伸臂 220 於卡扣位置時，二第一卡扣部 230 較靠近頭部 110。二延伸臂 220 於釋放位置時，二第一卡扣部 230 較遠離頭部 110。

【0020】 拉柄 300 樞設於滑動件 200 之銜接臂 210，並延伸於本體 100 外。拉柄 300 可相對滑動件 200 樞轉而位於頭部 110 之前方或位於頭部 110 之上方。在本實施例中，係利用拉柄 300 來帶動滑動件 200 滑動，但並不以此為限，在其他實施例中，可插拔光收發模組 10 也可以不要設置拉柄 300，直接抽拉銜接臂 210 來將可插拔光收發模組 10 自插座 20 中拔出。此外，在本實施例中，拉柄 300 係樞設於銜接臂 210，但並不以此為限，在其他實施例中，拉柄 300 也可以焊接於銜接臂 210 上或用螺絲鎖附於銜接臂 210 上。

【0021】 此外，在其他實施例中，拉柄 300 亦可為一帶體延伸於本

體 100 外。詳細來說，帶體可為由軟性橡膠材質及剛性材料所構成，具有高度韌性及強度不易斷裂的特性。並且，因帶體前端為軟性橡膠材質，具有較大之變形量，故可配合使用者的操作方式。

【0022】 二彈性件 400 分別位於二限位槽 150，且分別介於設於二限位槽 150 之第一限位面 151 與二延伸臂 220 之限位部 240 之間，並常態推抵二限位部 240 而令二第二卡扣部 230 位於卡扣位置。在本實施例中，限位槽 150 的數量與二彈性件 400 的數量為二個，但並不以此為限，在其他實施例中，限位槽 150 的數量與彈性件 400 的數量也可以為一個。

【0023】 請參閱第 4A 圖至第 5B 圖，第 5A 圖為第 1 圖之滑動件位於釋放位置之剖面示意圖。第 5B 圖為第 5A 圖之部分放大示意圖。

【0024】 如第 4A 圖與第 4B 圖所示，可插拔光收發模組 10 插設於插座 20 之插槽 22 內，且二限位部 240 分別受彈性件 400 推抵而令二第二卡扣部 230 位於卡扣位置時，二第二第一卡扣部 24 勾扣於二第二卡扣部 230 之卡扣面 231，使可插拔光收發模組 10 穩固地插設於插座 20 之插槽 22，並確保可插拔光收發模組 10 電性連接於插座 20。

【0025】 如第 5A 圖與第 5B 圖所示，當使用者欲將可插拔光收發模組 10 脫離插座 20 時，使用者可沿箭頭 a 所指示之方向拉動拉柄 300，以令拉柄 300 帶動滑動件 200 相對本體 100 滑動而位於釋放位置。於滑動件 200 滑移的過程(自卡扣位置滑移至釋放位置的過程)中，由於卡扣面 231 為斜面，故當滑動件 200 沿箭頭 a 所指示之方向滑動時，二第一卡扣部 24 會受到二卡扣面 231 之推抵而相對遠離。也就是說，二第一卡扣部 24 會被二第二卡扣部 230 撐開以解除第一卡扣部 24 與第二卡扣部 230 之間的卡扣效

果，進而提升可插拔光收發模組 10 與插座 20 之間的插拔便利性。

【0026】 請參閱第 2 圖與第 6 圖，第 6 圖為第 2 圖之可插拔光收發模組之拉柄樞轉的立體示意圖。如第 2 圖所示，拉柄 300 位於頭部 110 之前方時，可便於使用者施力來抽離可插拔光收發模組 10。但當需要將光纖插頭插入光纖插接口 160 時，使用者可沿箭頭 b 所指示之方向樞轉拉柄 300，使拉柄相對滑動件 200 樞轉而位於頭部 110 之上方。由於拉柄 300 位於頭部 110 之上方時，光纖插頭要插入光纖插接口 160 時不會受到拉柄 300 之阻擋，故便於使用者將光纖插頭(未繪示)插入光纖插接口 160。

【0027】 根據上述本發明所揭露的可插拔光收發模組，滑動件可滑動地設於本體之滑槽，讓使用者可藉由拉動滑動件而輕易地改變第二卡扣部與第一卡扣部間之組合關係(卡扣與釋放)。

【0028】 此外，由於拉柄係可樞轉地設於滑動件上，故拉柄可選擇性地地位於本體之前方或上方，當拉柄樞轉於本體之前方時，可便於使用者施力來抽離可插拔光收發模組。當拉柄樞轉於本體之上方時，拉柄不再阻擋於本體前方，故光纖插頭要插入光纖插接口時並不會受到拉柄之阻擋而便於使用者將光纖插頭插入光纖插接口。

【0029】 雖然本發明的實施例揭露如上所述，然並非用以限定本發明，任何熟習相關技藝者，在不脫離本發明的精神和範圍內，舉凡依本發明申請範圍所述的形狀、構造、特徵及數量當可做些許的變更，因此本發明的專利保護範圍須視本說明書所附的申請專利範圍所界定者為準。

【符號說明】

【0030】

10	可插拔光收發模組
20	插座
22	插槽
24	第一卡扣部
100	本體
110	頭部
120	插入部
130	側面
140	滑槽
141	槽底面
150	限位槽
151	第一限位面
152	第二限位面
160	光纖插接口
200	滑動件
210	銜接臂
220	延伸臂
230	第二卡扣部
240	限位部
300	拉柄
400	彈性件

申請專利範圍

1. 一種可插拔光收發模組，用以插設於一插座之一插槽，該插座包含二第一卡扣部，位於該插槽內，該可插拔光收發模組包含：

一本體，具有相對兩側面及二滑槽，該二滑槽位於該二側面，該本體用以插設於該插槽；以及

一滑動件，包含一銜接臂及二延伸臂，該銜接臂連接於該二延伸臂之間，該二延伸臂各具有一第二卡扣部，該本體介於該二延伸臂之間，且該二延伸臂可滑移地設於該二滑槽而具有一卡扣位置及一釋放位置，該二延伸臂於該卡扣位置時，該二第一卡扣部勾扣於該二第二卡扣部，該二延伸臂於該釋放位置時，該第二卡扣部推抵該二第一卡扣部，以令該二第一卡扣部相對遠離。

2. 如請求項 1 所述之可插拔光收發模組，其中該本體包含相連的一頭部及一插入部，該插入部用以插設於該插座，該二側面分別位於該頭部與該插入部之相對兩側，該二滑槽分別自該頭部朝該插入部延伸，該二延伸臂可相對該二滑槽滑動而具有遠離該頭部的該卡扣位置及靠近該頭部的該釋放位置。
3. 如請求項 2 所述之可插拔光收發模組，其中該二第二卡扣部各具有一卡扣面，該卡扣面鄰近該側面之一側至該頭部的距離小於該卡扣面遠離該側面之一側至該頭部的距離。
4. 如請求項 2 所述之可插拔光收發模組，其中該頭部具有至少一光纖插接口。
5. 如請求項 1 所述之可插拔光收發模組，其中該本體具有至少一限位槽及

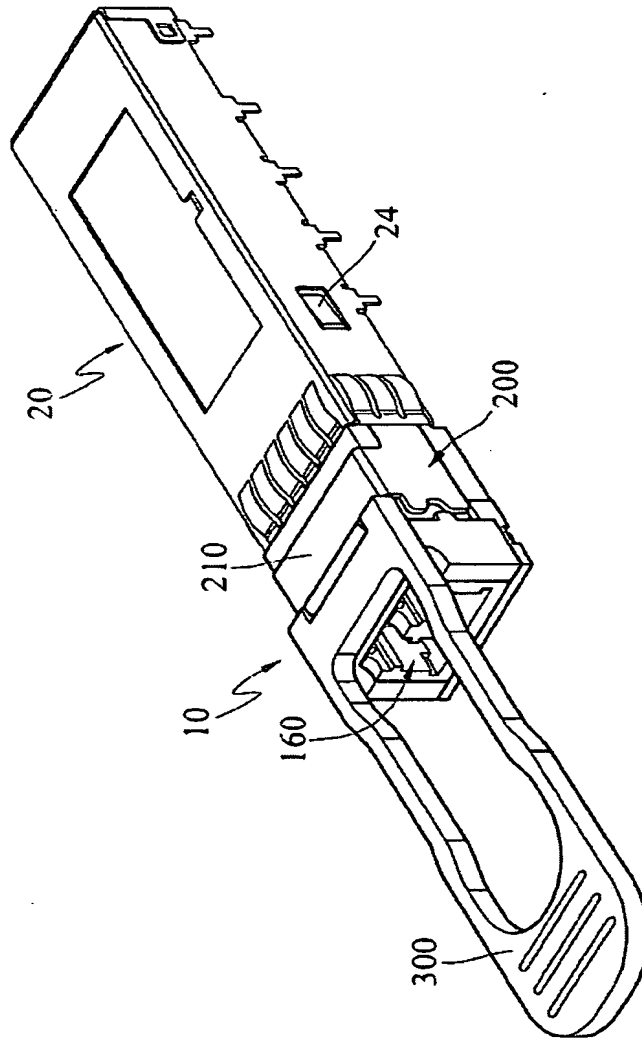
形成該二滑槽之二槽底面，該二槽底面平行於該二側面，該至少一限位槽位於該二槽底面之一，該二延伸臂各具有一限位部，可位移地位於該限位槽。

6. 如請求項 5 所述之可插拔光收發模組，更包含一彈性件，該本體具有形成該限位槽之一第一限位面及一第二限位面，該第一限位面較該第二限位面靠近該頭部，該彈性件位於該限位槽，且介於該第一限位面與該限位部之間。
7. 如請求項 5 所述之可插拔光收發模組，更包含二彈性件，該至少一限位槽的數量為二，該本體具有形成該二限位槽之二第一限位面及二第二限位面，該二第一限位面較該二第二限位面靠近該頭部，該二彈性件分別位於該二限位槽，且分別介於設於該二限位槽之該第一限位面與該限位部之間。
8. 如請求項 1 所述之可插拔光收發模組，更包含一拉柄，樞設於該滑動件之該銜接臂。
9. 一種可插拔光收發模組，包含：

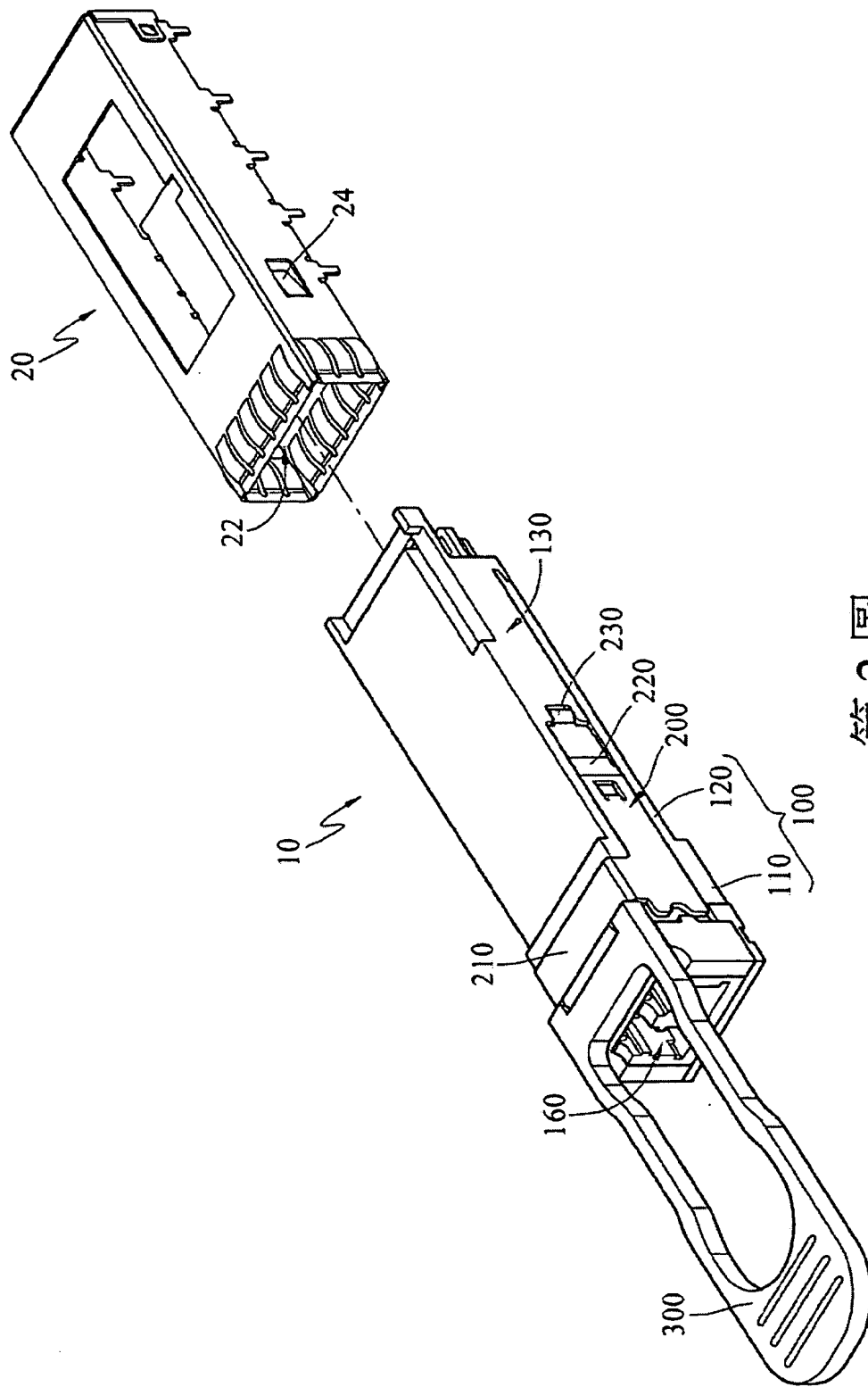
一本體，包含相連的一頭部及一插入部，該頭部與該插入部分別具有相對兩側面及二滑槽，該二滑槽位於該二側面，且分別自該頭部朝該插入部延伸；以及

一滑動件，包含一銜接臂及二延伸臂，該銜接臂連接於該二延伸臂之間，該二延伸臂各具有一第二卡扣部，該本體介於該二延伸臂之間，且該二延伸臂可滑移地設於該二滑槽具有遠離該頭部的一卡扣位置及靠近該頭部的一釋放位置。

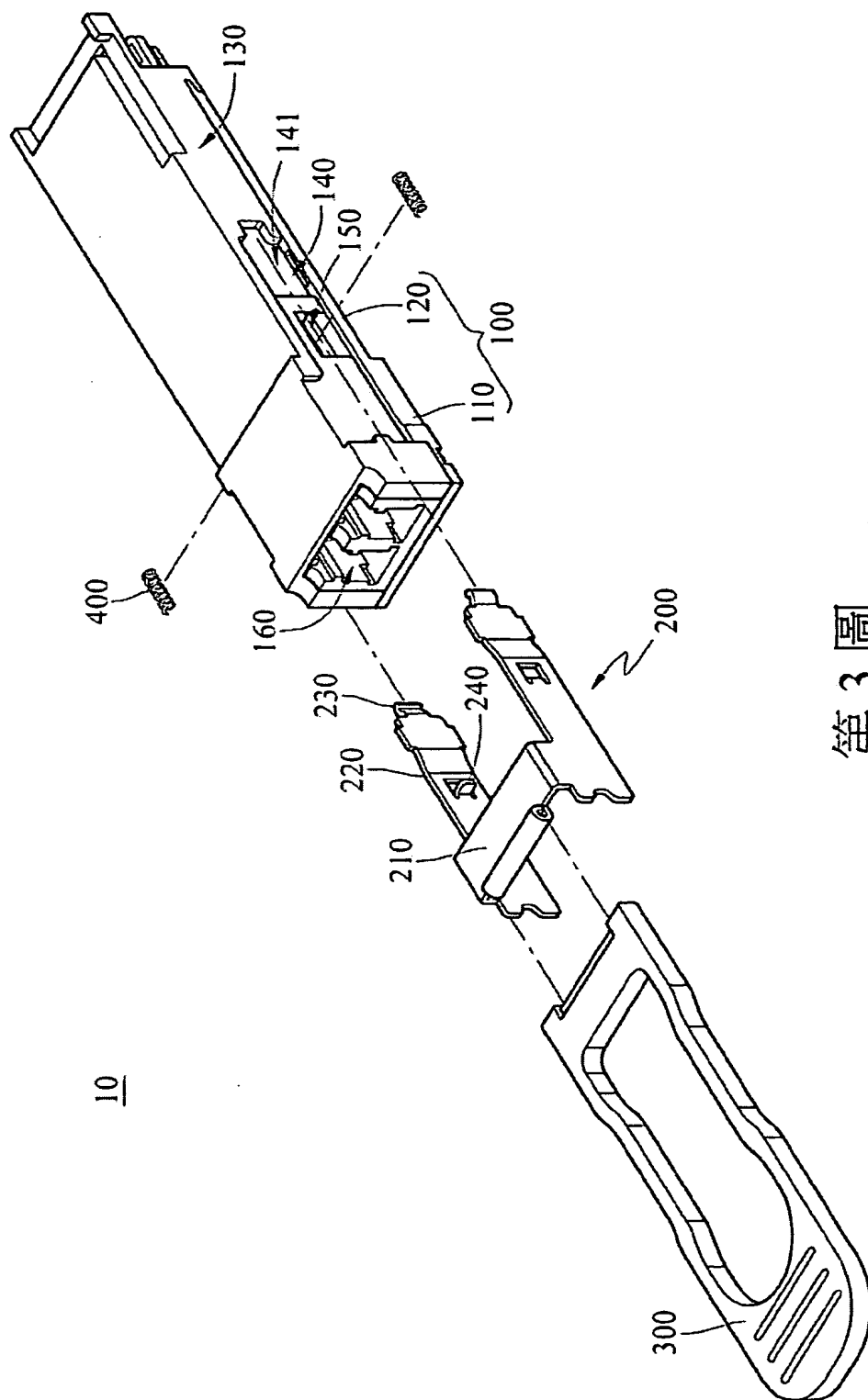
圖式



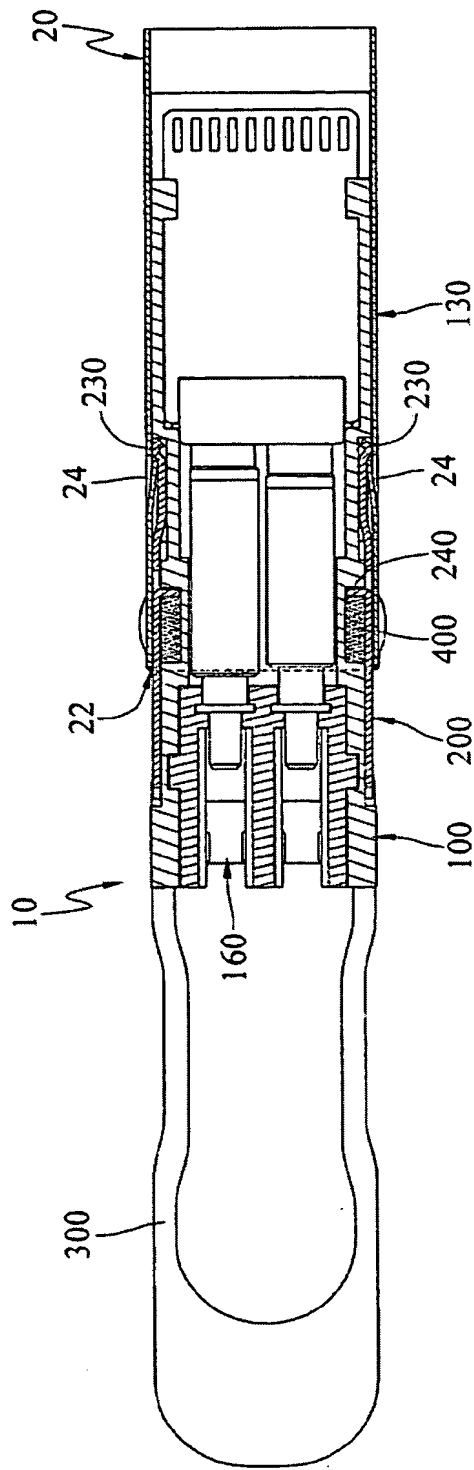
第1圖



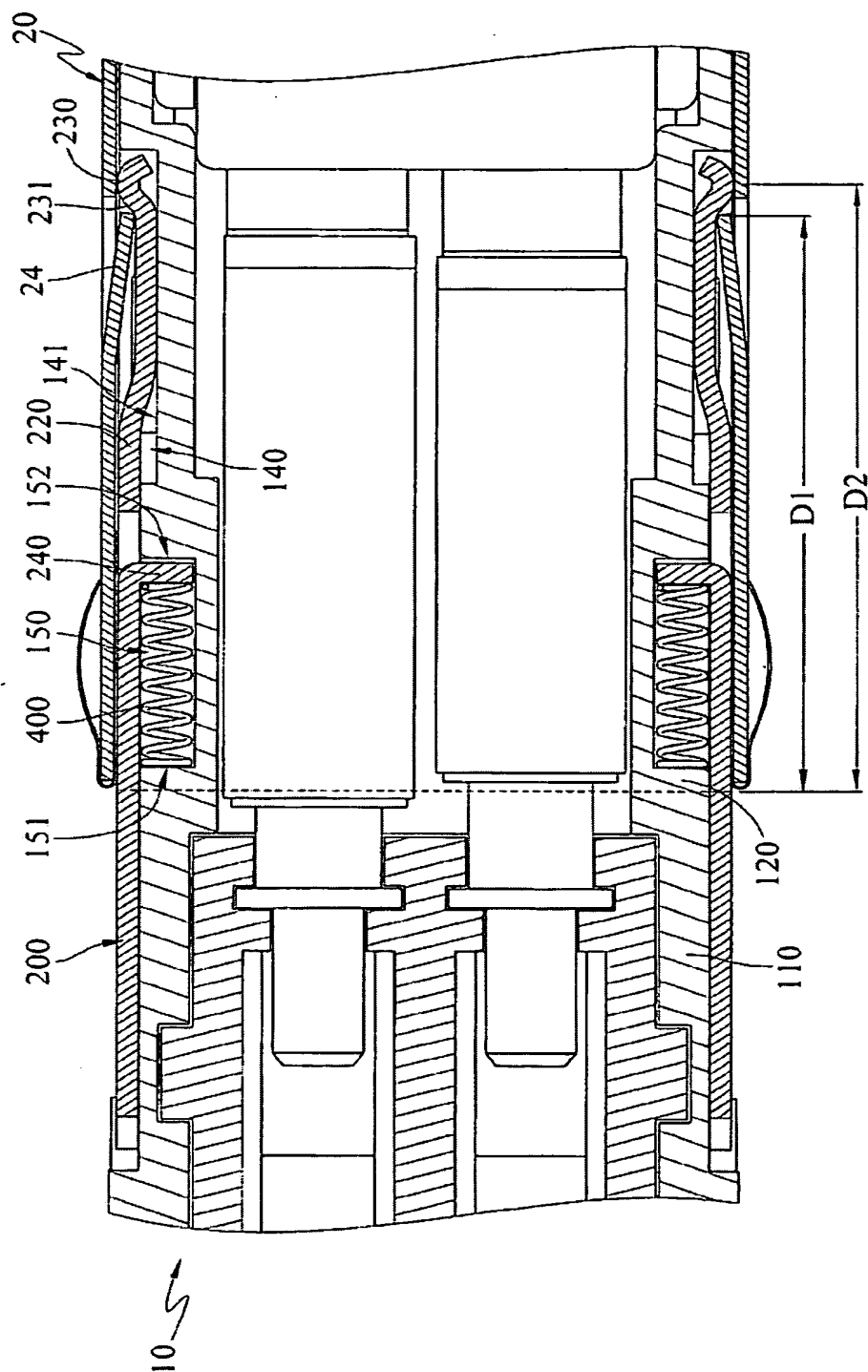
第2圖



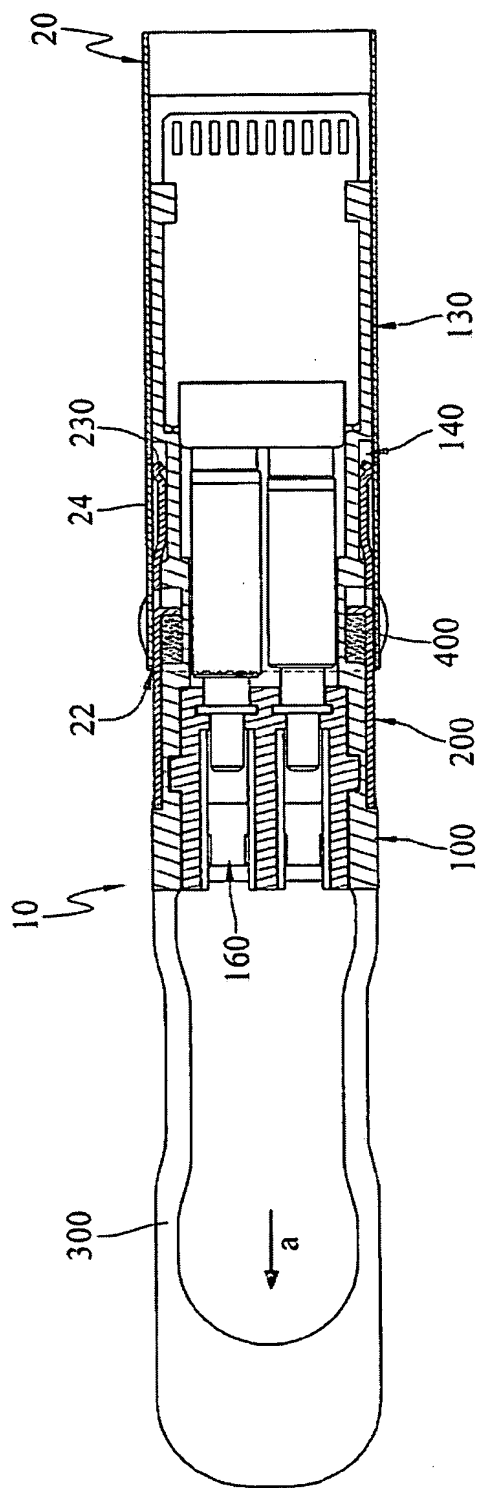
第3圖



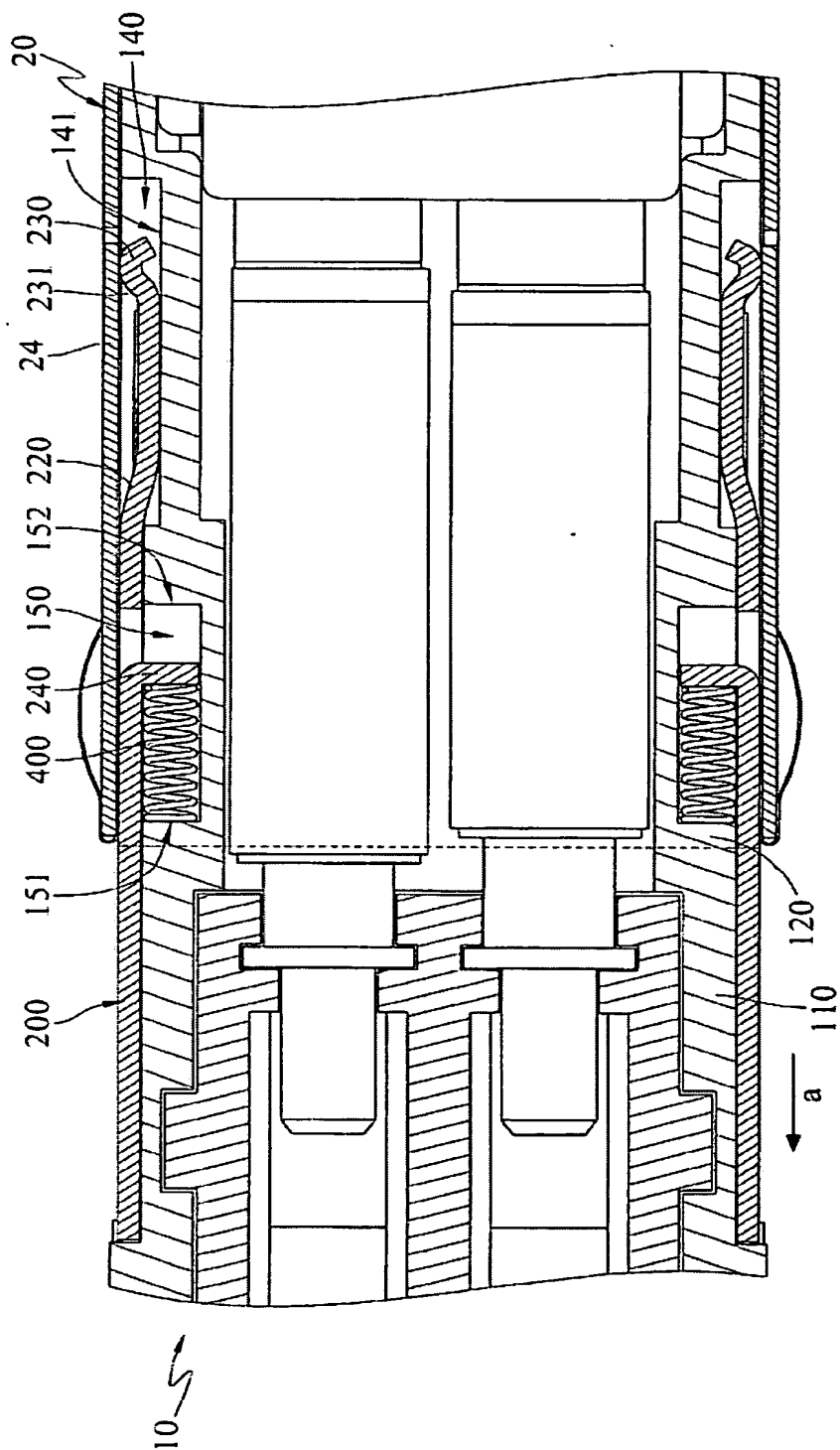
第4A圖



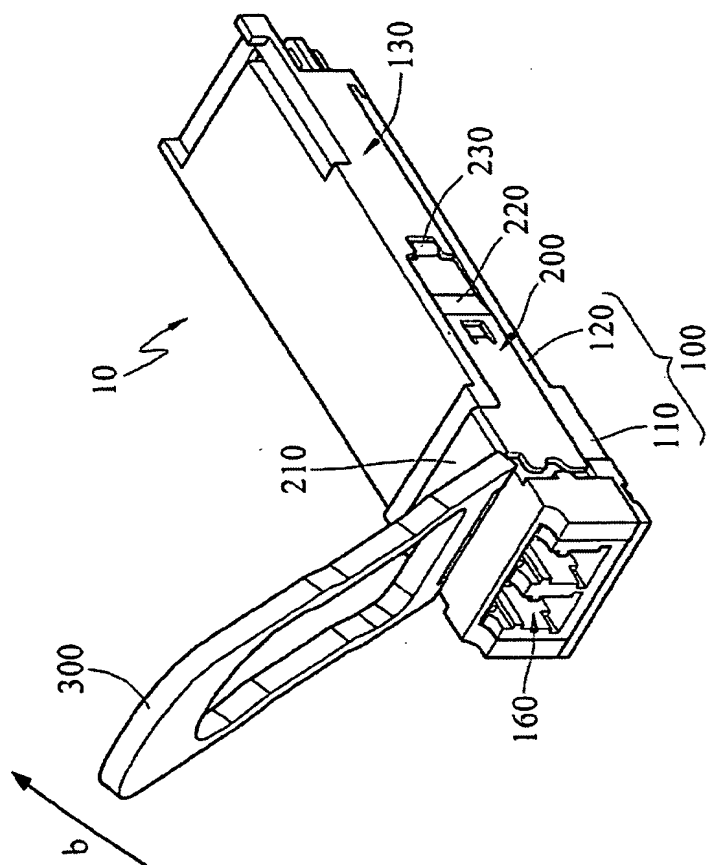
第4B圖



第5A圖



第5B圖



第6圖

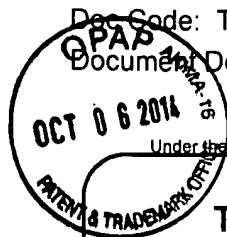
Doc Code: TRAN.LET

Document Description: Transmittal Letter

PTO/SB/21 (07-09)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

Application Number 14/504,500

Filing Date October 2, 2014

First Named Inventor TSAI

Art Unit

Examiner Name

Attorney Docket Number AOIT003

ENCLOSURES (Check all that apply)

- | | | |
|--|--|--|
| ☐ Fee Transmittal Form
☐ Fee Attached
☐ Amendment/Reply
☐ After Final
☐ Affidavits/declaration(s)
☐ Extension of Time Request
☐ Express Abandonment Request
☐ Information Disclosure Statement
☒ Certified Copy of Priority Document(s)
☐ Reply to Missing Parts/Incomplete Application
☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53 | ☐ Drawing(s)
☐ Licensing-related Papers
☐ Petition
☐ Petition to Convert to a Provisional Application
☐ Power of Attorney, Revocation
☐ Change of Correspondence Address
☐ Terminal Disclaimer
☐ Request for Refund
☐ CD, Number of CD(s) _____
☐ Landscape Table on CD | ☐ After Allowance Communication to TC
☐ Appeal Communication to Board of Appeals and Interferences
☐ Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)
☐ Proprietary Information
☐ Status Letter
☐ Other Enclosure(s) (please identify below): |
|--|--|--|

 Remarks
 Enclosed: Priority Document TW102135723

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name Grossman Tucker Perreault & Pledger PLLC

Signature

Printed name Kevin J. Carroll

Date October 2, 2014

Reg. No. 36,384

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name

April Davis

Date

October 2, 2014

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Power of Attorney to Prosecute Applications Before the USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached transmittal letter or application data sheet.

I hereby appoint Practitioner(s) associated with the following Customer Number:

Customer Number: 32047

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications filed for the undersigned as applicant under 37 CFR 1.46 and including the application identified in the attached transmittal letter or application data sheet.

Please direct all correspondence in this case to the address associated with:

Customer Number: 32047

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee or obligated assignee.

Applicant Name APPLIED OPTOELECTRONICS, INC.	
Applicant Address 6F-1, No. 700, Jhongjheng Rd., Zhonghe Dist., New Taipei City, Taiwan, R.O.C.	
Signature <i>Chao-Hung Tsai</i>	Date <i>2014/09/30</i>
Name and Title (of individual signing on behalf of assignee or obligated assignee) <i>Chao-Hung Tsai / VP - Vice President, Applied Optoelectronics, Inc.</i>	

Declaration for United States Patent Application

TITLE OF APPLICATION: PLUGGABLE OPTICAL TRANSCIEVER MODULE

As a below named inventor, I hereby declare that:

This declaration is directed to:

☒ the attached application, or

☐ United States Application No. or PCT Application No. _____ filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application, including the claims, and I am aware of the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 C.F.R. § 1.56 (attached hereto).

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Full name of sole or first inventor Chao-Hung TSAI	Chao-Hung Tsai
Sole or first inventor's signature	Date 2014/09/30

Full name of additional inventor, if any Chien-Te LIN	Chien-te Lin
Additional inventor's signature	Date 2014/9/30

Full name of additional inventor, if any Che-Shou YEH	Che-shou Yeh
Additional inventor's signature	Date 2014/9/30

§ 1.56 Duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is canceled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is canceled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:

- (1) prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
- (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

- (1) Each inventor named in the application;
- (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.

PLUGGABLE OPTICAL TRANSCEIVER MODULE

CROSS-REFERENCE TO RELATED APPLICATIONS

This non-provisional application claims priority under 35 U.S.C. § 119(a) on Patent Application No(s) 102135723, filed in Taiwan, R.O.C. on October 2nd, 2013, the entire contents of which are hereby incorporated by reference.

Technical Field

The disclosure relates to an optical communication component, more particularly to a pluggable optical transceiver module.

Background

An optical transceiver module is generally installed in an electronic communication facility in the modern high speed communication networks. In order to make the electronic communication facility flexible and easy to repair, the optical transceiver module is inserted into a corresponding socket disposed in the communication facility in a pluggable manner. In general, the socket is disposed on a circuit board. In order to define the electrical-to-mechanical interface of the optical transceiver module and the corresponding socket, different specifications have been provided such as XFP (10 Gigabit Small Form Factor Pluggable) used in 10 GB/s communication rate and QSFP (Quad Small Form-factor Pluggable).

A fastening mechanism is disposed in the socket corresponding to the optical transceiver module so that the optical transceiver module is securely fixed to the socket by the fastening mechanism. Therefore, it is indispensable that the optical transceiver module must have a releasing mechanism. This makes the optical transceiver module slip out from the socket by easily removing the lock.

On the other hand, a common communication facility, such as a hub, usually comprises

at least one optical transceiver module for converting optical signals into electronic signals. When the common communication facility is used for a long time, dusts may drop on the surface of common communication facility. Thus, dusts may also drop on the optical transceiver module without any appropriate protection when the optical fiber cable is
5 connected or removed from the optical transceiver module. Consequently, the dusts may damage the optical transceiver module and affect the transmission of the signals.

In view of this, it is important to improve the convenient connection and disconnection between the optical transceiver module and the socket and its dust-proof function.

SUMMARY

10 The disclosure provides a pluggable optical transceiver module configured to be inserted into a plugging slot. The pluggable optical transceiver module comprises a main body and a sliding component. The main body has two side surfaces opposite to each other and two sliding slots. The two sliding slots are located at the two side surfaces. The main body is configured to be inserted into the plugging slot. The sliding component comprises a
15 linkage arm and two extending arms. The two extending arms are connected to two ends of the linkage arm, respectively. Each extending arm has a second fastening part. The main body is between the two extending arms. The two extending arms are slidably disposed on the two sliding slots to have a fastening position and a releasing position. Two first fastening parts are fastened to the two second fastening parts when the two extending arms
20 are located at the fastening position. The two second fastening parts press the two first fastening parts, respectively, to make the two first fastening parts be farther away from each other when the two extending arms are located at the releasing position.

BRIEF DESCRIPTION OF THE DRAWINGS

The present disclosure will become more fully understood from the detailed description
25 and the drawings given herein below for illustration only, thus does not limit the present disclosure, wherein:

inserted into a socket 20 to convert optical signals into electronic signals. The socket 20 has a plugging slot 22 and two first fastening parts 24. Each first fastening part 24 is elastic. One end of the first fastening part 24 is connected to a case of the socket 20 and the other end of the first fastening part 24 is located in the plugging slot 22. In this embodiment, the
5 first fastening part 24 is an elastic slice.

FIG. 3 is another exploded view of FIG. 1. FIG. 4A is a cross-sectional view of FIG. 1 when a sliding component is located at a fastening position. FIG. 4B is a partial enlarged view of FIG. 4A. The pluggable optical transceiver module 10 comprises a main body 100, a sliding component 200, a pull handle 300 and two elastic components 400. The main body
10 100 comprises a head part 110 and an inserted part 120 that are connected to each other. The inserted part 120 is configured to be inserted into the plugging slot 22 of the socket 20. The main body 100 has two side surfaces 130, two sliding slots 140 and two limiting spaces 150. The two side surfaces 130 are located at opposite two sides of the head part 110 and the inserted part 120, respectively. The two sliding slots 140 are located at the two side
15 surfaces 130, respectively, and extend from the head part 110 to the inserted part 120. Each sliding slot 140 has a bottom surface 141 which is, but not limited to, parallel to the side surface 130. In other embodiments, the slot bottom surface 141 encloses an acute angle with the side surface 130.

The two limiting spaces 150 are located at the bottom surfaces 141 of the two sliding slots 140, respectively. Each limiting space 150 has a first limiting surface 151 and a second limiting surface 152. Both of the first limiting surface 151 and the second limiting surface 152 are connected to the bottom surface 141. The first limiting surface 151 is closer to the head part 110 than the second limiting surface 152.
20

Moreover, the main body 100 is configured to accommodate a photoelectric conversion circuit (not shown in the figures). Both of the two sliding slots 140 and the two limiting spaces 150 do not penetrate through the inner surface of the main body 100. Therefore, the main body 100 protects the photoelectric conversion circuit from being contaminated by
25

atmospheric dust..

The head part 110 has at least one optical fiber terminal 160. An optical fiber plug may plug into the photoelectric conversion circuit in the main body 100 through the optical fiber terminal 160.

5 The sliding component 200 comprises a linkage arm 210 and two extending arms 220. The two extending arms 220 are connected to two ends of the linkage arm 210, respectively. The main body 100 is between the two extending arms 220. The two extending arms 220 are slidably disposed on the two sliding slots 140, respectively. Each extending arm 220 has a second fastening part 230 and a limited part 240. The second fastening part 230 extends
10 along a direction far away from the side surface 130. Each second fastening part 230 has a fastening surface 231 located at one side of the second fastening part 230 facing the head part 110. A distance D1 between one side of the fastening surface 231 which is close to the side surface 130 and the head part 110 is less than a distance D2 from another side of the fastening surface 231 which is far away from the side surface 130 from and the head part
15 110. That is, the fastening surface 231 is an inclined surface enclosing an acute angle with the side surface 130. The limited part 240 extends toward the side surface 130 and is located in the limiting space 150. The limited part 240 is able to slide between the first limiting surface 151 and the second limiting surface 152 relative to the main body 100. The sliding component is able to slide relative to the main body 100 to have a fastening position
20 and a releasing position. The two first fastening parts 230 are farther from the head part 110 when the two extending arms 220 are located at the fastening position. The two first fastening parts 230 are closer to the head part 110 when the two extending arms 220 are located at the releasing position.

25 The pull handle 300 is pivoted on the linkage arm 210 of the sliding component 200 and extends outside from the main body 100. The pull handle 300 is able to pivot about the sliding component 200 to be in front of the head part 110 or on the top of the head part 110. In this embodiment, the pull handle 300 is configured to slide the sliding component 200

but the disclosure is not limited thereto. In other embodiments, the pluggable optical transceiver module 10 does not comprise the pull handle 300 and is able to be unplugged from the socket 20 by unplugging the linkage arm 210 directly. Furthermore, in this embodiment, the pull handle 300 is pivoted on the linkage arm 210 but the disclosure is not
5 limited thereto. In other embodiments, the pull handle 300 is welded to the linkage arm 210 or screwed to the linkage arm 210.

Moreover, the pull handle 300 is a band extending outside from the main body 100 in other embodiments. In detail, the band is made of soft rubber materials and rigid materials, which makes the band be highly tough and highly strengthened so that the band is difficult
10 to be ruptured. Meanwhile, because the end of the band is soft rubber, the band has greater deformation so that the band may be temporarily deformed to be in accordance with the operation of the users.

Two elastic components 400 are located at the two limiting spaces 150, respectively. Each elastic component 400 is sandwiched between the first limiting surface 151 disposed
15 on the limiting space 150 and the limited part 240 of the extending arm 220. The elastic component 400 normally presses the limited part 240 so that the second fastening part 230 is located at the fastening position. In this embodiment, both of the number of the limiting spaces 150 and that of the elastic components 400 are, for example, two. In other embodiments, both of the number of the limiting space 150 and that of the elastic
20 component 400 are one.

FIG. 4A is a cross-sectional view of the pluggable optical transceiver module in FIG. 1 when a sliding component is located at a fastening position. FIG. 4B is a partial enlarged view of the pluggable optical transceiver module in FIG. 4A. FIG. 5A is a cross-sectional view of the pluggable optical transceiver module in FIG. 1 when the sliding component is
25 located at a releasing position. FIG. 5B is a partial enlarged view of the pluggable optical transceiver module in FIG. 5A. As seen in FIG. 4A and FIG. 4B, the pluggable optical transceiver module 10 is inserted into the plugging slot 22 of the socket 20. The two first

fastening parts 24 are fastened to the two second fastening parts 230 when the two elastic components 400 respectively press the two limited parts 240 to locate the two second fastening parts 230 at the fastening position. Therefore, the pluggable optical transceiver module 10 is stably inserted into the plugging lot 22 and electrically connected to the socket 20.

As seen in FIG. 5A and FIG. 5B, users is able to pull the pull handle 300 along the direction indicated by an arrow a when removing the pluggable optical transceiver module 10 from the socket 20. The sliding component 200 is slid by the pull handle 300 relative to the main body 200 to be located at the releasing position. Since the fastening surface 231 is an inclined surface, the two first fastening parts 24 pressed by the fastening surface 231 are far away from each other when the sliding component 200 slides along the direction indicated by the arrow a. That is, the two second fastening parts 230 open the two first fastening parts 24 to release the two first fastening parts 24 from the two second fastening parts 230. Therefore, it is more convenient to plug the pluggable optical transceiver module 10 into the socket 20 and unplug the pluggable optical transceiver module 10 from the socket 20.

FIG. 6 is a perspective view of the pluggable optical transceiver module in FIG. 2 when a pull handle pivots on the top of the main body 200. Users are able to apply a force to pull out the pluggable optical transceiver module 10 when the pull handle 300 is located in front of the head part 110. The pull handle 300 is pivoted about the sliding component 200 along the direction indicated by an arrow b to be located above the head part 110 when users insert an optical fiber plug (not shown in the figure) into the optical fiber terminal 160. Since the pull handle 300 does not interfere with the optical fiber plug, it is more convenient for the users to insert the optical fiber plug into the optical fiber terminal 160.

According to the pluggable optical transceiver module of the disclosure, by sliding the sliding component within the two sliding slots, a user is able to easily fasten or release the combination of the two first fastening parts and the two second fastening parts.

Moreover, the pull handle is pivoted about the sliding component so that the pull handle is located in front of the main body or on the top of the main body. Users are able to pull out the pluggable optical transceiver module when the pull handle is located in front of the main body. The pull handle does not interfere with the optical fiber plug when located
5 on the main body. Therefore, it is more convenient for users to insert the optical fiber plug into the optical fiber terminal.

CLAIMS

What is claimed is:

1. A pluggable optical transceiver module, for being inserted into a plugging slot of a socket, the socket comprising two first fastening parts located in the plugging slot, the
5 pluggable optical transceiver module comprising:

a main body having two side surfaces that are opposite to each other and two sliding slots located at the two side surfaces, respectively, wherein the main body is configured to be inserted into the plugging slot; and

a sliding component comprising a linkage arm and two extending arms, wherein the
10 two extending arms are connected to two ends of the linkage arm, respectively, each extending arm has a second fastening part, the main body is between the two extending arms, the two extending arms are slidably disposed on the two sliding slots to have a fastening position and a releasing position, the two first fastening parts are fastened to the two second fastening parts when the two extending arms are located at the fastening
15 position, and the two second fastening parts press the two first fastening parts, respectively, to make the two first fastening parts be farther away from each other when the two extending arms are located at the releasing position.

2. The pluggable optical transceiver module according to claim 1, wherein the main body comprises a head part and an inserted part connected to each other, the inserted part is
20 configured to be inserted into the socket, the two side surfaces are located at two sides of the head part and the inserted part opposite to each other, respectively, wherein both the two sliding slots extend from the head part towards the inserted part, and the two extending arms are able to slide relative to the two sliding slots to have the fastening position which is farther away from the head part and the releasing position which is closer to the head part.

25 3. The pluggable optical transceiver module according to claim 2, wherein each

second fastening part has a fastening surface, and a distance between one side of the fastening surface which is close to the side surface and the head part is less than a distance between another side of the fastening surface which is far away from the side surface and the head part.

5 4. The pluggable optical transceiver module according to claim 2, wherein the head part has at least one optical fiber terminal.

5. The pluggable optical transceiver module according to claim 1, wherein the main body has at least one limiting space and two bottom surfaces forming the two sliding slots, respectively, the two bottom surfaces are parallel to the two side surfaces, the at least one
10 limiting space is located at one of the two side surfaces, and each extending arm has a limited part configured to move in the at least one limiting space.

6. The pluggable optical transceiver module according to claim 5, further comprising an elastic component, wherein the main body has a first limiting surface and a second limiting surface forming the limiting space, the first limiting surface is closer to the head
15 part than the second limiting surface, and the elastic component is located in the limiting space and between the first limiting surface and the limited part.

7. The pluggable optical transceiver module according to claim 5, further comprising two elastic components, wherein the number of the at least one limiting surface is two, the main body has two first limiting surfaces and two second limiting surfaces forming the two
20 limiting spaces together, respectively, the two first limiting surfaces are closer to the head part than the two second limiting surfaces, the two elastic components are located in the two limiting spaces, respectively, and each elastic component is between the first limiting surface and the limited part.

8. The pluggable optical transceiver module according to claim 5, wherein the
25 pluggable optical transceiver module further comprises a pull handle pivoted on the linkage arm of the sliding component.

9. A pluggable optical transceiver module, comprising:

a main body having a head part and an inserted part that are connected to each other, wherein the main body further comprises opposite two side surfaces and two sliding slots which are located at two sides of the head part and the inserted part opposite to each other, respectively, the two sliding slots are located at the two side surfaces, and the two sliding slots extend from the head part to the inserted part, respectively; and

a sliding component comprising a linkage arm and two extending arms, wherein the linkage arm is connected between the two extending arms, each extending arm has a second fastening part, the main body is between the two extending arms, the two extending arms are able to slide relative to the two sliding slots to have a fastening position which is farther away from the head part and a releasing position which is closer to the head part.

ABSTRACT

A pluggable optical transceiver module for inserted into plugging slot includes main body and sliding component. The main body has opposite two side surfaces and two sliding slots. The two sliding slots are located at the two side surfaces. The sliding component
5 includes linkage arm and two extending arms. The two extending arms are connected to the linkage arm. Each extending arm has a second fastening part. The main body is between the two extending arms. The two extending arms are disposed on the two sliding slots to have fastening position and releasing position. Two first fastening parts are fastened to the two second fastening parts when the two extending arms are located at fastening position. The
10 two second fastening parts press the two first fastening parts, respectively, for the two first fastening parts being farther from each other when the two extending arms are located at releasing position.

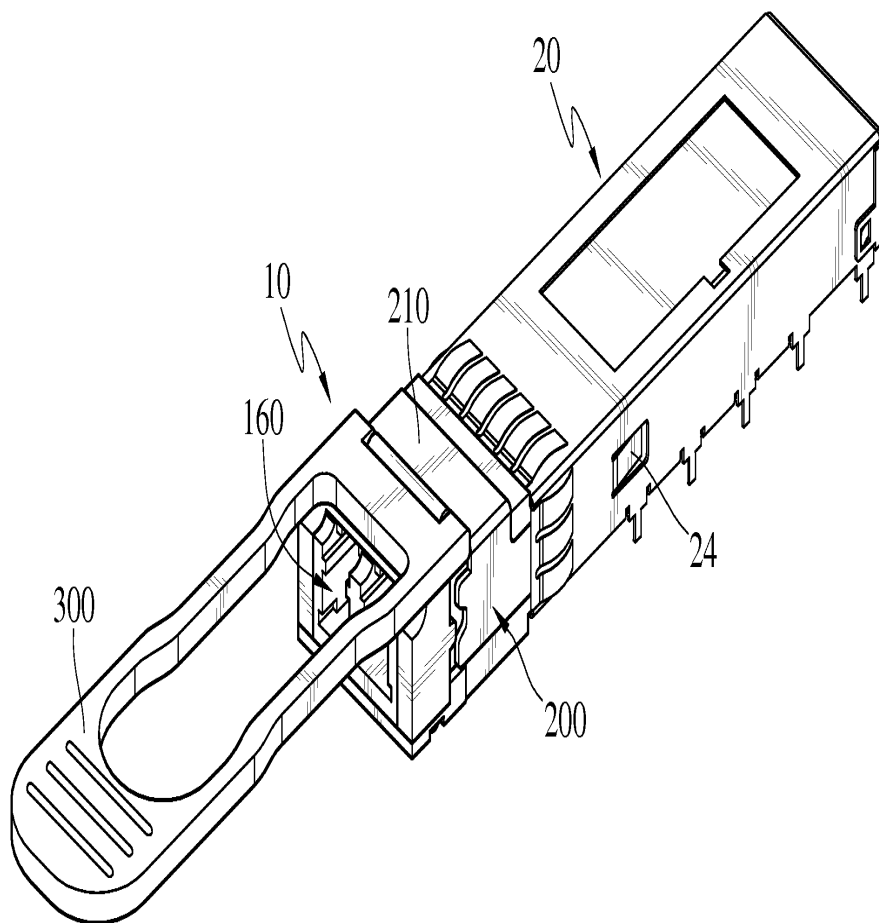


FIG. 1

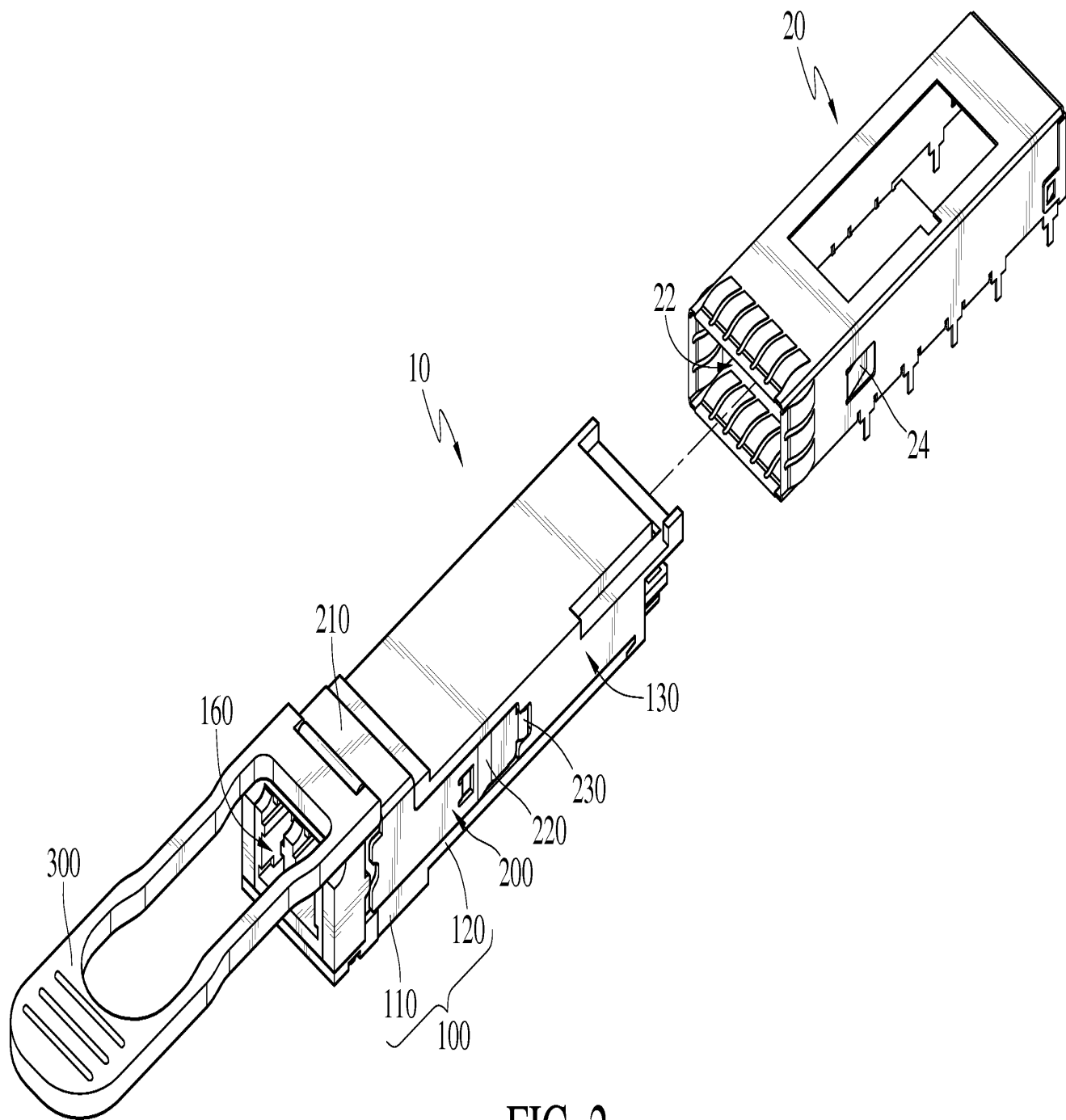


FIG. 2

10

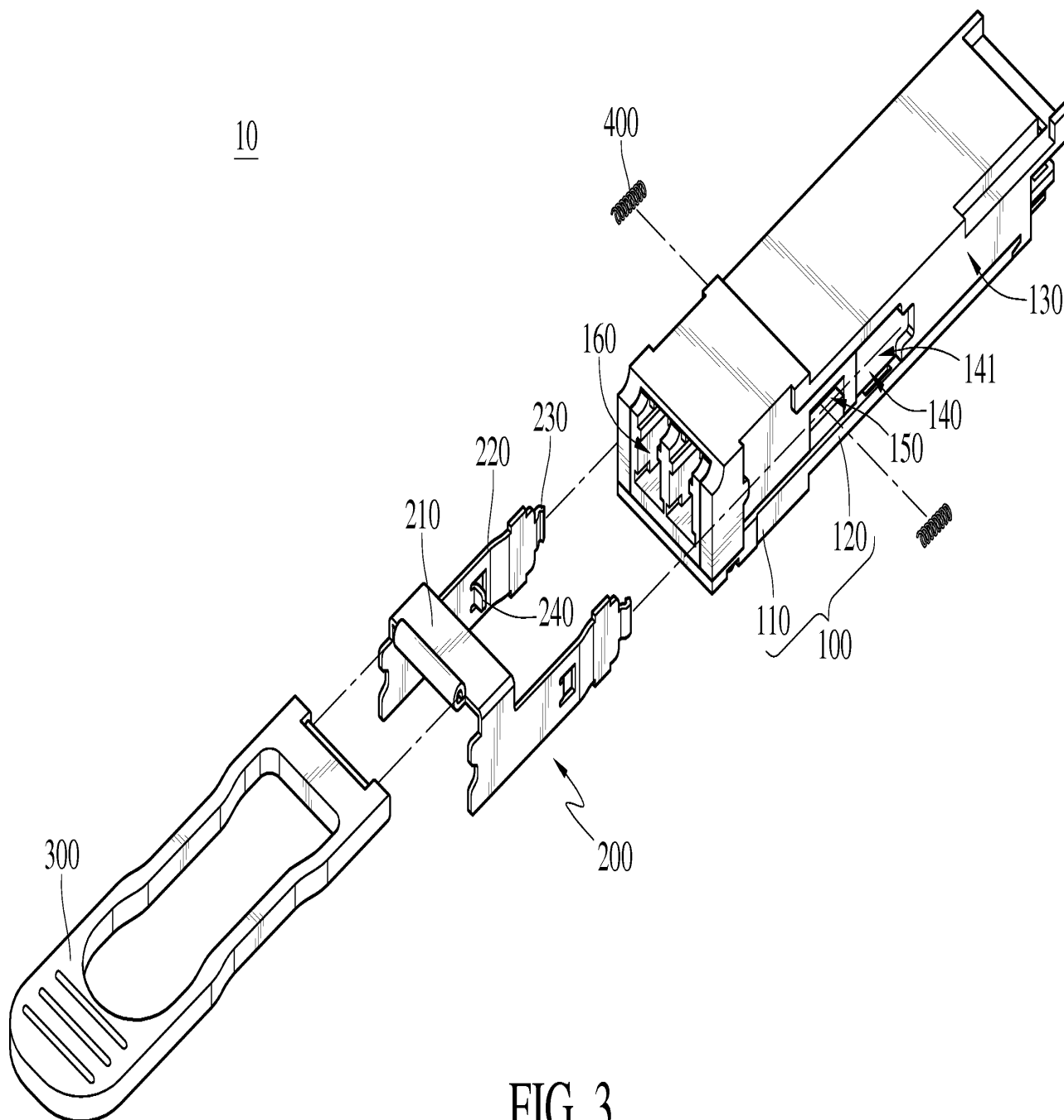


FIG. 3

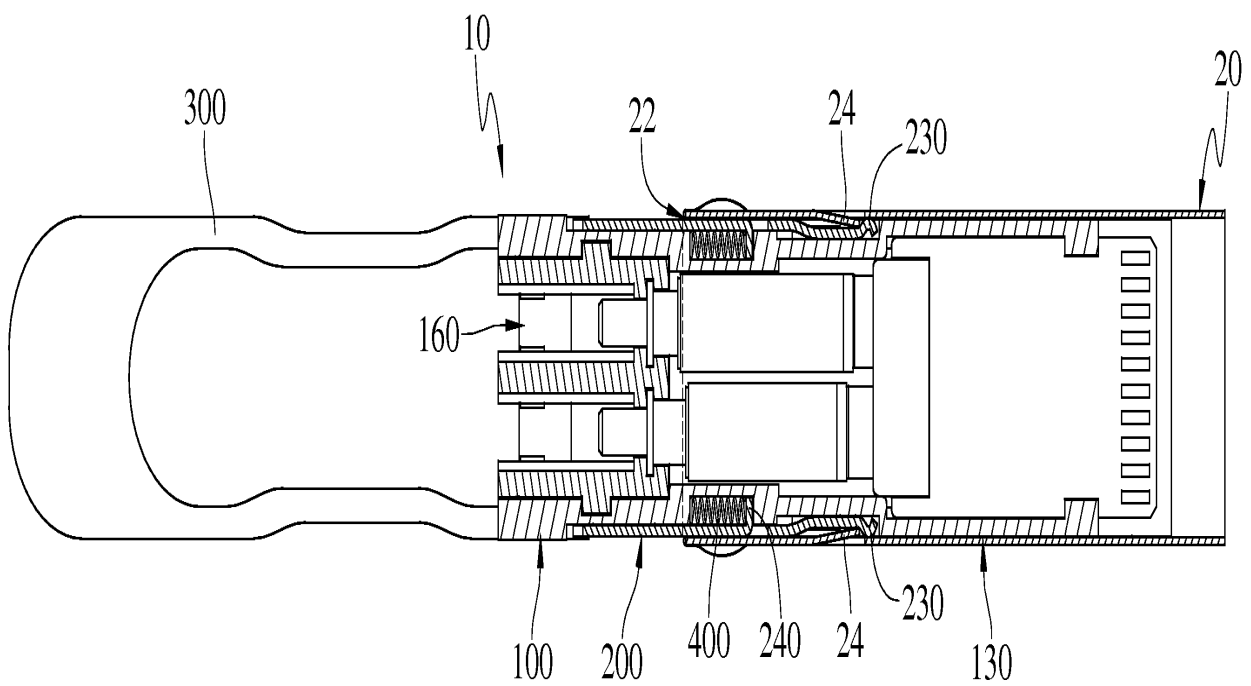


FIG. 4A



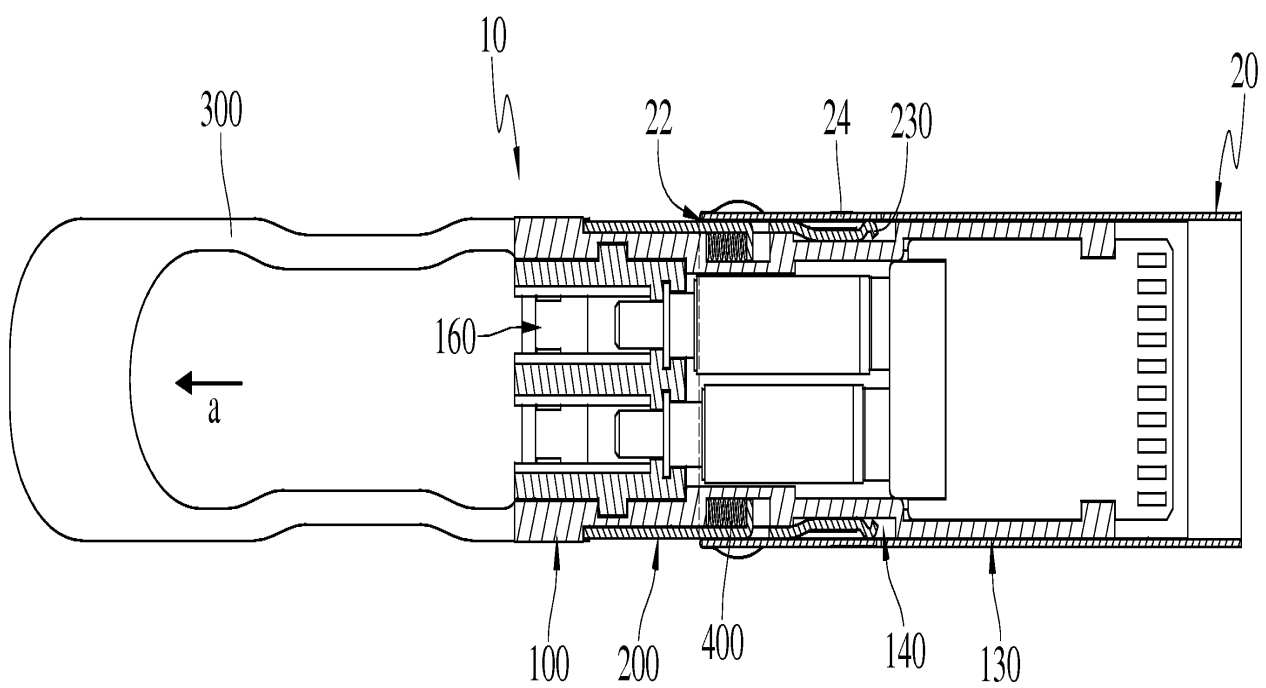


FIG. 5A



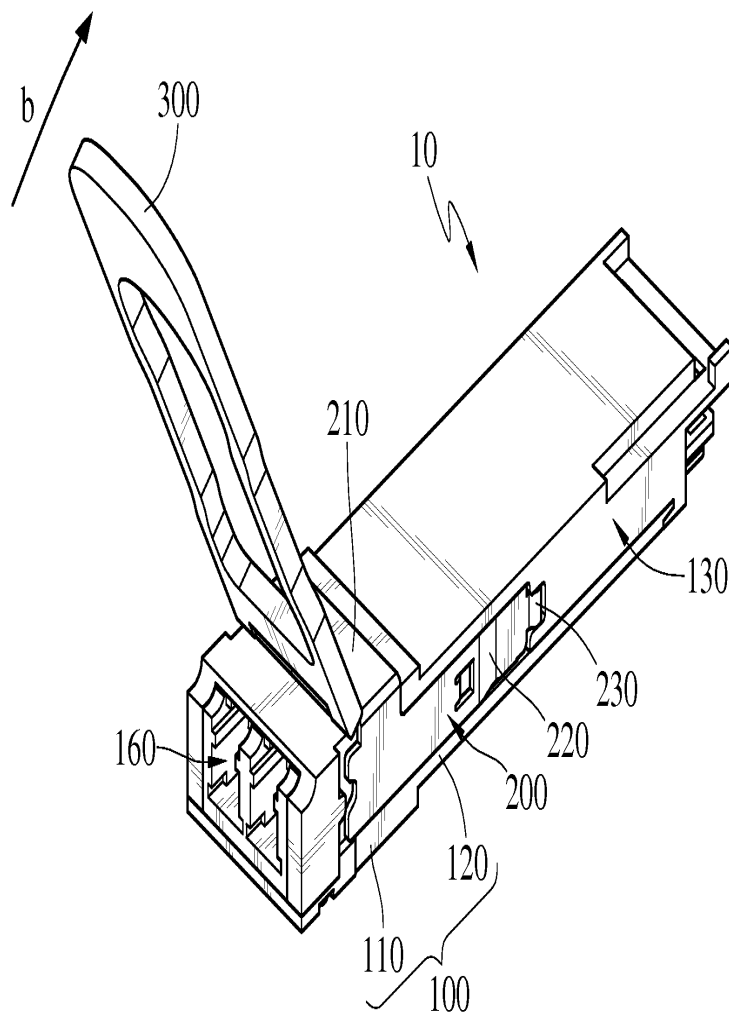


FIG. 6

Electronic Patent Application Fee Transmittal				
Application Number:				
Filing Date:				
Title of Invention:		PLUGGABLE OPTICAL TRANSCEIVER MODULE		
First Named Inventor/Applicant Name:		Chao-Hung Tsai		
Filer:		Kevin J. Carroll/April Davis		
Attorney Docket Number:		AOIT003		
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility application filing	1011	1	280	280
Utility Search Fee	1111	1	600	600
Utility Examination Fee	1311	1	720	720
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1600

Electronic Acknowledgement Receipt

EFS ID:	20307753
Application Number:	14504500
International Application Number:	
Confirmation Number:	5134
Title of Invention:	PLUGGABLE OPTICAL TRANSCEIVER MODULE
First Named Inventor/Applicant Name:	Chao-Hung Tsai
Customer Number:	27543
Filer:	Kevin J. Carroll/April Davis
Filer Authorized By:	Kevin J. Carroll
Attorney Docket Number:	AOIT003
Receipt Date:	02-OCT-2014
Filing Date:	
Time Stamp:	10:41:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 1600
RAM confirmation Number	8296
Deposit Account	501705
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Application Data Sheet	AOIT003_ADS_aia0014.pdf	1979273	no	7
			0c9df9b4037637aa6331855675b57701da1a969e		
Warnings:					
Information:					
2	Power of Attorney	AOIT003_Gen_Power_Attorney .pdf	41270	no	1
			97017bb963fbc5289e7084dc488a7dbbe431a55f		
Warnings:					
Information:					
3	Oath or Declaration filed	AOIT003_Declaration.pdf	106053	no	2
			f982f6ecf428fe6c78687a4517d862a2ee151949		
Warnings:					
Information:					
4		AOIT003_Application_asfiled_100214.pdf	55826	yes	12
			7f1aeb71582b42fafc2d3ddf49852e34a23fcaad		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	8	
	Claims		9	11	
	Abstract		12	12	
Warnings:					
Information:					
5	Drawings-only black and white line drawings	AOIT003_Drawings_asfiled_100214.pdf	95640	no	8
			2bbad3fefe74e2b26b80d74c2b940be591c8a9af		
Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	33070	no	2
			5a20f7b2b96206764f17297e90e67b653994daf1		
Warnings:					

Information:	
Total Files Size (in bytes):	2311132
This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503. <u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application. <u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course. <u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.	

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AOIT003
		Application Number	
Title of Invention	PLUGGABLE OPTICAL TRANSCEIVER MODULE		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

☐	Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)
--------------------------	---

Inventor Information:

Inventor 1					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Chao-Hung		Tsai		
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service					
City	New Taipei City	Country of Residence i	TW		

Mailing Address of Inventor:

Address 1	6F-1, No. 700, Jhongjheng Rd., Zhonghe Dist.				
Address 2					
City	New Taipei City	State/Province			
Postal Code	235	Country i	TW		

Inventor 2					Remove
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Chien-Te		Lin		
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service					
City	New Taipei City	Country of Residence i	TW		

Mailing Address of Inventor:

Address 1	6F-1, No. 700, Jhongjheng Rd., Zhonghe Dist.				
Address 2					
City	New Taipei City	State/Province			
Postal Code	235	Country i	TW		

Inventor 3					Remove
Legal Name					

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AOIT003
		Application Number	
Title of Invention	PLUGGABLE OPTICAL TRANSCEIVER MODULE		

Prefix	Given Name	Middle Name	Family Name	Suffix
	Che-Shou		Yeh	
Residence Information (Select One) ☐ US Residency ☒ Non US Residency ☐ Active US Military Service				
City	New Taipei City	Country of Residence i	TW	

Mailing Address of Inventor:				
Address 1	6F-1, No. 700, Jhongjheng Rd., Zhonghe Dist.			
Address 2				
City	New Taipei City	State/Province		
Postal Code	235	Country i	TW	
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button. Add				

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).			
☐ An Address is being provided for the correspondence information of this application.			
Customer Number	27543		
Email Address	kcarroll@gtp.com	Add Email	Remove Email

Application Information:

Title of the Invention	PLUGGABLE OPTICAL TRANSCEIVER MODULE		
Attorney Docket Number	AOIT003	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	8	Suggested Figure for Publication (if any)	

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country i

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AOIT003
		Application Number	
Title of Invention	PLUGGABLE OPTICAL TRANSCEIVER MODULE		

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.											
<table border="1"> <tr> <td>Please Select One:</td> <td>☒ Customer Number</td> <td>☐ US Patent Practitioner</td> <td>☐ Limited Recognition (37 CFR 11.9)</td> </tr> <tr> <td>Customer Number</td> <td colspan="3">27543</td> </tr> </table>				Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)	Customer Number	27543		
Please Select One:	☒ Customer Number	☐ US Patent Practitioner	☐ Limited Recognition (37 CFR 11.9)								
Customer Number	27543										

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.			
When referring to the current application, please leave the application number blank.			
Prior Application Status		Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX) the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).			
Remove			
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
102135723	TW	2013-10-02	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AOIT003
		Application Number	
Title of Invention	PLUGGABLE OPTICAL TRANSCEIVER MODULE		

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Add

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☐ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☒ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AOIT003
		Application Number	
Title of Invention	PLUGGABLE OPTICAL TRANSCEIVER MODULE		

Applicant 1				Remove	
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.					
Clear					
☒ Assignee		☐ Legal Representative under 35 U.S.C. 117		☐ Joint Inventor	
☐ Person to whom the inventor is obligated to assign.			☐ Person who shows sufficient proprietary interest		
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:					
Name of the Deceased or Legally Incapacitated Inventor :					
If the Applicant is an Organization check here. ☒					
Organization Name		Applied Optoelectronics, Inc.			
Mailing Address Information:					
Address 1		6F-1, No. 700, Zhongjheng Rd., Zhonghe Dist.			
Address 2					
City		New Taipei City		State/Province	
Country ⁱ	TW	Postal Code		235	
Phone Number				Fax Number	
Email Address					
Additional Applicant Data may be generated within this form by selecting the Add button. Add					

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.	
Assignee 1	
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.	
Remove	
If the Assignee or Non-Applicant Assignee is an Organization check here. ☐	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	AOIT003
		Application Number	
Title of Invention	PLUGGABLE OPTICAL TRANSCEIVER MODULE		

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		State/Province	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications

Signature	/Kevin J. Carroll/		Date (YYYY-MM-DD)	2014-10-02
First Name	Kevin	Last Name	Carroll	Registration Number
			36384	

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.