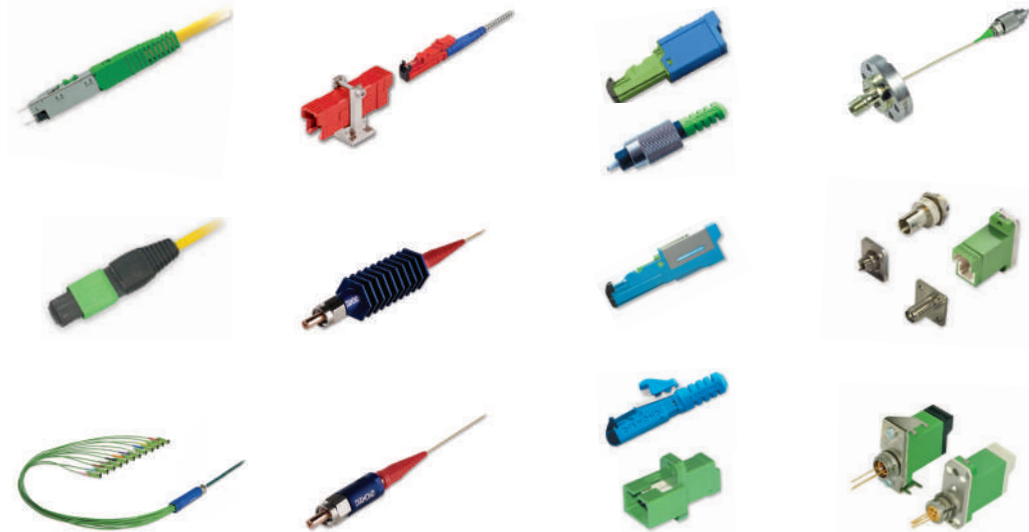


WE'RE WELL CONNECTED



MULTIPLE FIBER POWER SOLUTIONS ACCESSORIES CUSTOM PRODUCTS

Multiple Fiber System (MFS)
A very compact connector developed by Diamond based on MT ferrule technology. Available in 4-, 8- and 12-channels, as simplex or backplane (up to 48-channels), MM/SM, PC/APC.

Multiple Fiber Push-On (MPO)
A multifiber connector that complies with worldwide standards based on the MT ferrule. Available in 4-, 8- and 12-channels, as simplex, MM/SM, PC/APC.

Fan-Out
Efficient cable installation by means of pre-assembled cables and connectors. Characterized by excellent mechanical and thermal properties. Available in different lengths and connector types.

Power Solution Multimode (Psm)
Designed to handle all optical fibers in higher power applications. The optical interface can transmit 100W optical power on a 105um core. Available with E-2000® and Micro AVIM® connectors.

F-SMA Power Solution Injection (PSI) mode stripper
Removes unwanted cladding modes from the fiber and is used when emphasis is made on the preservation of the beam parameter product (small spot diameter and low numerical aperture). Available with the F-SMA connector for MM fibers from 100µm to 1000µm.

F-SMA Power Solution Injection (PSI) mode guider
Allows all modes, including cladding modes, to be transmitted with minimum attenuation, resulting in less heat and more power available at the cable output. Available with the F-SMA connector for MM fibers from 100µm to 1000µm.

Optical Transmission Adapters (UGT) and Sacrificial Interfaces (SI)
UGT are in-line adapters for PC to APC or reverse transition. SI are in-line components used to protect front panel connectors from damage due to repeated matings.

Terminators
High attenuation of return loss. Used for open output signals.

In-line Attenuators
Used to adapt the transmitted light power to the characteristics of the receiver.

Optical Gold Reflectors (OGR)
Used as a fiber termination with the highest possible reflection.

Hybrid Mating Adapters
Used for connection of different types of connectors.

Vacuum Feedthrough
Obtained feedthrough benefits from a very low leak rate. It can be ordered for many types of fiber, including SM, MM, PM, PS, large core MM or others. Multichannel systems are also available.

Interface Module (IMOD)
The IMOD is a half adapter used for free space applications of optical connectors. Available in different accuracy variants.

Laser and LED transmitter modules (MAT) / photodiode receiver modules (MAR)
They are transceiver modules with an E-2000® interface. Both types are designed to minimize light coupling losses and provide high optical stability in a wide variety of environmental conditions.

MULTI FIBER, POWER SOLUTION & ACCESSORIES



Many applications require complex, customized solutions. The highly qualified research and development team at Diamond will partner with you to develop the best mechanical and optical solution for your specific project. The technical team has in-depth experience in many different technologies. Diamond offers many years of experience in designing, manufacturing and testing high quality fiber optic components.

CUSTOMIZED SOLUTIONS



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FIELD REPAIR EQUIPMENT CLEANING & INSPECTION MEASUREMENT SERVICES

ZEUS D50
The Fusion Splice Kit is designed to assemble or repair fiber optic connections in the field. The kit contains everything needed to prepare, handle and splice fibers, industrial cables and connectors.

Splice-on connectors (SOC)
Fast, easy and reliable field installation of factory-quality terminations. Available connectors: E-2000®, F-3000®, SC, ST and FC.

Splice Repair Kit
Innovative fiber/cable repair option requires minimal strip lengths and no bulky splice sleeves.

Cleaning Kit
The kit contains a hand held microscope for connector end-face inspection and all necessary tools for cleaning, including in-adapter cleaners.

Video Microscope Kit
The kit contains all necessary tools for inspection and cleaning of a connector end-face. The Video inspection Microscope OLP-82P with 3.5-inch display and a built-in power-meter meets today's requirements for safety, reliability and quality. The P5000i digital inspection probe allows mated connectors to be inspected. The probe may be connected to a laptop. A variety of inspection tips and adapters are available for both kits.

Inspection Adapter
A variety of inspection tips and adapters are available for the video and handheld microscope to inspect all Diamond connectors.

Reference patch cord
In order to limit the variability of attenuation measurement using reference connectors, Diamond uses selected single mode fiber with restricted tolerances on the mode field diameter (MFD) as specified within the IEC 61755-2-4/-2-5 standard. Available connectors: E-2000®, F-3000®, SC, FC.

Launch fiber box
Suitable for characterization of fiber optic networks using an optical time domain reflectometer (OTDR) measurement device. Available with standard telecom connectors or harsh environment revos E-2000® and HE-2000® connectors.

Optical Attenuating Fiber (OAF)
The OAF-Patch is a product family of wavelength independent fixed attenuation patchcords suitable for each connector type. Offering a large choice of nominal attenuation from 2dB to 30dB on fiber type 9/125 µm.

Testing and Calibration Lab
The accredited test and calibration laboratory STS 0333 / SCS 0101 performs measurements, tests and calibrations not only for Diamond's own purposes, but can also be used for project specific requirements of Diamond's customers. We also offer calibration of fiber optic measurement equipment, ensuring traceability at the highest level according to ISO/IEC 17025.

Cleanrooms
ISO 5, 6 and 7 clean rooms according to DIN EN ISO 14644-1 for the assembly, control and packaging of products such as pigtailed, patch cords, adapters and mechanical parts that are highly sensitive to environmental contamination, to be cleaned and packaged in a controlled environment.

SERVICES, NETWORK & FIELD PRODUCTS



Diamond SA, based in Losone, Switzerland, specializes in high-performance fiber optic interconnect solutions with ultra-tight tolerances, offering both standard and custom options. We employ a vertically integrated approach and utilize state-of-the-art methods to terminate assemblies with various fibers and cables.





<p>E-2000®</p> <p>Unique connector with spring cap that provides outstanding optical performance, along with excellent handling characteristics.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ 0.1dB class ▶ SX, DX, Compact DX, Low profile DX ▶ Backplane (2-6 channels) ▶ Fusion ▶ IP65 ▶ Non-magnetic ▶ Interlock ▶ PM, PS, PSm, PS+ ▶ XB <p>Features:</p> <ul style="list-style-type: none"> ▶ Color and mechanical coding ▶ Interchangeable fixing clips ▶ Sterilizable <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-15 LSH 	<p>F-3000®</p> <p>The F-3000® connector family is designed according to international standards and is LC compatible.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Simplex ▶ Duplex ▶ Junior Duplex ▶ Backplane (2-4 channels) ▶ Fusion <p>Features:</p> <ul style="list-style-type: none"> ▶ Small-Form-Factor (SFF) ▶ Interchangeable fixing clips <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-28 LF3 <p>The F-3000®s connector comes without protective cap and thumb latch button. It has been specifically developed for use with active network devices (e.g. SFP).</p>	<p>DiaLink</p> <p>A round, slim connector well-suited for use in medical, sensing and in-building cabling applications. The pull cap feature enables easy installation into conduit pipes.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ DiaLink-Saver ▶ DiaLink male ▶ DiaLink female ▶ Threaded version <p>Features:</p> <ul style="list-style-type: none"> ▶ Compact design ▶ High packing density ▶ Sterilizable ▶ Non-magnetic version ▶ Pull cap for max. 300N <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-32 DiaLink 	<p>SC</p> <p>A push-pull connector ideal for industrial, medical, sensing and telecom measurement.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Simplex ▶ Duplex ▶ Fusion <p>Features:</p> <ul style="list-style-type: none"> ▶ Push-pull mechanism <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-4 SC 	<p>FC</p> <p>A metal connector used for industrial, medical, sensing applications and telecom measurement.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Standard ▶ Mini ▶ Fusion ▶ Alberino (plastic) ▶ PM, PSm ▶ Mating adapter with square, hexagonal or round flange <p>Features:</p> <ul style="list-style-type: none"> ▶ High precision anti-rotation keys ▶ Nickel-plated brass housing ▶ Compatible with TIA-604-4B, IEC 61754-13, EN50377-1-2 <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-13 FC PC wk ▶ TIA-604-4B FC PC and APC ▶ EN50377-1-2 FC APC nk 	<p>ST</p> <p>A bayonet style connector often used in industrial, medical, sensing applications, telecom and LAN applications.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Standard ▶ Fusion <p>Features:</p> <ul style="list-style-type: none"> ▶ Spring loaded (10N) ▶ Bayonet locking mechanism <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-2 BFOC/2.5 	<p>AVIM®</p> <p>Developed in the mid-90s, the AVIM® was designed for vibration resistance in avionics, space and mobile platforms.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ SM, MM, PM ▶ PS, PS+ (available for qualified) <p>Features:</p> <ul style="list-style-type: none"> ▶ High vibration resistance (35 gRMS) ▶ High Shock resistance (500g) ▶ Space flight experience <p>Standards:</p> <ul style="list-style-type: none"> ▶ ESCC 3420/002 	<p>Midi AVIM®</p> <p>Designed for compactness and ruggedness in dynamic small environments such as space, avionics and mobile platforms.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ SM, MM, PM and PZ ▶ PS, PM-PS <p>Features:</p> <ul style="list-style-type: none"> ▶ High vibration resistance (35 gRMS) ▶ High Shock resistance (500g) ▶ Titanium design <p>Standards:</p> <ul style="list-style-type: none"> ▶ Diamond 	<p>Mini AVIM®</p> <p>Designed for compactness and ruggedness in dynamic small environments such as space, avionics and mobile platforms.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ SM, MM, PM and PZ ▶ PS, PS+ (available for DMI on request) <p>Features:</p> <ul style="list-style-type: none"> ▶ Very compact (4.5mm x 21mm) ▶ Standard Clip System ▶ Tested successfully up to 35 gRMS ▶ Very high precision anti-rotation keys ▶ Titanium design (Micro AVIM®) <p>Standards:</p> <ul style="list-style-type: none"> ▶ Diamond 	<p>Micro AVIM® / DMI</p> <p>The Micro AVIM® or Diamond Micro Interface (DMI) connector requires minimal space making it ideal for use on Printed Circuit Boards.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ PM, PM-PS and PZ ▶ PS, PS+ (available for DMI on request) <p>Features:</p> <ul style="list-style-type: none"> ▶ 4 optical/electrical channels ▶ Automatic protection shutter ▶ Protection IP67 ▶ Push-Pull ▶ Field repairable ▶ Vibration resistant ▶ Allows mixing of fiber types <p>Standards:</p> <ul style="list-style-type: none"> ▶ Diamond 	<p>F-SMA</p> <p>Designed for use with multimode fiber, including large core multimode fiber for higher power levels.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ MM Standard ▶ MM Large core <p>Features:</p> <ul style="list-style-type: none"> ▶ External parts: Inox ▶ Ferrule ø 3,175 mm ▶ MM, PC <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-22 	<p>HE-2000®</p> <p>A rugged and reliable harsh environment push-pull connector with superior optical and mechanical performance.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Connector and bulkhead assembled with cable, tubes or fibers. The ferrule front face can be PC, APC or APC4° polished for MM, SM, PM, PS, large core or small core fibers. Available also as XB. <p>Features:</p> <ul style="list-style-type: none"> ▶ 4 optical/electrical channels ▶ Resistant metal shell ▶ Protection IP68 ▶ Field repairable ▶ Vibration resistant ▶ Allows mixing of fiber types <p>Standards:</p> <ul style="list-style-type: none"> ▶ IEC 61754-35 	<p>MIL-38999 DM4 Family</p> <p>The well-known MIL style connector with superior optical and mechanical properties.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Connector and bulkhead assembled with cable, tube or fiber. The ferrule front face can be PC, APC or APC4° polished for MM, SM, PM, PS, large core or small core fibers. Available also as XB. <p>Features:</p> <ul style="list-style-type: none"> ▶ 4 to 12 optical / electrical channels ▶ Resistant metal shell ▶ Protection IP67 ▶ Field repairable ▶ Vibration resistant locking system ▶ Allows mixing of fiber types <p>Standards:</p> <ul style="list-style-type: none"> ▶ MIL-DTL-38999 	<p>MIL-83526 DM4</p> <p>A ruggedized housing allows for easy handling in industrial environments.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Connector and bulkhead assembled with cable, tubes or fibers. The ferrule front face can be PC, APC or APC4° polished for MM, SM, PM, PS, large core or small core fibers. Available also as XB. <p>Features:</p> <ul style="list-style-type: none"> ▶ 4 optical/electrical channels ▶ Resistant metal shell ▶ Protection IP68 ▶ Field repairable ▶ Vibration resistant ▶ Allows mixing of fiber types <p>Standards:</p> <ul style="list-style-type: none"> ▶ MIL-DTL-83526 	<p>X-BEAM</p> <p>This lensed connector ensures the data connection can be easily maintained even in heavily polluted and other harsh environments.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Connector and bulkhead assembled with cable or tube. The ferrule front face can be PC or APC polished for MM and SM fibers. <p>Features:</p> <ul style="list-style-type: none"> ▶ 4 optical channels ▶ Resistant metal shell ▶ Protection IP68 ▶ Fiber types mix (keep consistent) ▶ Field repairable ▶ Vibration resistant <p>Standards:</p> <ul style="list-style-type: none"> ▶ MIL-DTL-83526 	<p>DiaFlex</p> <p>A multifiber connector system based on the MT ferrule and a mechanical design that provides excellent optical properties.</p> <p>Available versions:</p> <ul style="list-style-type: none"> ▶ Male and female connectors are assembled with cable or fan outs. The ferrule front face can be PC or APC polished for MM and SM fibers. <p>Features:</p> <ul style="list-style-type: none"> ▶ 8-24 optical channels ▶ Resistant metal shell ▶ Protection IP68 ▶ Easy locking system ▶ Protective cap with feed-in eye ▶ Small external diameter <p>Standards MT Ferrule:</p> <ul style="list-style-type: none"> ▶ IEC 61754-5
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* E-2000®, F-3000®, AVIM® and HE-2000® are registered trademarks of DIAMOND SA in the European Union and other countries.

* The pictures of the connectors are not scaled true to the original

SINGLE FIBER CONNECTORS

TECHNOLOGIES

Crimping

Active Core Alignment (ACA)

The goal of ACA is to achieve the best Insertion loss values by minimizing the fiber eccentricity to the ferrule outer diameter, as well as, achieving a perfectly aligned exit angle. As part of the ACA process, the metallic end-face of the two component ferrule is shaped so that one side of the material deformation causes the fiber core to align to the middle of the central axis of the ferrule in a controlled manner.

Available connectors: All connector types

Fiber core centered

High Power (PS)

Diamond Power Solution (PS) connections utilize various beam expansion methods (Expanded Beam (EB), which can vary greatly depending on the scope of the application. The different PS types available are as follows: PS Collimated (contact), PM-PS (contact), PSm (contact), PSI (free standing), PSc (collimator), PSF Free Space (diverging), PSb Ball Lens (expanded beam), PSI Lensed (focused). PS+ for up to 16W on SM fibers.

Available connectors: E-2000®, F-3000®, Mini AVIM®, DMI, FC, X-Beam and more upon request

PSm Power Solution multimode

PSi Free standing

Polarization Maintaining (PM)

Diamond Polarization Maintaining (PM) connectors are renowned for their exceptional performance. The Active Core Alignment (ACA) process minimizes core offset to ensure low insertion loss. Active Polarization Orientation (APO) guarantees optimal alignment of polarization axes for high extinction ratio on PM and polarizing (PZ) fibers.

Available connectors: E-2000®, F-3000®, LSA (DIN), FC, SC, DMI, AVIM® family and others upon request

MULTI FIBER CONNECTORS

PM

PM-PS collimated polarization maintaining

Expanded Beam (XB)

Diamond has developed an ultra-low tolerance optical sub-assembly with a microlens and ferrule embedded in a high precision guide ceramic sleeve. The result is a high performance, exceedingly reliable lensed-ferrule assembly offering compact size and highly repeatable low insertion loss. A Diamond lensed-ferrule assembly can fit standard connector bodies, as well as, many different connectivity solutions, due to its modular conception, and can be used as a substitute of physical contact (PC) ferrules, when mating-cycles, dust insensitivity, reliability and low losses matter.

Available connectors: E-2000®, XB2, HE-2000®, MIL-83526 DM4, MIL-38999 DM4 Family.