

## PATENT ASSIGNMENT COVER SHEET

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Stylesheet Version v1.2

EPAS ID: PAT5088826

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
3M INNOVATIVE PROPERTIES COMPANY	06/01/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	CORNING RESEARCH & DEVELOPMENT CORPORATION
<b>Street Address:</b>	ONE RIVERFRONT PLAZA
<b>City:</b>	CORNING
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	14831
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16058371
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<i>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.</i>	
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<b>Address Line 1:</b>	106 PINEDALE SPRINGS WAY
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<b>ATTORNEY DOCKET NUMBER:</b>	HI18-741
<b>NAME OF SUBMITTER:</b>	JOSEPH G. MONAGHAN
<b>SIGNATURE:</b>	/Joseph G. Monaghan/
<b>DATE SIGNED:</b>	08/08/2018
<b>Total Attachments: 16</b>	
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## ASSIGNMENT OF PATENTS

This ASSIGNMENT OF PATENTS (this "Assignment"), dated as of June 1, 2018, is entered into by and among 3M Innovative Properties Company, a Delaware corporation, having a place of business at 2501 Hudson Road, St. Paul, Minnesota 55144, ("Assignor,"), and Corning Research & Development Corporation, a Delaware Corporation, having a place of business at One Riverfront Plaza, Corning, New York 14831 ("Assignee" and, together with Assignor, the "Parties").

## RECITALS

WHEREAS, Assignee has agreed to purchase and accept, and Assignor has agreed to sell, transfer, convey and assign to Assignee all of Assignor's right, title and interest in and to the patents, patent applications and utility models, together with reissuances, continuations, continuations-in-part, divisionals, and reexaminations thereof, that are identified in Appendix A attached hereto ("Assigned Patents").

NOW, THEREFORE, in consideration of the premises and the mutual covenants and agreements contained in this Assignment and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Assignor does hereby sell, transfer, convey and assign unto Assignee all of Assignor's right, title and interest in, to and under the Assigned Patents and the inventions disclosed and claimed therein, including, without limiting the generality of the foregoing, the right to sue and recover damages and associated costs and attorneys' fees and obtain equitable relief for, past, present and future infringement, misappropriation or other violation thereof and to fully and entirely stand in the place of Assignor in all matters related to the Assigned Patents.

EXCEPT AS MAY OTHERWISE BE AGREED UPON BY THE PARTIES IN WRITING, NO EXPRESS OR IMPLIED WARRANTIES ARE GIVEN BY ASSIGNOR WITH RESPECT TO ANY ASSIGNED PATENTS REGARDING THE VALIDITY, REGISTRABILITY, TITLE SCOPE, ENFORCEABILITY OR NON-INFRINGEMENT OF ANY PATENTS SUBJECT TO THIS AGREEMENT.

Assignor hereby authorizes and requests the Commissioner for Patents of the United States, and any other applicable official of any applicable governmental authority, to record Assignee as the assignee and owner of the Assigned Patents, and to issue any and all registrations from any and all applications for registration included in the Assigned Patents in and to the name of Assignee.

This Assignment shall be governed exclusively under the laws of the State of Delaware, without regard to conflicts of law or choice of law principles.

*[Signature Pages Follow]*

United States of America

**IN WITNESS WHEREOF**, the Parties have caused this Assignment to be executed on the date and in the capacities of their respective officers thereunto duly authorized as set out below.

**ASSIGNOR**

**3M INNOVATIVE PROPERTIES COMPANY**

By: 

Name: Ted Ringsred

Title: Secretary

ASSIGNEE

CORNING RESEARCH & DEVELOPMENT  
CORPORATION

By: Timothy J. Aberle

Name: Timothy J. Aberle

Title: Vice President

**APPENDIX A**  
**ASSIGNED PATENTS**

Title	Country	Application Number	Application Date	Registration Number	Registration Date
A Connector in the Field of Telecommunications	US	12/680948	30 Sep 2008	7967642	28 Jun 2011
A Method of Assembling an Optical Connector and an Optical Connector	US	12/091629	27 Oct 2006	7712974	11 May 2010
Adhesive Backed Ducts with Strength Member for Cabling Applications	US	61/354519	6/14/2010		
Adhesive-backed Communications Media Cabling and System	US	14/003489	06 Sep 2013	9225154	29 Dec 2015
Adhesive-backed Communications Media Cabling and System	US	61/452387	14 Mar 2011		
Aerial Telecommunications Terminal and System	US	11/145080	03 Jun 2005	7075013	11 Jul 2006
An Optical Fiber Cable Inlet Device	US	09/365622	02 Aug 1999	6487344	26 Nov 2002
An Overvoltage Protection Module and An Assembly of at Least One Telecommunications Module and at Least One Overvoltage Protection Module	US	11/997938	02 Aug 2006	7778003	17 Aug 2010
Apparatus and Method for Adjusting the Spectral Response of an Optical Waveguide Grating	US	10/610957	1-Jul-03	6788851	7-Sep-04
Application of a Continuous Substrate with Segmented Adhesive	US	14/376063	31 Jul 2014	9477059	25 Oct 2016
Application of a Continuous Substrate with Segmented Adhesive	US	61/596412	08 Feb 2012		
Aqueous Low Friction Coating for Telecommunication Cables	US	15/039894	27 May 2016		
Article and Method for Parallel Labeling of an Array of Connections	US	15/527884	01 Dec 2015		
Article and Method for Parallel Labeling of an Array of Connections	US	62/093847	18 Dec 2014		
Assembly and a Telecommunications Module for Use Therein	US	10/598929	29 May 2008	7844049	30 Nov 2010
Assembly Tool and Optical Connector Assembly Method	US	11/318957	27 Dec 2005	7194179	20 Mar 2007
Assembly Tool and Optical Connector Assembly Method	US	12/789984	28 May 2010	8442375	14 May 2013
Assembly Tool and Optical Fiber Connector Assembly Method	US	13/809072	08 Jan 2013	9004779	14 Apr 2015
Assembly Tool and Optical Fiber Connector Assembly Method	US	15/708846	19 Sep 2017		

Assembly Tool and Optical Fiber Connector Assembly Method	US	61/365430	7/19/2010		
Assembly Tool and Optical Fiber Connector Assembly Method	US	61/423246	12/15/2010		
Assembly Tool and Optical Fiber Connector Assembly Method	US	62/397165	20 Sep 2016		
Bladeless Optical Fiber Cleaver	US	13/260852	28 Sep 2011	8746525	10 Jun 2014
Bladeless Optical Fiber Cleaver	US	61/170152	4/17/2009		
Bladeless Optical Fiber Cleaver and Method	US	12/680961	31 Mar 2010	8254739	28 Aug 2012
Bladeless Optical Fiber Cleaver and Method	US	60/981342	10/19/2007		
Bladeless Optical Fiber Cleaver and Method	US	61/025535	2/1/2008		
Bundled Wire Guide Apparatus for Carrier and Telecommunication Module Assembly	US	61/300165	2/1/2010		
Cable Assembly with a Removable Installation Device	US	15/452016	07 Mar 2017		
Cable Assembly with a Removable Installation Device	US	62/307974	14 Mar 2016		
Cable Gripping Device and Optical Fiber Connector	US	15/117889	10 Aug 2016		
Cable Gripping Structure and Optical Fiber Connector	US	15/915541	3/8/2018		
Cable Sealing Device	US	15/257034	06 Sep 2016	9817195	14 Nov 2017
Cable Sealing Device	US	62/240619	13 Oct 2015		
Cap for an Electrical Connector	US	29/213197	15 Sep 2004	D554068	30 Oct 2007
Cap for Telecommunications Cross Connect Block	US	12/108187	23 Apr 2008	7530836	12 May 2009
Cap for Telecommunications Cross Connect Block	US	12/424221	15 Apr 2009	7753716	13 Jul 2010
Cap for Telecommunications Cross Connect Block	US	60/914863	4/30/2007		
Cap for Telecommunications Cross Connect Block	US	60/988531	11/16/2007		
Carrier and an Assembly Including a Carrier and a Telecommunications Module	US	11/782406	24 Jul 2007	7828567	09 Nov 2010
Cell Tower Enclosure	US	13/859342	09 Apr 2013	9395506	19 Jul 2016
Cell Tower Enclosure	US	61/640765	01 May 2012		

Challenge-Response System for Maintenance Operations Via Responder for Telecommunications Cabinet	US	13/817081	14 Feb 2013	8856528	07 Oct 2014
Circuit and Method for Providing Access to a Test and/or Monitoring System	US	10/598927	09 Jul 2007	7773728	10 Aug 2010
Collar Body for Field Terminable Optical Connector	US	13/260861	28 Sep 2011	8851765	07 Oct 2014
Collar Body for Field Terminable Optical Connector	US	61/171908	4/23/2009		
Communication Cabling Duct Having Controlled Elongation	US	15/120759	23 Aug 2016		
Communication Cabling Duct Having Controlled Elongation	US	61/968566	21 Mar 2014		
Compact Optical Fiber Splice Holder Device	US	12/548601	27 Aug 2009	8295669	23 Oct 2012
Composition, Method of Making the Same, and Use Therefor	US	61/103288	10/7/2008		
Connector and Splice Holder Device	US	60/613169	9/24/2004		
Connector for Connecting Two Bare Optical Fibers	US	15/762247	10/4/2016		
Connector for Connecting Two Bare Optical Fibers	US	62/240048	12 Oct 2015		
Connector for Telecommunication Enclosure	US	14/898984	16 Dec 2015		
Connector for Telecommunication Enclosures	US	15/004010	22 Jan 2016	9638871	02 May 2017
Connector for Telecommunication Enclosures	US	61/662615	21 Jun 2012		
Connector for Telecommunication Enclosures	US	61/718979	26 Oct 2012		
Connector for Telecommunication Enclosures	US	61/846816	16 Jul 2013		
Connector for Telecommunication Enclosures	US	15/946152	4/5/2018		
Converged In-building Network	US	13/470439	14-May-12	9343797	17-May-16
Converged In-building Network	US	61/486887	5/17/2011		
Coupling Field Adapter	US	13/389522	08 Feb 2012	8734027	27 May 2014
Coupling Field Adapter	US	61/237872	8/28/2009		
Cross Connect Terminal Block	US	12/281117	28 Aug 2008	7632133	15 Dec 2009
Device for Holding Field Termination Load Adapter for Optical Connectors	US	10/988968	15 Nov 2004	7149402	12 Dec 2006



Dispersion Compensation Modules with Fiber Bragg Gratings	US	10/393219	20-Mar-03	6901188	31-May-05
Disposable Optical Fiber Coating Removal Tool	US	14/833501	24 Aug 2015	9748747	29 Aug 2017
Disposable Optical Fiber Coating Removal Tool	US	62/058918	02 Oct 2014		
Distribution Cabling System	US	62/520151	15 Jun 2017		
Distribution Cabling Tape and System	US	15/651557	17-Jul-17		
Distribution Cabling Tape and System	US	62/363610	18-Jul-16		
Distribution Cabling Tape, System and Tape Application Device	US	62/567516	3-Oct-17		
Drawer for the Management of Optical Fibers	US	10/682343	09 Oct 2003	6925241	02 Aug 2005
Drop Access Location Method and System for Horizontal Cabling in Multi-Dwelling Unit Applications	US	12/489950	23 Jun 2009	8107785	31 Jan 2012
Drop Access Location Method and System for Horizontal Cabling in Multi-Dwelling Unit Applications	US	61/075466	6/25/2008		
Drop Access Location Method and System for Horizontal Cabling in Multi-dwelling Unit Applications	US	61/094256	9/4/2008		
Drop Access Location Method and System for Horizontal Cabling in Multi-dwelling Unit Applications	US	61/116419	11/20/2008		
Dual-band Bend Tolerant Optical Waveguide	US	10/172093	14 Jun 2002	6947652	20 Sep 2005
Ducts to Support a Drop Access Location System for Horizontal Cabling in Multi-dwelling Unit Applications	US	12/731744	25 Mar 2010	8842960	23 Sep 2014
Ducts to Support a Drop Access Location System for Horizontal Cabling in Multi-dwelling Unit Applications	US	61/164184	3/27/2009		
Enclosure and Organizer for Telecommunication Lines and Splices	US	11/216229	31 Aug 2005	7333706	19 Feb 2008
Enclosure and Organizer for Telecommunication Lines and Splices	US	12/332416	11 Dec 2008	7697812	13 Apr 2010
Enclosure and Organizer for Telecommunication Lines and Splices	US	61/022052	1/18/2008		
Enclosure for Telecommunication Lines and Splices	US	11/216593	31 Aug 2005	7045710	16 May 2006
ENCLOSURE FOR TELECOMMUNICATIONS CABLES, WITH REMOVABLE ORGANIZER	US	13/059604	17 Feb 2011	8472775	25 Jun 2013
Fiber Circuit Management System with Splice Tray	US	12/439761	03 Mar 2009	8189983	29 May 2012
Fiber Circuit Management System with Splice Tray	US	60/825513	9/13/2006		

Fiber Circuit Management System with Splice Tray	US	60/955202	8/10/2007		
Fiber Clamp Mechanism for an Optical Fiber Preparation Tool	US	12/673869	17 Feb 2010	8452150	28 May 2013
Fiber Clamp Mechanism for an Optical Fiber Preparation Tool	US	60/972118	9/13/2007		
Fiber Connecting Device with Mechanical Element and Integrated Fiber Sensor, Fiber Connecting Device Module, and Method of Connecting Two Fibers	US	15/762281	10/12/2015		
Fiber Distribution Enclosure with Extractable Organizer	US	61/099321	9/23/2008		
Fiber Drop Cable Assembly for Outdoor and Indoor Routing	US	14/918014	20 Oct 2015		
Fiber Drop Cable Assembly for Outdoor and Indoor Routing	US	62/069059	27 Oct 2014		
Fiber Drop Cable Assembly for Outdoor and Indoor Routing	US	62/103765	15 Jan 2015		
Fiber Drop Cable Assembly for Outdoor and Indoor Routing	US				
Fiber Management Assemblies and Network Interface Devices Incorporating Such Assemblies	US	15/155629	16 May 2016		
Fiber Management Assemblies and Network Interface Devices Incorporating Such Assemblies	US	62/166881	27 May 2015		
Fiber Management Assemblies and Trays and Network Interface Devices Incorporating Such Assemblies and Trays	US	14/722962	27 May 2015	9341801	17 May 2016
Fiber Management Trays and Network Interface Devices Incorporating Such Trays	US	62/003102	27 May 2014		
Fiber Optic Cabinet	US	13/696470	06 Nov 2012	8873924	28 Oct 2014
Fiber Optic Splice Tray	US	62/560829	20 Sep 2017		
Fiber Organizer and Distribution Box	US	13/883139	02 May 2013	8929708	06 Jan 2015
Fiber Organizer and Distribution Box	US	61/418469	12/1/2010		
Fiber Organizer and Distribution Box	US	61/529040	30 Aug 2011		
Fiber Splicing and Gripping Device	US	11/852803	10 Sep 2007	7454117	18 Nov 2008
Fiber Termination Platform for Optical Connectors	US	11/551762	23 Oct 2006	7280733	09 Oct 2007
Fibre Network Comprising Sensors	US	14/432546	02 Oct 2013	9544049	10 Jan 2017
Fibre-Optic Enclosure Having Transceiving Means Operable to Generate and Receive Optical Signals	US	14/442282	15 Nov 2013	9544066	10 Jan 2017

Field Installable Optical Fiber Connector for Fiber Optic Cables with Rigid Strength Members	US	62/321413	12 Apr 2016		
Field Installed Optical Fiber Connector for Jacketed Fiber Cable And Termination Method	US	15/522183	26 Apr 2017		
Field Installed Optical Fiber Connector for Jacketed Fiber Cable and Termination Method	US	62/074762	04 Nov 2014		
Field Installed Optical Fiber Connector for Jacketed Fiber Cable and Termination Method	US	62/087327	04 Dec 2014		
Field Terminable LC Format Optical Connector with Splice Element	US	12/428729	23 Apr 2009	8070367	06 Dec 2011
Field Terminable LC Format Optical Connector with Splice Element	US	61/047868	4/25/2008		
Field Terminable LC Format Optical Connector with Splice Element for Jacketed Cable	US	61/501563	27 Jun 2011		
Field Terminable Optical Connector with Splice Element for Jacketed Cable	US	13/532052	25 Jun 2012	8876405	04 Nov 2014
Field Terminable Optical Fiber Connector with Splice Element	US	12/990520	01 Nov 2010	8573859	05 Nov 2013
Field Terminable Optical Fiber Connector with Splice Element	US	14/066370	29 Oct 2013	8840320	23 Sep 2014
Field Terminable Optical Fiber Connector with Splice Element	US	14/465433	21 Aug 2014	9103995	11 Aug 2015
Field Terminable Optical Fiber Connector with Splice Element	US	61/059433	6/6/2008		
Field Terminable ST Format Optical Fiber Connector	US	14/022288	10 Sep 2013	8998506	07 Apr 2015
Field Terminable ST Format Optical Fiber Connector	US	61/701180	14 Sep 2012		
Flexible Optical Coupling	US	12/990796	03 Nov 2010	8444326	21 May 2013
Flexible Optical Coupling	US	61/057447	5/30/2008		
Grating Coil Package for Reduced Fiber Strain	US	09/916024	26-Jul-01	6424784	23-Jul-02
High Density Distribution Frame with an Integrated Splicing Compartment	US	62/308534	15 Mar 2016		
Highly Configurable Fiber-Optic Interconnection Tray	US	15/001734	20 Jan 2016	9494760	15 Nov 2016
Highly Configurable Fiber-Optic Interconnection Tray	US	62/117068	17 Feb 2015		
Hybrid Fiber Connector Patch Cord Assemblies	US	14/511841	10 Oct 2014	9310568	12 Apr 2016
Hybrid Fiber Connector Patch Cord Assemblies	US	61/904769	15 Nov 2013		
Identification Tag	US	15/533888	01 Dec 2015		

Identification Tag	US	62/093853	18 Dec 2014		
In-Line Shuffle Modules Utilizing Three Dimensional Optical Circuits	US	10/101255	18 Mar 2002	6832032	14 Dec 2004
Latch for an Optical Fiber Connector	US	29/345705	21 Oct 2009	D619100	06 Jul 2010
Low Cost, Disposable Optical Fiber Cleaver	US	14/225938	26 Mar 2014		
Low Cost, Disposable Optical Fiber Cleaver	US	61/809666	08 Apr 2013		
Low Cost, Disposable Optical Fiber Cleaver	US	61/884502	30 Sep 2013		
Low Profile Cabling Duct	US	29/350830	24 Nov 2009	D628049	30 Nov 2010
Low Profile Cabling Duct	US	29/350832	24 Nov 2009	D628050	30 Nov 2010
Low Profile Fiber Drop Point of Entry System	US	12/731724	25 Mar 2010	8295670	23 Oct 2012
Mechanical Cable Entry Port	US	13/120024	21 Mar 2011	8648258	11 Feb 2014
Mechanical Cable Entry Port	US	62/510001	23 May 2017		
Mechanical Cable Entry Port	US				
Method and Apparatus for Aligning the Polarization of a Polarization Maintaining Optical Fiber to the Polarization of a Light Source	US	09/876401	07 Jun 2001	6721467	13 Apr 2004
METHOD AND APPARATUS FOR GENERATING FREQUENCY MODULATED PULSES	US	09/816937	23-Mar-01	6834134	21-Dec-04
METHOD AND APPARATUS FOR GENERATING FREQUENCY MODULATED PULSES	US	60/195818	4/11/2000		
Method for Higher-order Dispersion Compensation	US	10/323301	18-Dec-02	6829409	7-Dec-04
METHOD FOR MAKING SHAPED HIGHLY BIREFRINGENT OPTICAL FIBERS	US	09/515187	29 Feb 2000	6580860	17 Jun 2003
METHOD FOR REDUCING STRAIN ON BRAGG GRATINGS	US	09/525719	14-Mar-00	6301423	9-Oct-01
Method of Assembling an Optical Connector and an Optical Connector	US	12/769693	29 Apr 2010	8118495	21 Feb 2012
Method of Making a Three Dimensional Optical Circuit	US	10/123551	16 Apr 2002	6549710	15 Apr 2003
METHOD OF MANUFACTURING TEMPERATURE RANGE ADJUSTED COATED OPTICAL FIBERS	US	09/780983	09 Feb 2001	6630209	07 Oct 2003
Method to Stabilize and Adjust The Optical Path Length Difference in an Interferometer	US	60/211521	6/14/2000		

Method to Stabilize and Adjust the Optical Path Length of Waveguide Devices	US	09/874784	5-Jun-01	6823110	23-Nov-04
Method, Apparatus and System for Visible Light Communication	US	15/117499	09 Aug 2016		
Method, Apparatus and System for Visible Light Communication	US	61/942838	21 Feb 2014		
Method, Apparatus and System for Visible Light Communication	US	15/117499	16 Jan 2015		
Microsphere-filled Sealant Materials	US	10/770095	02 Feb 2004	7214735	08 May 2007
Modular Cable Head for Optical Networks	US	11/815983	10 Aug 2007	7986864	26 Jul 2011
Modular Fiber Frame	US	15/698133	07 Sep 2017		
Modular Fiber Frame	US	62/385687	09 Sep 2016		
Modular Support System for Optical Fiber Trays	US	13/876924	29 Mar 2013	8625951	07 Jan 2014
Modular Termination Module with Contacts for Connecting Telecommunication Wires Therewith	US	61/410990	11/8/2010		
Multi-Purpose Sealing Device	US	15/609944	31 May 2017		
Multi-Purpose Sealing Device	US	62/357434	01 Jul 2016		
Optical Connector	US	60/729629	10/24/2005		
Optical Connector	US	60/743119	1/11/2006		
Optical Connector	US	60/744180	4/3/2006		
Optical Connector	US	60/805038	6/16/2006		
Optical Connector and Fiber Distribution Unit	US	11/551760	23 Oct 2006	7369738	06 May 2008
Optical Connector and Fiber Distribution Unit	US	60/819226	7/7/2006		
Optical Connector for Jacketed Cables	US	14/206839	12 Mar 2014	9389370	12 Jul 2016
Optical Connector for Jacketed Cables	US	61/803924	21 Mar 2013		
Optical Connector, Optical Fiber with Connector, Optical Fiber Connecting Device, and Optical Fiber Connection Method	US	12/032918	18 Feb 2008	7942589	17 May 2011
Optical Fiber Cable Inlet Device	US	10/996326	23 Nov 2004	RE41743	21 Sep 2010
Optical Fiber Cable Inlet Device	US	12/035632	22 Feb 2008	7738759	15 Jun 2010

Optical Fiber Cable Inlet Device	US	60/895233	3/16/2007		
Optical Fiber Cable Inlet Device and Telecommunications Enclosure System	US	12/527995	20 Aug 2009	8879883	04 Nov 2014
Optical Fiber Cable Inlet Device with Integral Optical Device	US	61/085584	8/1/2008		
Optical Fiber Cable Inlet Device with Integral Optical Device	US	12/507533	22 Jul 2009	8184939	22 May 2012
Optical Fiber Cable Retention Device	US	60/829581	10/16/2006		
Optical Fiber Cable Retention Device	US	60/913846	4/25/2007		
Optical Fiber Cable Splicing Box	US	14/378989	15 Aug 2014	9513450	06 Dec 2016
Optical Fiber Connection Apparatus	US	15/680654	18 Aug 2017		
Optical Fiber Connection Apparatus	US	15/680654	18 Aug 2017		
Optical Fiber Connector	US	14/391936	10 Oct 2014	9383526	05 Jul 2016
Optical Fiber Connector for Telecommunication Enclosures	US	61/586135	13 Jan 2012		
Optical Fiber Connector Polishing Apparatus and Method	US	14/394170	13 Oct 2014	9296081	29 Mar 2016
Optical Fiber Connector with Integrated Installation Tools	US	62/418320	07 Nov 2016		
Optical Fiber Connector with Integrated Installation Tools	US				
Optical Fiber Fusion Splice Having a Controlled Mode Field Diameter Expansion Match	US	10/159375	30 May 2002	6742939	01 Jun 2004
Optical Fiber Loopback Test System and Method	US	11/670836	02 Feb 2007	7715678	11 May 2010
Optical Fiber Mechanical Splice with Strain Relief Mechanism	US	10/522003	14 Jan 2005	7140787	28 Nov 2006
Optical Fiber Polishing Apparatus	US	13/144029	11 Jul 2011	8771042	08 Jul 2014
Optical Fiber Polishing Apparatus and Method	US	61/149107	2/2/2009		
Optical Fiber Splice with a Thermoplastic Optical Adhesive	US	62/639597	7-Mar-18		
Optical Fiber with Bragg Grating and Thin Film Coating and Connector	US	62/191062	10 Jul 2015		
Optical Fiber with Bragg Grating and Thin Film Coating and Connector	US				
OPTICAL FIBER WITH IMPROVED STRENGTH IN HIGH HUMIDITY/HIGH TEMPERATURE ENVIRONMENTS	US	09/721397	22 Nov 2000	6587628	01 Jul 2003

Optical Fiber with Thin Film Coating and Connector	US	62/174719	12 Jun 2015		
Optical Fiber with Thin Film Coating and Connector	US	15/579658	05 Dec 2017		
Optical Fibre Distribution Enclosure	US	14/432535	31 Mar 2015	9513451	06 Dec 2016
Optical Waveguide Article Including A Fluorine-Containing Zone	US	09/934388	21 Aug 2001	6690868	10 Feb 2004
Outdoor Cable Pathway System	US	62/643293	15-Mar-18		
Outdoor Pathway Splice	US	62/643314	15-Mar-18		
Patch Cord and Management System and Management Method Thereof	US	15/520657	20 Apr 2017		
Rack-Mountable Telecommunications Patch Panel	US	14/371108	08 Jul 2014	9091831	28 Jul 2015
Re-enterable Splice Enclosure	US	10/770377	02 Feb 2004	7141738	28 Nov 2006
Remote Grip Multi-Fiber Connector	US	14/427860	12 Mar 2015	9791635	17 Oct 2017
Remote Grip Multi-Fiber Connector	US	61/700149	12-Sep-12		
Remote Grip Multi-Fiber Connector	US	14/427860	12 Aug 2013	9791635	17 Oct 2017
Remote Grip Optical Fiber Connector	US	12/057824	28 Mar 2008	7775726	17 Aug 2010
Remote Grip Optical Fiber Connector	US	12/527217	14 Aug 2009	8118494	21 Feb 2012
Remote Grip Optical Fiber Connector	US	60/890371	2/16/2007		
Remote Grip Optical Fiber Connector	US	60/890378	2/16/2007		
Removable Adhesive Backed Ducts for Cabling and a Removal Method	US	13/640456	10 Oct 2012	9640958	02 May 2017
Removable Adhesive Backed Ducts for Cabling and a Removal Method	US	61/324147	4/14/2010		
Ruggedized Optical Fiber Connection Structures and Assemblies	US	14/965036	10 Dec 2015	9810861	07 Nov 2017
Ruggedized Optical Fiber Connection Structures and Assemblies	US	15/802984	3-Nov-17		
Ruggedized Optical Fiber Connection Structures and Assemblies	US	62/094399	19 Dec 2014		
Rupturable Seal	US	10/455055	05 Jun 2003	6893696	17 May 2005
Sealing Member	US	61/224664	7/10/2009		
Sealing Member for an Enclosure	US	61/356841	6/21/2010		

Sealing Member for an Enclosure	US	13/696457	2-Jun-11	9012774	21-Apr-15
Sealing Member for an Entry Port	US	11/177838	08 Jul 2005	7186929	06 Mar 2007
Sealing Member for Enclosures	US	10/929659	30 Aug 2004	7442884	28 Oct 2008
Shielding Attachable to a Connector in the Field of Telecommunications, a Combination of a Connector and at Least One Shielding and a Method of Shielding a Connector	US	12/680954	31 Mar 2010	8376779	19 Feb 2013
Small Form Factor Optical Connector with Thermoplastic Adhesive	US	10/811437	26 Mar 2004	7147384	12 Dec 2006
Splice Holder Device	US	11/221527	08 Sep 2005	7333709	19 Feb 2008
Splice Holder Device	US	12/029664	12 Feb 2008	7558459	07 Jul 2009
Splice Holder Device	US	60/691881	6/17/2005		
Splice Holder Device	US	60/829575	10/16/2006		
Splice Holder Device using Downwardly-extending Arms	US	12/445647	24 Aug 2010	8380034	19 Feb 2013
Splice Holder for Communication Socket	US	12/679791	01 Jun 2010	8270797	18 Sep 2012
Strain Relief Device	US	13/389529	08 Feb 2012	8754331	17 Jun 2014
Strain Relief Device	US	13/881978	26 Apr 2013	8816222	26 Aug 2014
Strain Relief Device	US	61/238273	8/31/2009		
Strain Relief Device	US	61/417562	11/29/2010		
Strain Relief Device	US	61/417569	11/29/2010		
Strain Relief Device for Low Friction Drop Cable	US	14/896574	24 Jun 2013		
Support Structure for Telecommunication Jacks	US	13/704352	14 Dec 2012	8758048	24 Jun 2014
System and Method for Providing Final Drop in a Living Unit in a Building	US	14/601712	21 Jan 2015	9343885	17 May 2016
System and Method for Providing Final Drop in a Living Unit in a Building	US	14/631998	26 Feb 2015	9343886	17 May 2016
System for Higher-order Dispersion Compensation Including Phase Modulation	US	10/323953	18-Dec-02	7013063	14-Mar-06
System for Installing Horizontal Cabling in Multi-Dwelling Units	US	13/359115	26 Jan 2012	8360127	29 Jan 2013
System for Providing Final Drop in a Living Unit in a Multi-dwelling Unit	US	61/266547	12/4/2009		



System for Providing Final Drop in a Living Unit in a Multi-Dwelling Unit	US	61/354880	6/15/2010		
System for Providing Final Drop in a Living Unit in a Multi-dwelling Units	US	61/231714	8/6/2009		
Telecommunication Enclosure for External Connection	US	14/899000	30 Jun 2014		
Telecommunication Enclosure for External Connection	US	61/846823	16 Jul 2013		
Telecommunication Enclosure Having Integrated Termination Tools	US	15/609891	31 May 2017		
Telecommunication Enclosure Having Integrated Termination Tools	US	62/115670	13 Feb 2015		
Telecommunication Enclosure with an Interlocking Seal	US	12/625643	25 Nov 2009	8073302	06 Dec 2011
Telecommunication Jack Comprising A Second Compensating Printed Circuit Board For Reducing Crosstalk	US	13/983648	29 Aug 2013	8936494	20 Jan 2015
Telecommunications Cable Enclosure	US	10/916332	11 Aug 2004	7256349	14 Aug 2007
Telecommunications Cable Enclosure	US	10/927402	26 Aug 2004	7268299	11 Sep 2007
Telecommunications Cable Enclosure	US	11/778967	17 Jul 2007	7598457	06 Oct 2009
Telecommunications Cable Enclosure	US	11/836010	08 Aug 2007	8071879	06 Dec 2011
Telecommunications Cable Inlet Device	US	12/738935	20 Apr 2010	8270799	18 Sep 2012
Telecommunications Cable Inlet Device	US	12/934438	24 Sep 2010	8313250	20 Nov 2012
Telecommunications Cable Inlet Device	US	13/675684	13 Nov 2012	8934751	13 Jan 2015
Telecommunications Cable Inlet Device	US	14/132594	18 Dec 2013	9201205	01 Dec 2015
Telecommunications Cable Inlet Device	US	60/988851	11/19/2007		
Telecommunications Cable Inlet Device	US	61/043652	4/9/2008		
Telecommunications Cable Inlet Device	US	61/753193	16 Jan 2013		
Telecommunications Enclosure System	US	60/895247	3/16/2007		
Telecommunications Enclosure System	US	60/946311	6/26/2007		
Telecommunications Module with Disconnection Feature	US	13/638303	28 Sep 2012	9001995	07 Apr 2015

Telecommunications Module, Combination of a Telecommunications Module and at Least One Splitter Circuit, and Assembly of at Least Two Telecommunications Modules	US	11/719504	16 May 2007	7892046	22 Feb 2011
Telecommunications Terminal	US	10/331969	30 Dec 2002	6777617	17 Aug 2004
Telecommunications Terminal Module with Hinged Grounding Element	US	11/910784	05 Oct 2007	7894209	22 Feb 2011
Temperature Range Adjusted Coated Optical Fibers	US	10/251462	20 Sep 2002	6643440	04 Nov 2003
TEMPERATURE STABILIZED OPTICAL FIBER PACKAGE	US	09/860070	17-May-01	6668126	23-Dec-03
Terminal Box	US	11/145079	03 Jun 2005	7075012	11 Jul 2006
Terminal Enclosure with Extractable Fiber Organizer Tray	US	13/577821	16 Feb 2011	8718435	06 May 2014
THERMALLY MANAGED PACKAGE FOR FIBER OPTIC BRAGG GRATINGS	US	09/524862	14-Mar-00	6226438	1-May-01
Three Dimensional Optical Circuit	US	09/927655	10 Aug 2001	6556754	29 Apr 2003
Triple-band Bend Tolerant Optical Waveguide	US	10/930575	31 Aug 2004	7130515	31 Oct 2006
Triple-band Bend Tolerant Optical Waveguide	US	11/196185	03 Aug 2005	7130516	31 Oct 2006
Unitary Connector for Connecting Two Bare Optical Fibers	US	15/762261	10/12/2015		
Universal Aerial Hanger	US	11/145078	03 Jun 2005	7078625	18 Jul 2006
Upgradeable Distribution Framework, Cable Connector, and Cabling Management System	US				
Upgradeable Distribution Framework, Cable Connector, and Cabling Management System	US	15/531891	31 May 2017		
WAVEGUIDE NARROWBAND REJECTION FILTER	US	08/975843	21 Nov 1997	6005999	21 Dec 1999
WIDE-BANDWIDTH CHIRPED FIBER BRAGG GRATINGS WITH LOW DELAY RIPPLE AMPLITUDE	US	10/354800	30-Jan-03	6741773	25-May-04
Wire Connector Having a Wire Holder with an Abutting Portion and a Protecting Portion	US	14/409747	19 Dec 2014	9293840	22 Mar 2016
Optical Connector and Optical Fiber Connecting System	US	11/572111	23 Jul 2008	7637673	29 Dec 2009
Optical Connector and Optical Fiber Connecting System	US	11/572112	22 May 2008	7556438	07 Jul 2009
Optical Fiber Connector	US	12/091640	13 Aug 2008	7744290	29 Jun 2010