

# **Corporate Overview for the Defense Industry**

## **OZ Optics Limited**

**October 2024**





# Company Background



- **Founded in 1985**
- **Corporate Headquarter Located in Ottawa, Canada**
- **Manufacturing Facility in  
Ottawa, Canada | Izmir, Türkiye | Jiaxing, China**
- **Ten Product Groups:**
  - Laser-to-Fiber Delivery Systems
  - High Power Fiber Optic Components
  - Polarization Maintaining Products
  - Attenuators
  - Opto-Electronic Packaging
  - Fiber Optic Test Equipment
  - Fiber Optic Sensor Systems
  - Fiber Optics Components for Gyroscope
  - OCT
  - BioPhotonics
  - Quantum
- **Sales Offices in  
Canada, USA, Europe, Türkiye and China**

## ➤ Ottawa, Canada



## ➤ Izmir, Türkiye



## ➤ Jiaxing, China



# Corporate Statements and Quality Policy



## Our Vision

- ✓ Capture and expand market share
- ✓ Be the preferred supplier of choice
- ✓ Maximize shareholder value

## Our Mission

To become the leading provider of innovative optical products to telecom and non-telecom sectors

## Our Core Values

- ✓ Leadership
- ✓ Teamwork
- ✓ Boldness
- ✓ Commitments
- ✓ Innovation
- ✓ Rewards

## Our Quality Policy

Provide our Customers with a competitive advantage, leveraging performance, price and delivery, through a continuous process of Quality advancement in all areas of our Company.

Communicate effectively to our Customers, Suppliers and Shareholders our commitment to Quality, continuous improvement and to abide by any applicable requirements.

Promote opportunities of professional development for all members of our company through education, training and personal challenge.





# Company Profile

## Over 467 employees worldwide

OZ Canada



**243+**  
Employees

OZ China



**87+**  
Employees

OZ Türkiye

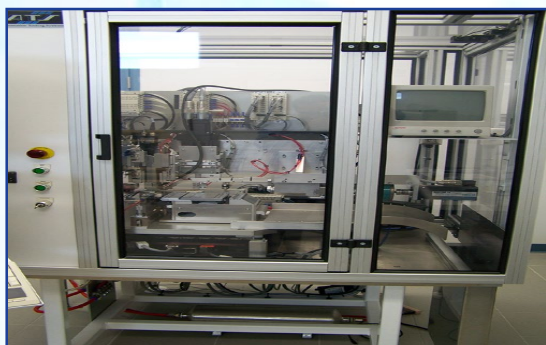


**137+**  
Employees





# Company Profile



**Advanced Proprietary  
Processing Technology**



**Canada  
Certificate: FM 63463**



**China  
Certificate: FM 577647**



**Turkey  
Certificate: FM 601414**

**ISO9001:2015 Certified**



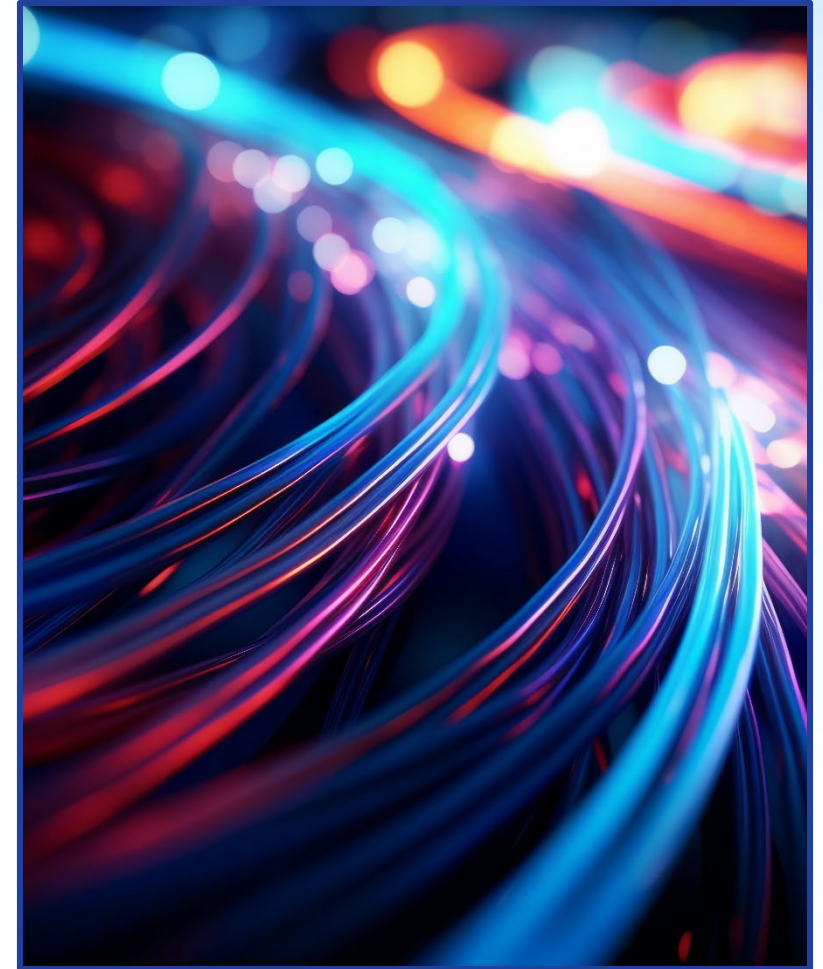
**Broad Patent Portfolio**



# Company Profile

## OZ Optics is Lead by an Experienced Team:

- **Ömür Sezerman, Chairman, President & CEO**
  - Founder and CEO since inception (40 years)
- **Zahide Sezerman, VP of Human Resources**
  - With OZ Optics since inception (40 years)
- **Garland Best, VP of Components Division**
  - 33 years at OZ Optics
- **Gordon Youle, VP of Test Equipment Division**
  - 26 years at OZ Optics
- **Saeed Pilevar, Senior VP of Business Development**
  - 3 months at OZ Optics
- **Onur Koca, General Manager of OZ Türkiye**
  - 3 year at OZ Optics
- **Bing Li, General Manager of OZ Optics China**
  - 21 years at OZ Optics





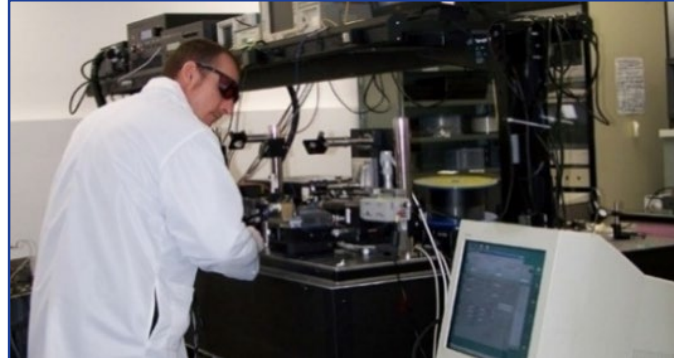
# Company Profile

**Experienced and Well-Trained Staff in Following Fields:  
Optical, Mechanical, Electronics & Software**

## CNC Machine Shop



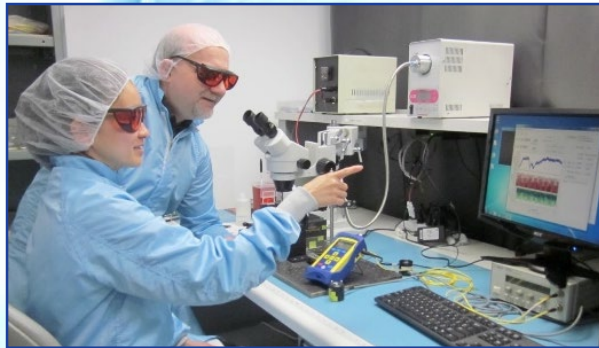
## Femto-Second Laser Lab



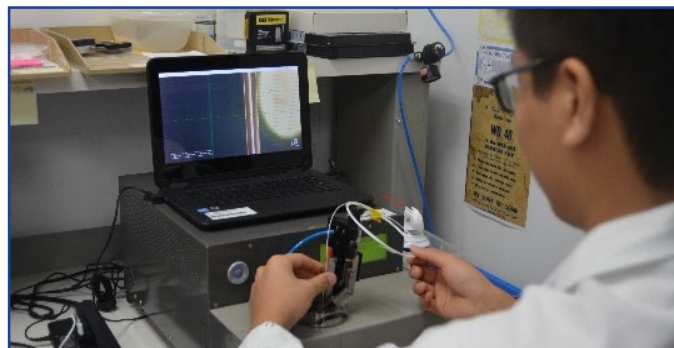
## AR Coating



## Clean Room



## Laser Conditioning / Cleaving







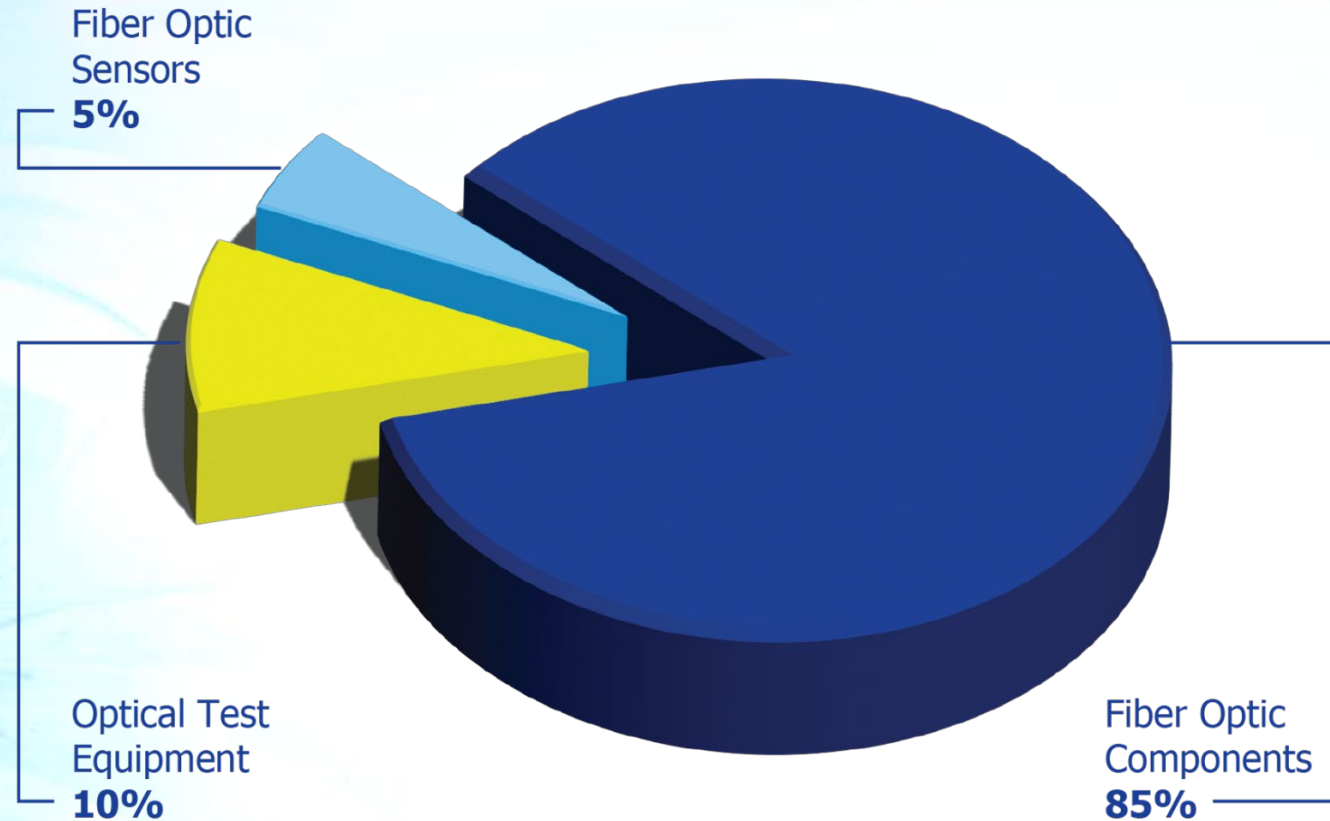
# Core Competencies

- **Pioneer in Polarization Maintaining (PM) Components & Custom Test Equipment, Including Polarization Test Equipment and FTTH Equipment**
- **Leader in Wavelength Flattened, High Power & Low PDL Components**
- **Leader in High Power Fiber Optic Delivery Systems**
- **Widest Range in Attenuator Product Offering**
- **Fiber Optic Distributed Strain and Temperature Sensors**
- **Complete product line for OCT, Gyroscope & BioPhotonics applications & 2 Micron**
- **Now available: Spectrometers and Quantum Light Sources**



# Leading Technology

➤ **Three Product Groups** ➤ **Over 1,000 Products** ➤ **Leading Edge R&D**







# Leading Technology

## Featured Products



### World's Largest Online Fiber Optic Catalog

Most Products are in Stock



### Polarization Maintaining Fiber Optic Components

Patent Numbers: USA 7058275, 7095931, 7295731, China 1672073

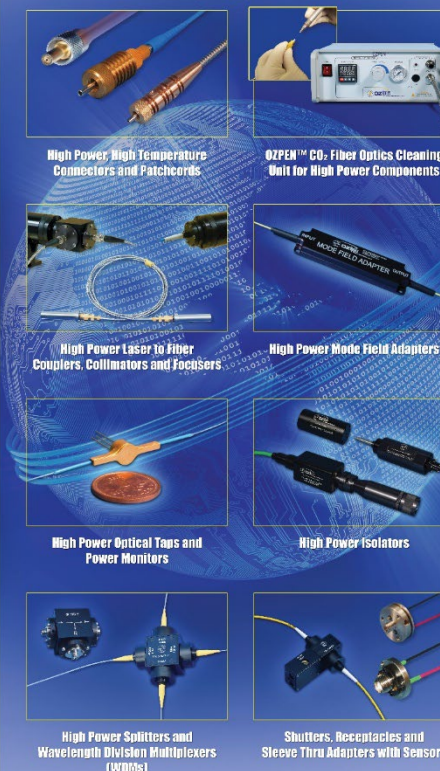


### Laser and Laser Diode to Fiber Delivery Systems



### High Power Fiber Optic Components

Patent Numbers: Canada 2494133, USA 7058275, 7095931, 7295731, China 1672073







# Leading Technology

## Featured Products



### Fiber Optic Attenuators

Polarization Maintaining, Single Mode and Multi-Mode Fibers



Benchtop Digital



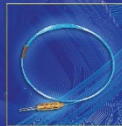
Variable Attenuators



Digital Variable Attenuators



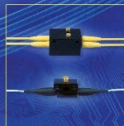
Electrically Controlled Variable Attenuators



MEMS Variable Attenuators



PM, SM and MM Fibers Pigtailed Inline Variable Attenuators



Single and Multi Channel Miniature Variable Attenuators



Reflective Style Variable Attenuators



Air Gap Variable Attenuators



Plug Type Fixed Attenuators



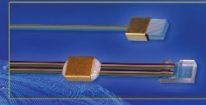
Attenuating Fiber Patchcords

### Fiber Optic Components for Optoelectronic Packaging

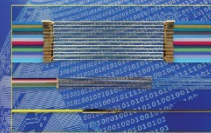
Hermetically Sealable Patchcords with Glass or Metal Solder



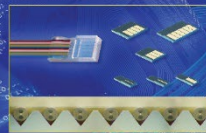
Single Channel



Multi Channel



Metalized Fibers



PM, SM and MM Fiber Pigtailed V-Groove Arrays



Polarization Measurement System for V-Grooves



Tapered, Lensed Fiber, Polished and Laser Shaped



Precision Collimator and Focuser Array

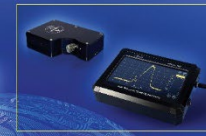


Fused Fiber Collimator

### Fiber Optic Test Equipment



Quantum Entangled Photons Sources



High-Resolution Optical Spectrometers



Optical Fiber Length Meters



Back Reflection Meters



High-Speed Polarization Controller-Scrambler



Handheld and Benchtop Extinction Ratio Measurement Systems



Multichannel, Benchtop and Handheld Digital Variable Attenuators



High Power Visual Fault Locators



Powermeters with Smart Detector Heads



Laser Diode Stable Sources

### Fiber Optic Components for 2 Micron Wavelengths



Fiber Optic Patchcords



Fused Couplers, Taps, Beam Splitters and Combiners



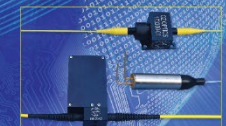
Fiber Pigtailed Laser Diode Sources



Pigtail, Receptacle Style Collimators and Focusers



High Speed Electro-Optic Polarization Controllers and Scramblers



Manual and Electrically Controlled Variable Attenuators



Polarizers



Isolators





# Leading Technology

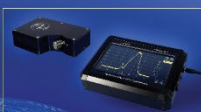
## Featured Products



### New Fiber Optic Products



Polarization Entangled  
Photon Sources



High-Resolution  
Optical Spectrometers



High Speed Electro-Optic Polarization  
Controllers and Scramblers



Polarization Entanglement  
Tomography Analyzers



Fiber Optic Coils  
for Gyroscopes



Universal Optical DNA Rapid  
Detection Systems for Pathogens



Motor Driven Polarization  
Dependent Loss Emulators



Detector Heads and  
Optical Power Monitors



### Fiber Optic Products for Gyroscopes



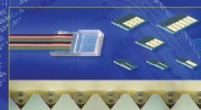
Fiber Optic Coils  
for Gyroscopes



ASE Sources



Wavelength Division  
Multiplexers



PM, SM and MM Fiber Pigtailed  
V-Groove Arrays



Fused Couplers, Taps,  
Beam Splitters and Combiners



Fiber Optic Polarizers



Fiber Optic  
Patchcords



SM and PM Fiber  
Pigtailed Circulators



Isolators

### Quantum Entangled Photons Sources



Hyper-Entangled Photon Source  
Broadband Telecom



Polarization-Entangled Photon Source  
Broadband Telecom



Bright Polarization-Entangled Photon  
Source Broadband Telecom



Bright Polarization-Entangled Photon  
Source Narrowband Telecom



Correlated Photon Pair Sources



Polarization-Entangled Photon Source  
Narrowband at 610 nm



Polarization Entanglement  
Tomography Analyzer

### Fiber Optic Products for OCT Applications



OCT Modules



Manual and Electrically Controlled  
Broadband Variable Attenuators



Manual and Electrically Controlled  
Fiber Optic Delay Lines



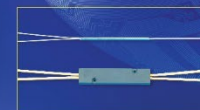
Manual and Electrically Controlled  
Polarization Controllers / Scramblers



Fiber Pigtailed  
Broadband SLED Sources



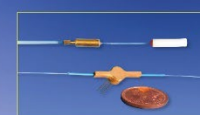
Fiber Collimators / Focusers



Broadband Fused Couplers



SM and PM Fiber  
Pigtailed Circulators







# Leading Technology

## Featured Products

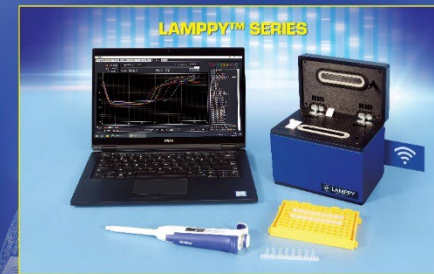


### Fiber Optic Products for Biophotonics Applications



### Universal Optical DNA Rapid Detection System

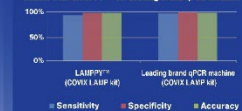
For Pathogens Including:  
COVID-19, SARS, EBOLA, CHOLERA, SALMONELLA, ETC.



#### Features:

- Use to detect viral, fungal, and bacterial DNA/RNA
- Rapid DNA/RNA detection (as little as 20 minutes)
- Highly sensitive and specific detection of low viral levels
- Intuitive software displays real time data during testing
- Melt analysis available with the included software
- Lid heater prevents evaporation and condensation
- Compact modular design allows for easy cleaning and maintenance
- Pair with an external battery for a portable and field-deployable system
- Test up to 8 samples simultaneously (higher throughput systems with up to 96 samples available upon request)
- Wireless communication with dual-band Wi-Fi and Bluetooth connectivity
- A fraction of the cost of qPCR based systems
- OZ Optics also offers private labelling for volume OEM applications

Clinical trial: LAMPYY™ vs. Leading brand qPCR machine

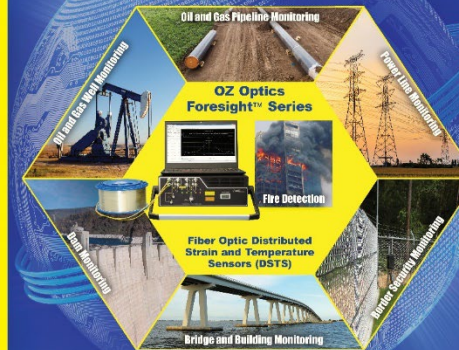


In a lab study done at Acibadem University using saliva samples taken from patients at the Acibadem Hospitals, LAMPYY was compared to a well-known conventional qPCR machine in performance and speed. The comparison study was carried out with a sample size of 262 using the COVIX LAMP-based kit on both instruments and then verified with the KrosQuant SARS-COV-2 (2019 nCoV) Real Time PCR Diagnostic Kit on a leading brand conventional qPCR machine.

### Fiber Optic Distributed Strain and Temperature Sensors

USA Patent Numbers: 7499151, 7599047, and 9568307

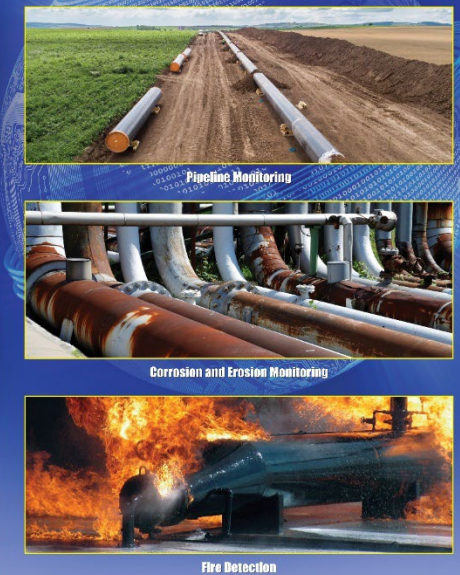
- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Simultaneous measurement of strain and temperature
- Fast, dynamic measurement of strain and/or temperature up to 200 km sensing range
- Uses standard telecommunications fibers to minimize costs



### Fiber Optic Sensors for Pipeline Monitoring

USA Patent Numbers: 7499151, 7599047, and 9568307

- Pipeline leakage detection
- Sensitive detection of corrosion / erosion, cracks and buckling
- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Simultaneous measurement of strain and temperature
- Fast, dynamic measurement of strain and/or temperature up to 200 km sensing range
- Uses standard telecommunication fiber to minimize costs







# Leading Technology

## Featured Products



### Fiber Optic Sensors for Fire Detection

USA Patent Numbers: 7499151, 7599047, and 9568307

- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Simultaneous measurement of strain and temperature
- Fast, dynamic measurement of strain and/or temperature up to 200 km sensing range
- Uses standard telecommunications fiber to minimize costs



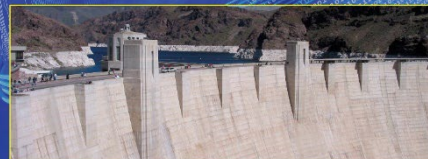
### Fiber Optic Sensors for Bridges, Dams and Buildings

USA Patent Numbers: 7499151, 7599047, and 9568307

- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Simultaneous measurement of strain and temperature
- Fast, dynamic measurement of strain and/or temperature up to 200 km sensing range
- Uses standard telecommunications fibers to minimize costs



Bridge Monitoring



Dam Monitoring



Building Fire Detection

### Fiber Optic Sensors for Power Line and Smart Power Generator Monitoring

USA Patent Numbers: 7499151, 7599047, and 9568307

- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Simultaneous measurement of strain and temperature
- Fast, dynamic measurement of strain and/or temperature up to 200 km sensing range
- Uses standard telecommunication fiber to minimize costs



Underground Power Line Monitoring



Power Line Monitoring



Optical Ground Wire (OPGW)



Construction of OPGW



Gas Generator Monitoring

### Fiber Optic Sensors for Security Monitoring

USA Patent Numbers: 7499151, 7599047, and 9568307

- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Simultaneous measurement of strain and temperature
- Fast, dynamic measurement of strain and/or temperature up to 200 km sensing range
- Uses standard telecommunication fiber to minimize costs



Border Security Monitoring



Highway Health Monitoring



# **Industry Standards**

**All Products Manufactured are in Strict Accordance with International Industry Standards:**

- **ISO 9001:2015 Certified (Canada, China and Türkiye)**
- **REACH Compliance**
- **RoHS Compliance**
- **CE Compliance**
- **Telecordia Compliance**
- **Controlled Goods Directorate Registered**
- **Critical Supplier for F35 and F18 Project**
- **TSCA (Toxic Substance Control Act) Compliance**
- **CHEMSHERPA Compliance**
- **IEC 61010 Compliance**





# Marketing Strategy

## Application Market

Using our strong direct sales and distributors, we address the following markets:

- **Energy – Oil and Gas**
- **Military and Homeland Security**
- **Educational**
- **Industrial**
- **Telecom / Datacom**
- **Medical & Pharmaceutical**







# Marketing Strategy

## Application Market

By leveraging the technology and expertise gained since its inception, OZ Optics has attracted a broad range of customers in the telecom / datacom, medical, military, security, industrial, construction, aerospace, power utilities, petrochemical and educational sectors.





# Marketing Strategy

## Global Sales Network

OZ Optics has resellers and distributors in over 30 Countries and Regions with over 10,000 customers worldwide:



Austria



Germany



Luxembourg



Sweden



Belgium



Greece



Netherlands



Switzerland



Brazil



Hong Kong



Norway



Taiwan



Canada



India



Poland



Thailand



China



Ireland



Portugal



Türkiye



Denmark



Italy



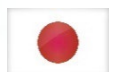
Singapore



United Kingdom



France



Japan



South Korea

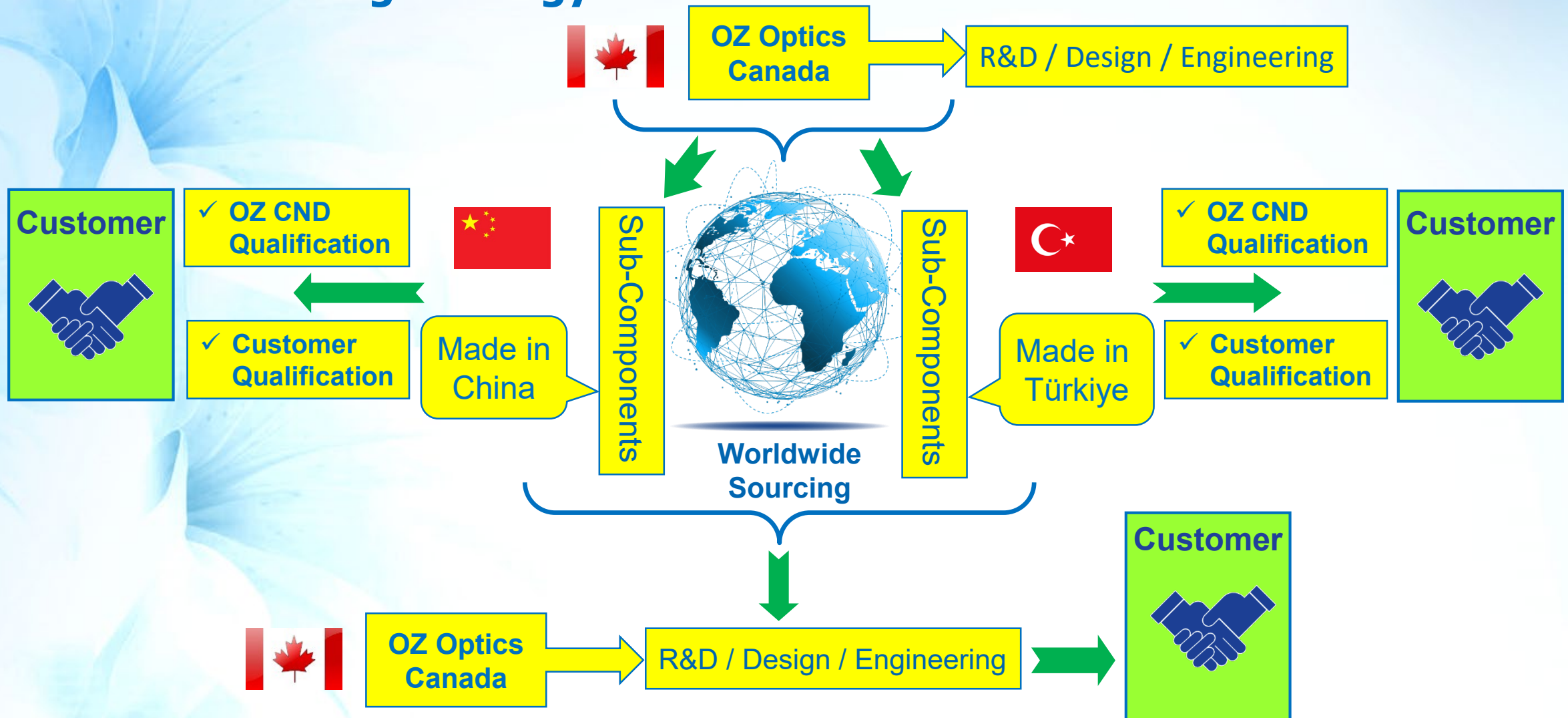


United States





# Manufacturing Strategy





# Marketing & Operation Strategy

## Competitive Advantage

- Superior Technology  
Innovative Engineering
- Competitive Pricing
- Global Presence
- Extensive Experience  
In Fiber Optics Manufacturing
- Exceptional Quality and Service







# Branch Network



**OZ OPTICS CANADA** (Headquarters)



**OZ OPTICS TÜRKIYE** (Türkiye Factory)



**OZ OPTICS CHINA** (Jiaxing Factory)



# Branch Network

## Facility - Ottawa Headquarters

- 60,000 sq ft. - Manufacturing and R&D Facilities
- 15,000 sq ft. - Admin, Sales and Marketing
- 15,000 sq ft. - Training and Fitness Facilities

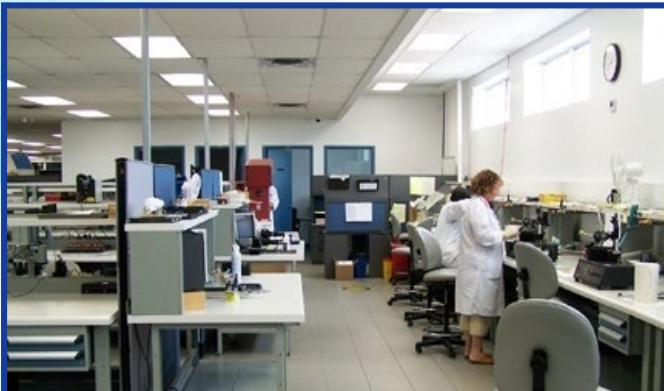






# Branch Network

## Facility - Ottawa Headquarters



**Production Area**



**Training Centre Building**



**Meeting Room**



**Swimming Pool**



# Branch Network

## Facility - Türkiye Factory (Izmir, Türkiye)

- Operational Since 2000
- 33,000 sq ft. Manufacturing Facility
- Located in Free Trade Zone
- Low Tax Rates
- Sub Component Parts Manufacturing
- High Quality Labor
- AR Coating Machine & Clean Room onsite







# Branch Network

## Facility - China Factory (Jiaxing, China)

- Operational Since June 2010
- Wholly Foreign Owned Enterprise
- Cost Effective Manufacturing
- High Quality Labor
- Supply Chain Integration





# Branch Network

## Facility - China Factory (Jiaxing, China)

- Located in Economic Development Zone
- 4000+ sq meters - Total Area
  - 500 sq meters – Administration, Sales and Marketing
  - 3500 sq meters – Manufacturing Area
    - ✓ 500 sq meter – Class 10,000 Clean Room
    - ✓ 300 sq meter – ESD Working Area







# OZ Optics China

Zhejiang OZ Optics Technologies Co., Ltd



- Operational since June 2010
- Wholly Foreign Owned Enterprise
- NPI & Production Line Setup
- On-site Training by OZ CND
- Began Mass Production in September 2010
- Completed Main Facility Expansion in 2019

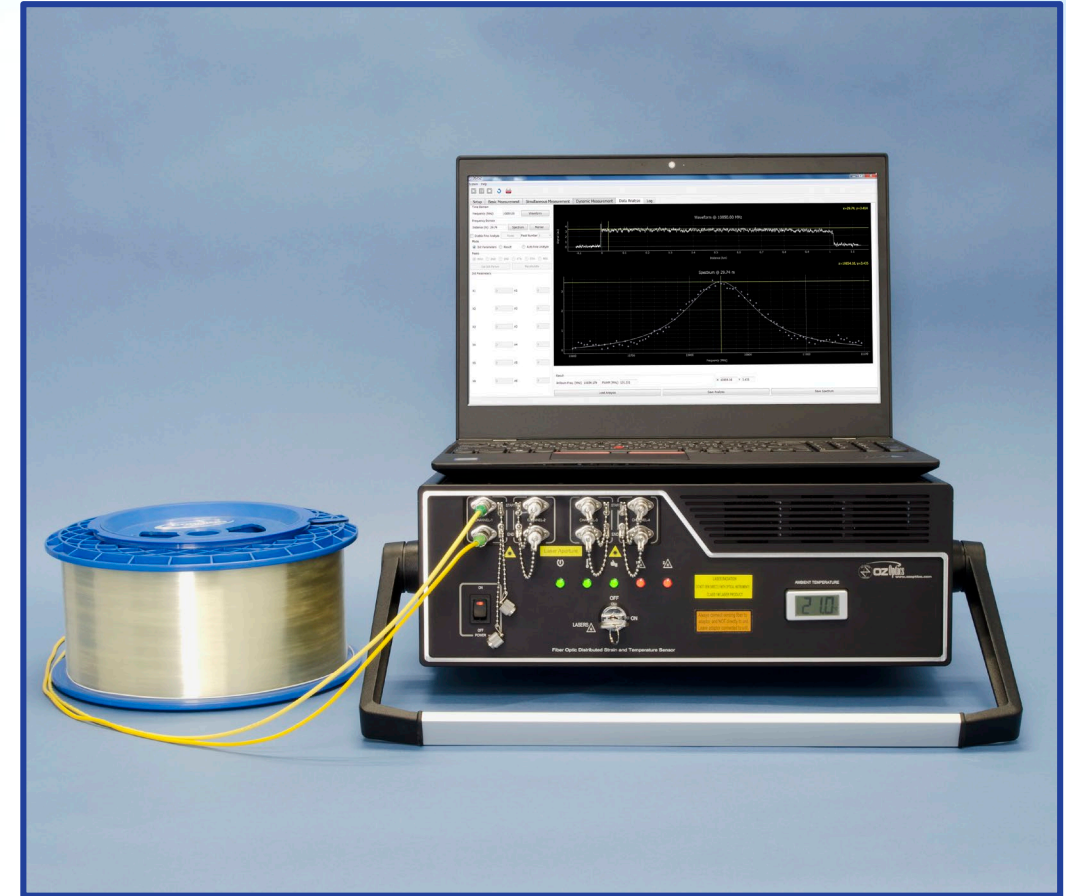




# Distributed Temperature and Strain Sensor



- Sophisticated sensor systems using stimulated Brillouin scattering in optical fibers to measure changes in both strain and temperature along the length of an optical fiber.
- Uses standard telecom single mode fibers for strain and / or temperature measurement



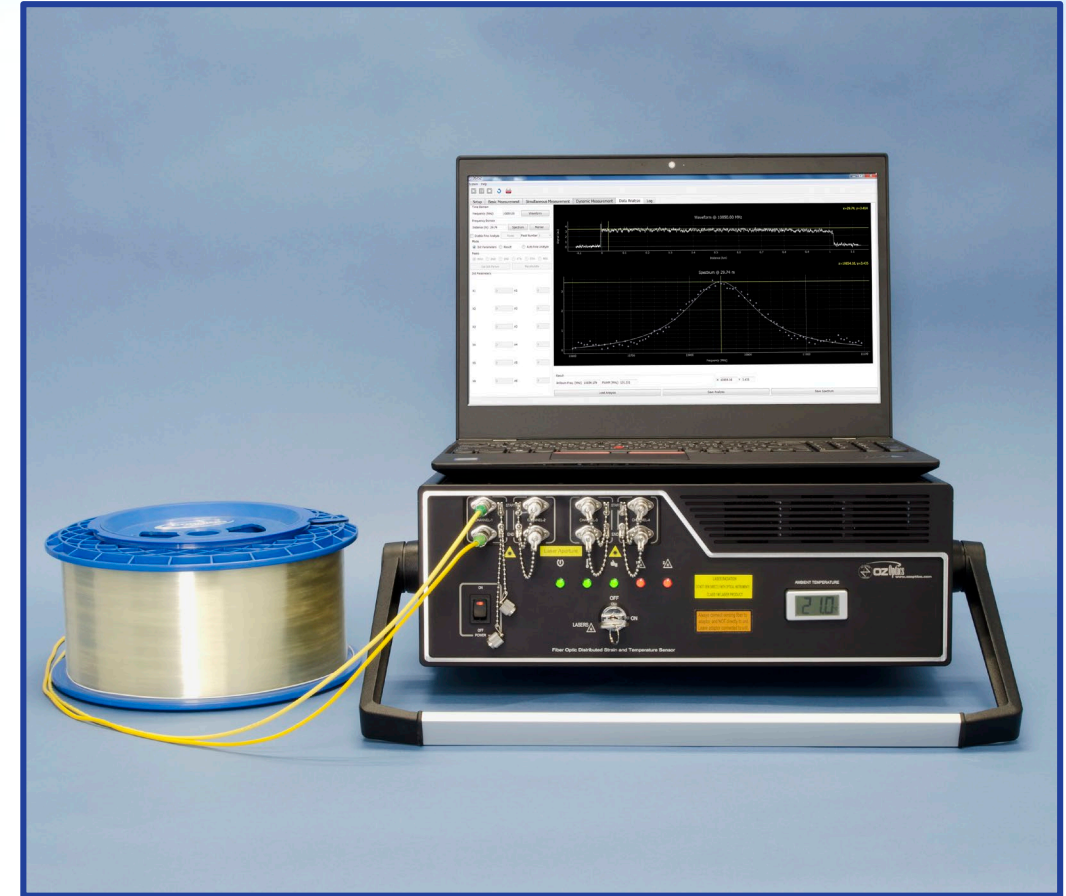




# Distributed Temperature and Strain Sensor



- Real-time measurement of strain and temperature
- High spatial resolution, strain, and temperature resolution and accuracy
- DLL available for system integrator
- As low as 0.1 m spatial resolution
- Max. 100 km sensing range with max. 200 km fiber length
- Available configurations: BOTDA, BOTDR and Combo (BOTDA + BOTDR)





# Broadband Polarization Entangled Photon Source

## DTS0158: Broadband Polarization Entangled Photon Source

- High-quality Polarization and Frequency Entanglement
- Broad Bandwidth Covering C- and L- Bands
- High Fidelity and Excellent Stability
- Turn-key and Room-temperature Operation
- Low Power Consumption
- Compact and Light Weight Platform
- Rugged, Alignment Free, All Fiber Design



DTS0158 – Broadband Polarization Entangled Photon Source





# Telecom-Broadband Hyperentangled Photon Sources



## DTS0187: Telecom-Broadband Hyperentangled Photon Sources

- High-quality Hyper-entanglement in Polarization and Frequency
- Hyperentangled Biphotons Routed Deterministically in Two Output Ports
- Compatible with Fixed or Programmable Filters for High-dimensional Entanglement in Frequency Domain
- Broad Bandwidth Covering C- and L- Bands
- High Fidelity and Excellent Stability
- Turn-Key and Room-Temperature Operation
- Low Power Consumption
- Rugged, Alignment Free, All Fiber Design



DTS0187 – Telecom-Broadband Hyperentangled Photon Sources



# Bright Entangled Photon Sources

**DTS0198: Bright Entangled Photon Sources Broadband Telecom**

**DTS0197: Bright Entangled Photon Sources Narrowband Telecom**

- Highest Counts/Coincidences Rate Available in The Market
- Highly-Stable Benchtop Device with Excellent Fidelity
- Rugged, Alignment Free, All-in-Fiber Proprietary Design
- Controllable Accidental Photons Rate
- Built-in Noise-Suppression Filters
- High Heralding Efficiency (45%-70%)
- Hyperentangled Pairs Routed
- Deterministically Into Two Output Ports



**DTS0198 – Bright Entangled Photon Sources Broadband Telecom**



**DTS0197 – Bright Entangled Photon Sources Narrowband Telecom**





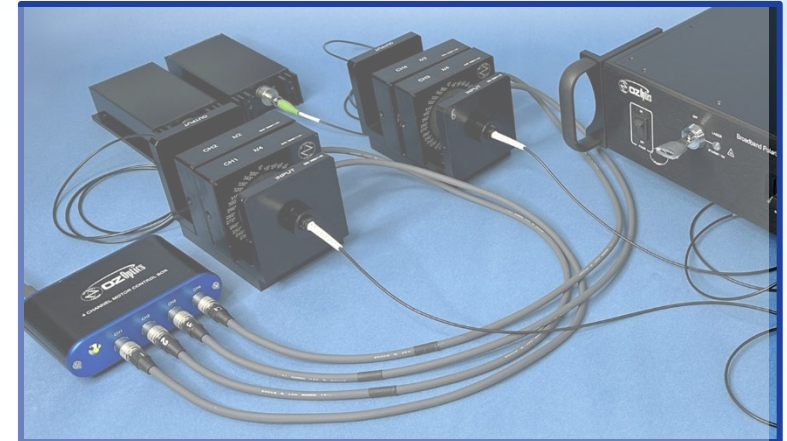
# Polarization Entanglement Tomography Analyzer

## DTS0196: Polarization Entanglement Tomography Analyzer

- Plug-and-play Analyzer with a Controller Unit
- Customized Software and Intuitive GUI
- Quick and Precise Polarization State Rotators
- Compact Size and Small Footprint

### Applications:

- Polarization State Tomography
- Automation of Multi-polarization State Analysis



**DTS0196 – Polarization Entanglement Tomography Analyzer**



# Benchtop Polarization Entangled Photon Source

**DTS0200: Polarization-Entangled Photon Source Narrowband 810 nm**

- High-Quality Turn-Key Polarization Entanglement
- Custom Wavelength Offerings
- Turn-Key and Room-Temperature Operation
- Rugged, Room Temperature Operation
- Two (Signal / Idler) Outputs or Single Output



**DTS0200 – Polarization-Entangled Photon Source Narrowband 810 nm**





# Benchtop Correlated Photon pair Sources

## DTS0199: Correlated Photon Pair Sources



- High-Quality Turn-Key Polarization Entanglement
- Custom Wavelength Selection
- Turn-Key and Room-Temperature Operation
- Rugged Aluminum Housing
- Two (Signal / Idler) Outputs or Single Output



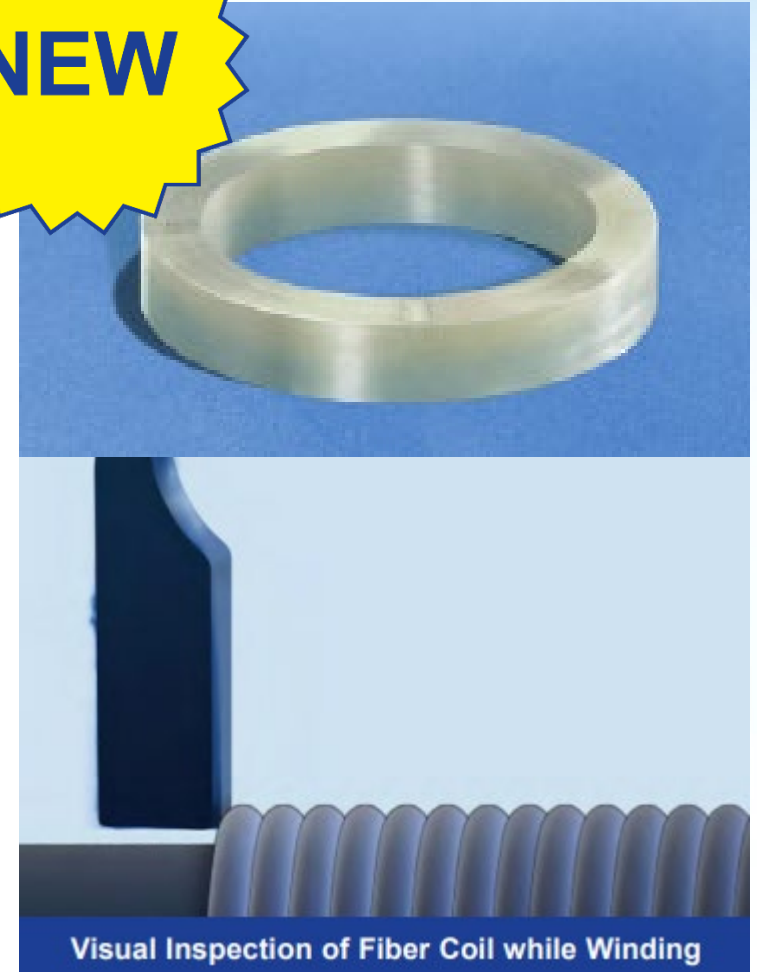
DTS0199 – Correlated Photon Pair Sources



# Fiber Optic Coils for Gyroscopes

## DTS0194: Fiber Optic Coils for Gyroscopes

- High Performance for Tactical Grade, Navigation Grade and Strategic Grade Fiber Optic Gyroscopes (FOGS)
- Fully Customized Design And Manufacturing Capability
- High Symmetry High Stability and Reliability
- Low Polarization Crosstalk (PM Only)
- Low Temperature Sensitivity / Low Shupe Error
- Low Vibration Sensitivity
- Design, Testing and Integration Service Available



Visual Inspection of Fiber Coil while Winding



DTS0194 – Fiber Optic Coils for Gyroscopes

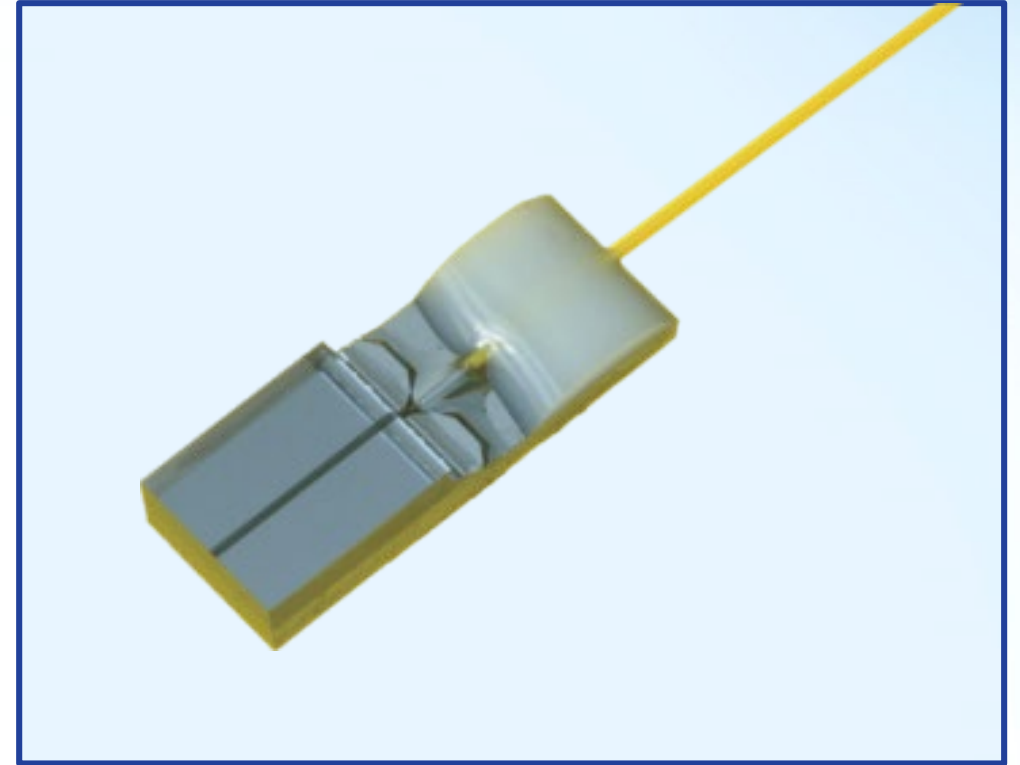




# Fiber Pigtailed V-Groove Arrays

## DTS0083: V-Groove Assemblies

- Up to 96 Fibers in a Single Array
- 127, 250, 500 Micron & Custom Spacings
- SMF, MMF & PMF



DTS0083 – V-Groove Assemblies

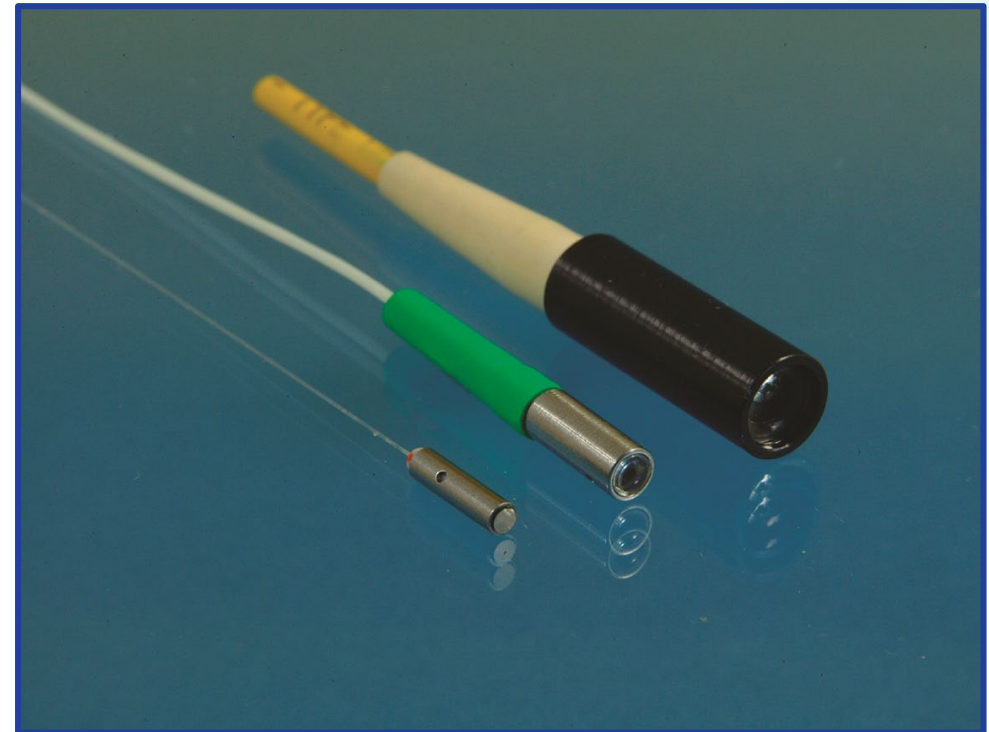


# Pigtail Style Collimators / Focusers

## DTS0060: Collimators / Focusers – Pigtail Style

LPC-03-1550-8/125-P-0.44-2AS-40-3A-3-2 and LPF-01-1550-8/125-P-3-19.4-5AS-60-3A-3-1

- As Small as 2  $\mu\text{m}$  Waist Diameter
- Up to -60 dB Back Reflection  
SMF, PMF; 35 dB MMF
- 240 nm – 2200 nm Wavelengths Available



DTS0060 - Collimators and Focusers – Pigtail Style





# Pigtail Style Collimators / Focusers

**DTS0157: Fused Fiber Collimator**

**DTS0145: High Power Collimators and Focusers – Pigtail Style**

- **Standard Collimated Beam Diameter:**  
0.2 mm to 3.5 mm
- **Standard Sizes:**  
1.6 mm, 2.5 mm, 4 mm, 8 mm, 11 mm,  
12 mm & 25.4 mm Diameter Housing
- **Up to 1 kW Power**



**DTS0157 – Fused Fiber Collimator**



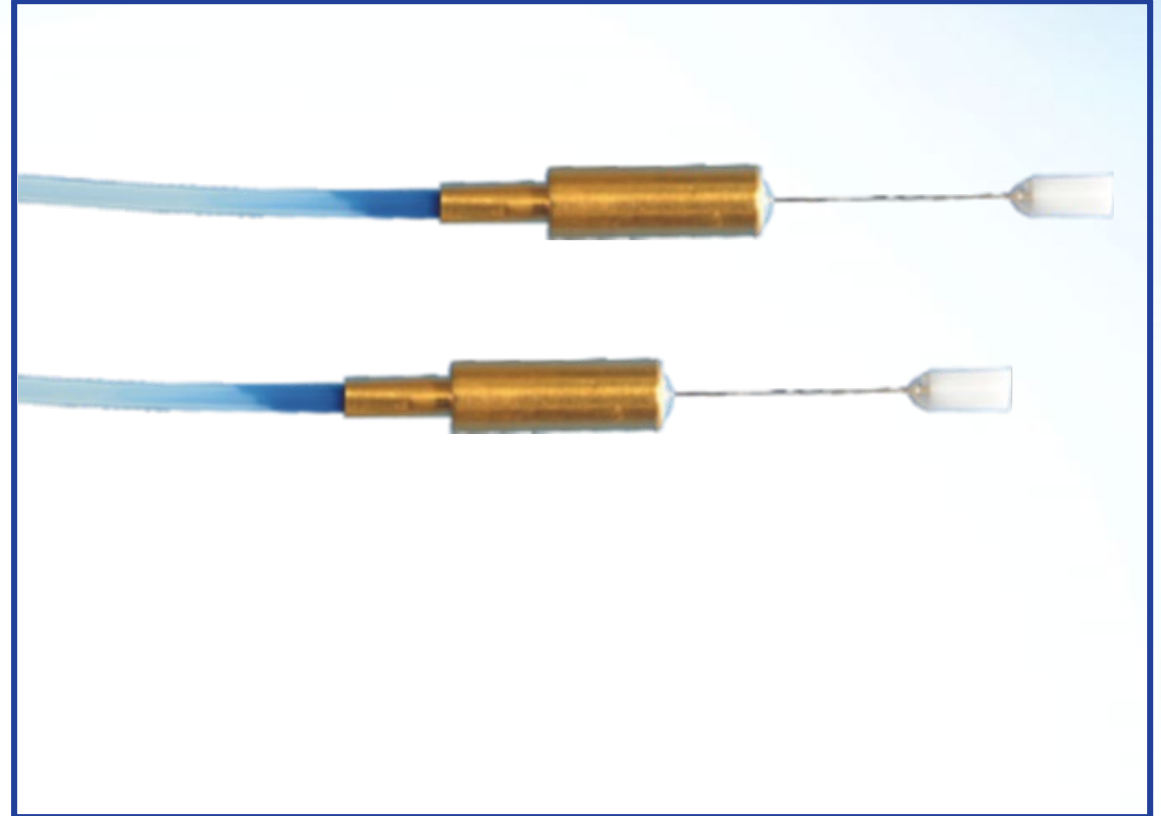
**DTS0145 – High Power Collimators and Focusers – Pigtail Style**



# Hermetically Sealable Patchcords with Metal Solder

## DTS0036: Hermetically Sealable Patchcords with Metal Solder

- Meets Telcordia Specifications
- SMF, MMF & PMF Versions
- Fibers can be finished with ferrules, laser cleaved ends or tapered fiber tips.
- Customer Specific OEM Designs



DTS0036 – Hermetically Sealable Patchcords with Metal Solder

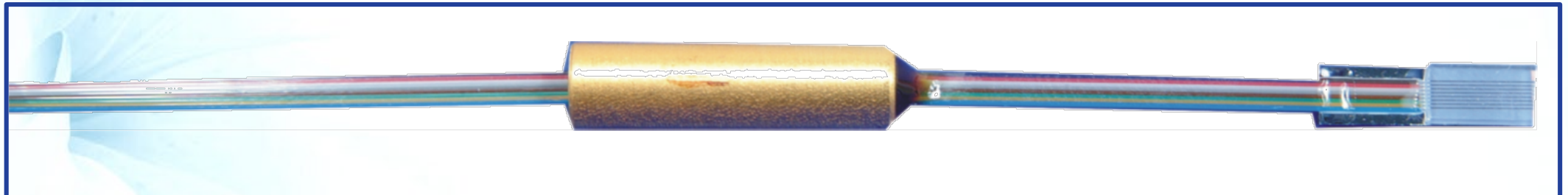




# Hermetically Sealable Patchcords with Glass Solder

## DTS0035: Hermetically Sealable Patchcords with Glass Solder

- No Metalization Required, For Lower Costs
- Meets Telcordia Specifications
- SMF, MMF & PMF
- Customer Specific OEM Designs



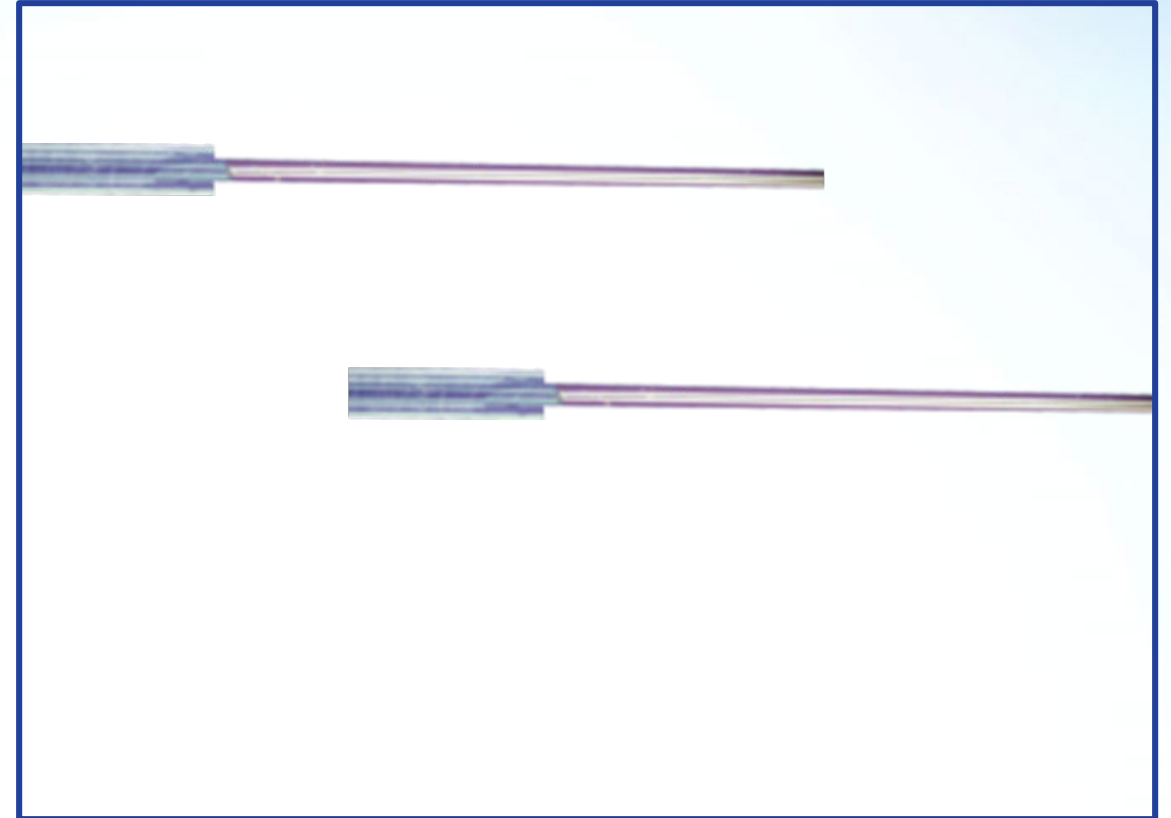
DTS0035 – Hermetically Sealable Patchcords with Glass Solder



# Metalized Fibers

## DTS0053: Metalized Fibers

- SMF, MMF & PMF Versions
- Ideal for Hermetic Component Packaging
- Cleaved Fiber Endfaces, Masked Regions
- Midspan Metalization



DTS0053 – Metalized Fibers

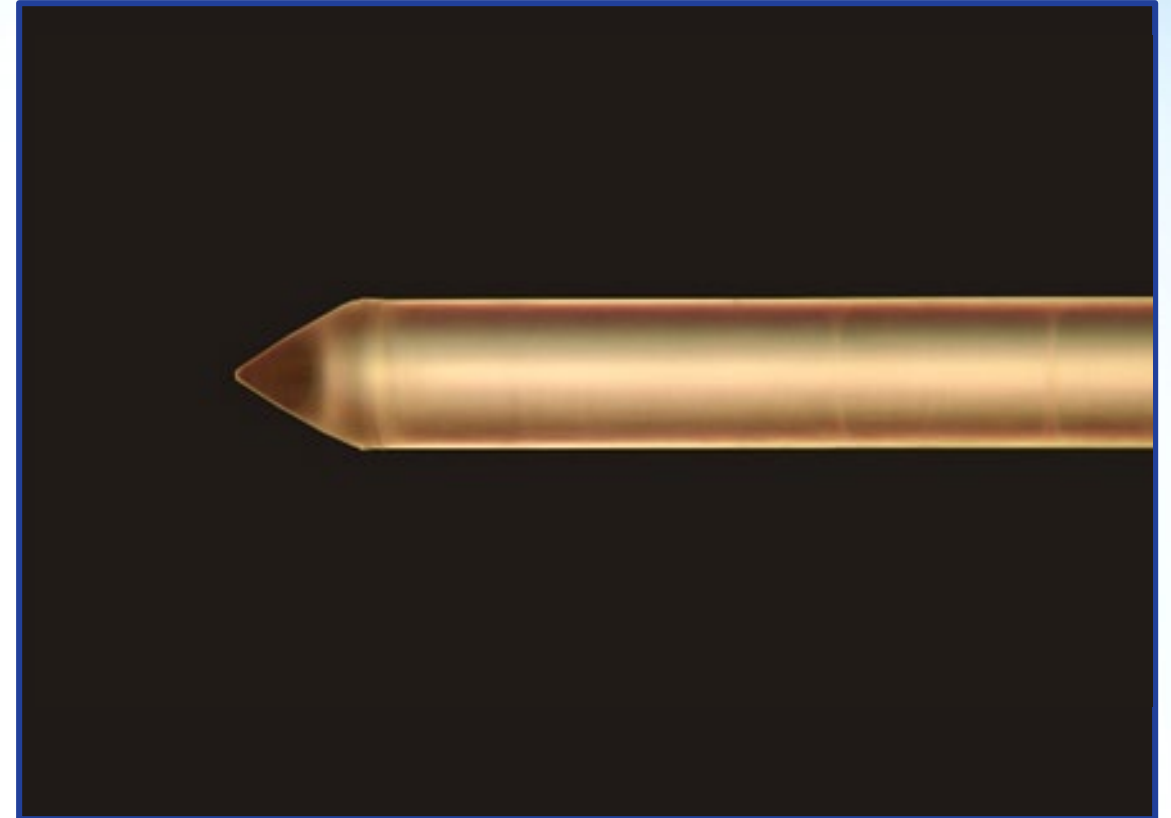




# Tapered/Lensed Fibers

## DTS0080: Tapered/Lensed Fibers

- As Small As 2.5 Micron Spot Sizes
- Circular And Oval Spot Profiles
- Custom OEM Designs, Metalized Versions



DTS0080 – Tapered/Lensed Fibers

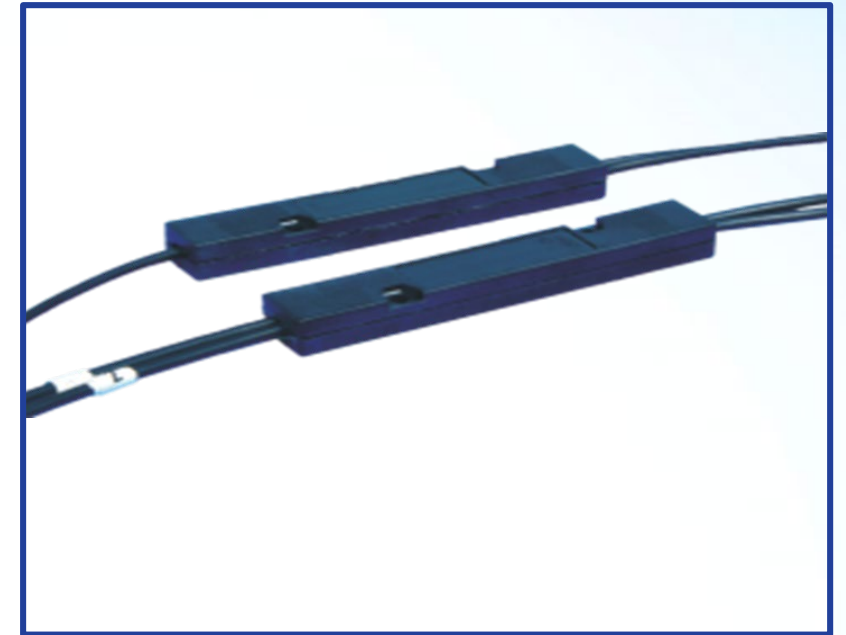


# Fused Fiber Optic Couplers

## DTS0033: Fused Couplers – Fiber Optic

FUSED-12-780-5/125-50/50-3A3A3A-3A-0.5-PM

- 1x2, 2x2 & 1xN Couplers available
- 0.5 dB Typical Excess Losses, SMF, PMF & MMF
- 488 nm to 2050 nm Wavelengths



DTS0033 – Fused Couplers – Fiber Optic

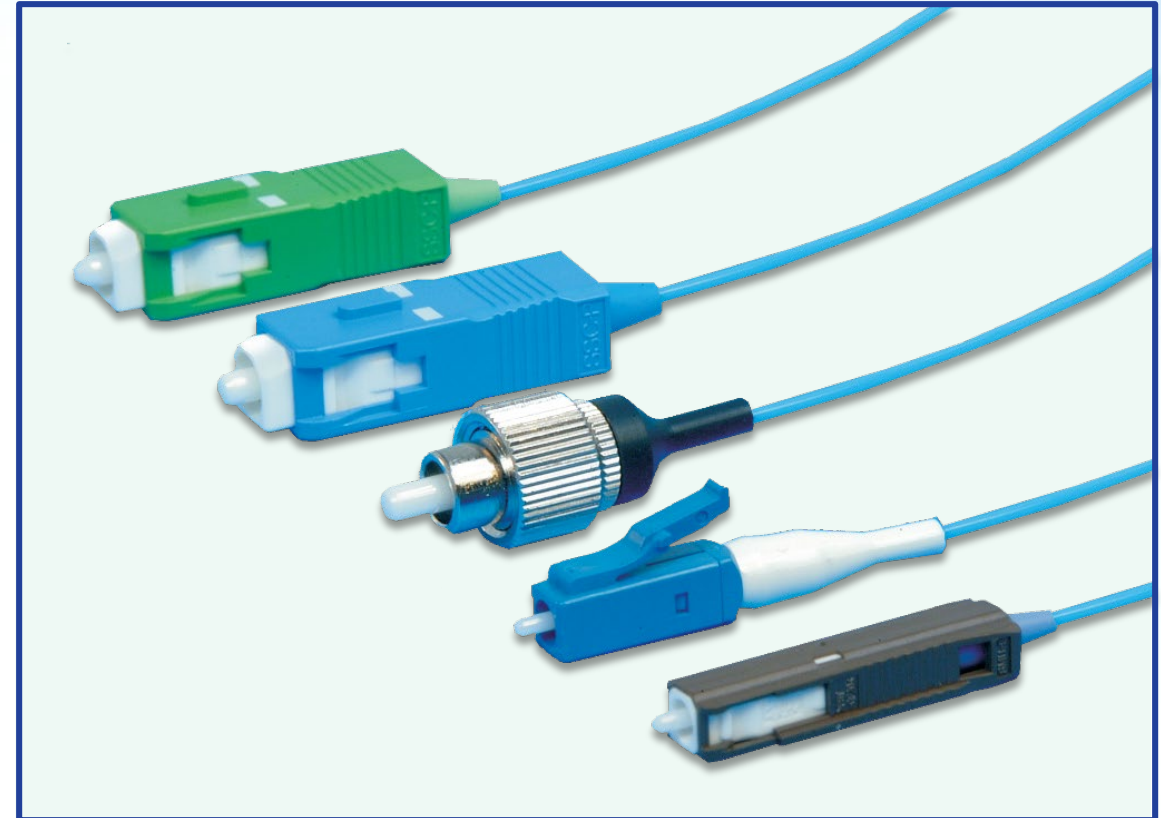




# Polarization Maintaining Patchcords

## DTS0071: Polarization Maintaining Patchcords

- Up to 30 dB Polarization Extinction Ratios
- $< 0.3$  dB Insertion Loss, up to 60 dB Backreflection
- Super, Ultra, Angled FC/PC, SC, AT&T – ST, LC, MU, E2000, DMI and Custom Connectors
- Multi-Fiber PM Patchcords Based on MT Connector Design



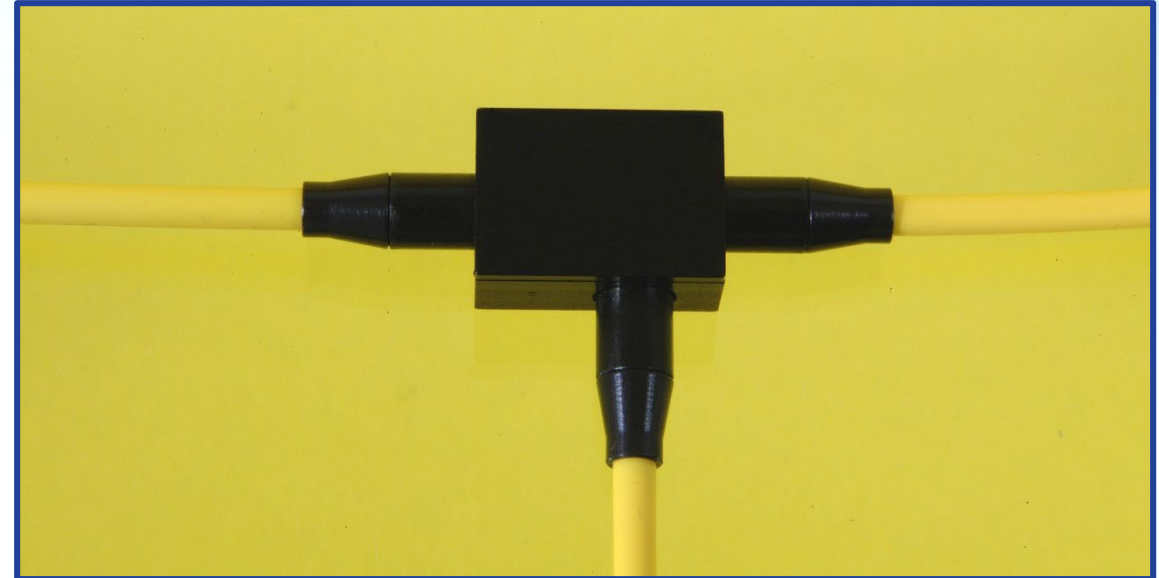
DTS0071 – Polarization Maintaining Patchcords



# Polarization Maintaining Splitters

## DTS0095: Beam Splitters/Combiners

- Splits Polarized Light into 2 PM or SM Fibers
- 0.6 dB IL, -40, -50, -60 dB Backreflection
- 1x2 & 2x2 Versions Available
- 350 – 2050 nm Versions



DTS0095 – Beam Splitters/Combiners

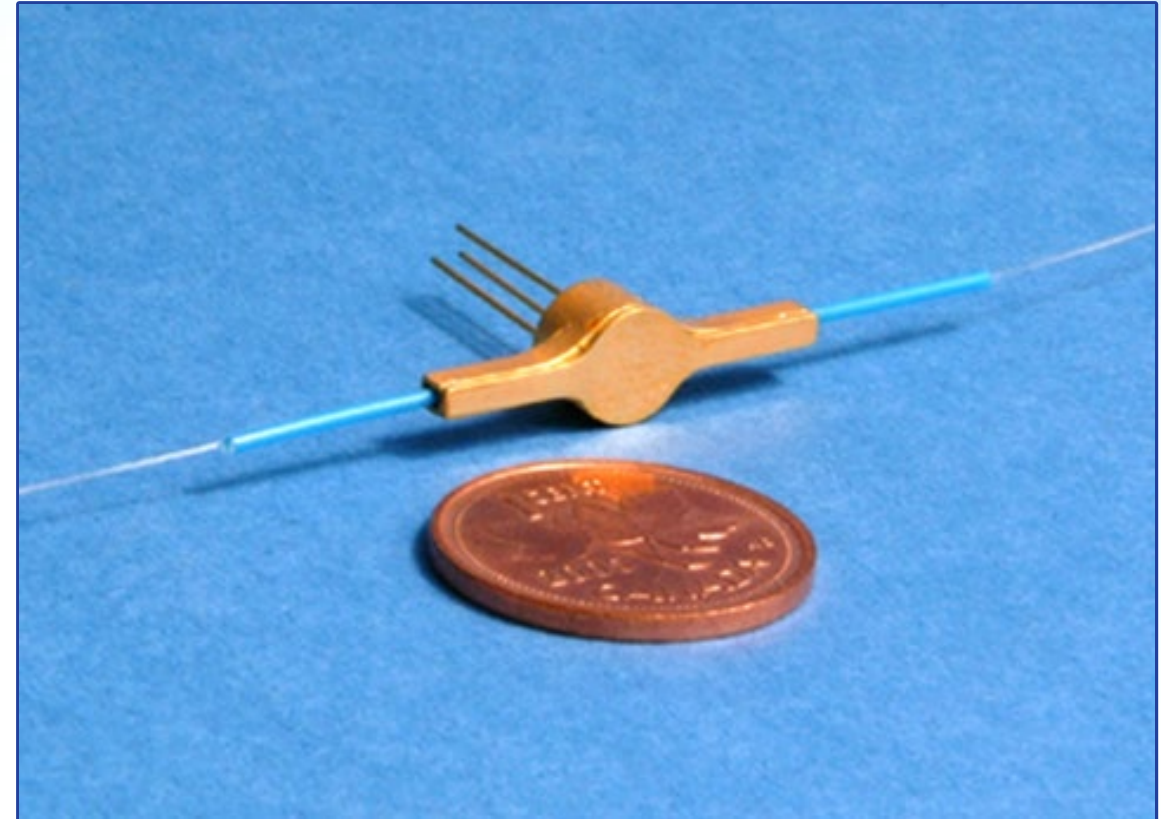




# PM Fiber Power Monitors/Tap Couplers

## DTS0042: Directional Fiber Optic Power Monitors (Taps/Photodiodes)

- Wide Wavelength Range, up to 2 Watts Power Handling
- Single Channel
- Digital Display Version Used to Monitor and Measure Power Simultaneously
- Allows optical monitoring without disconnecting
- Can be locally or remotely accessed
- Ideal for FTTH networks



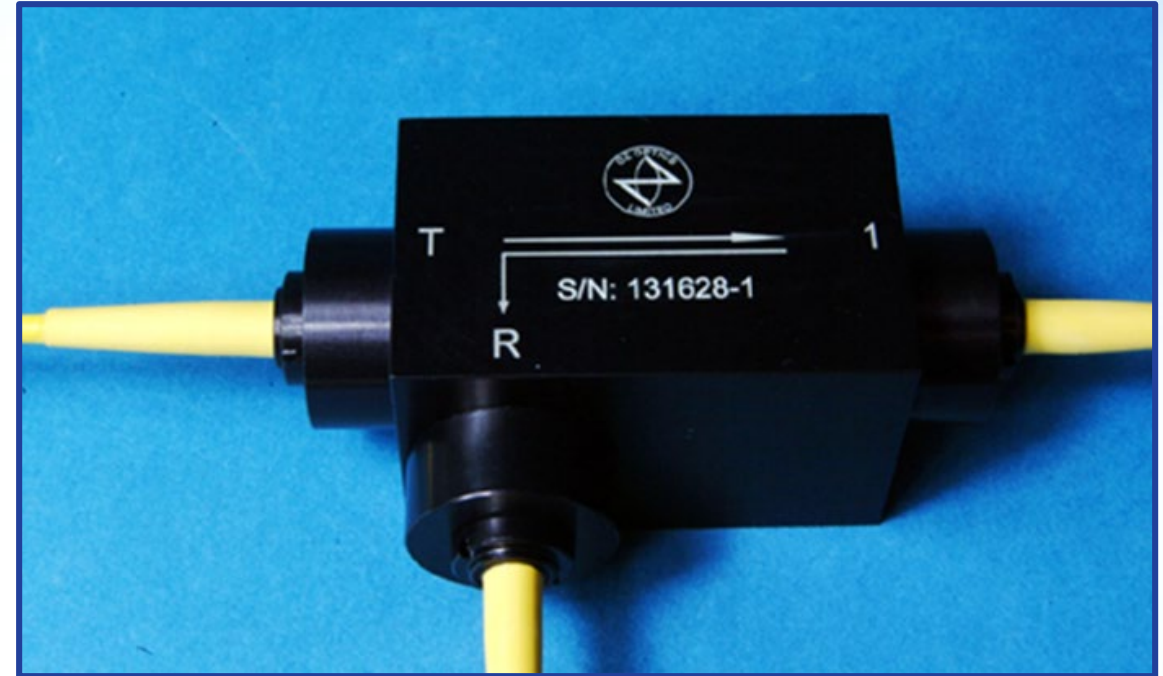
DTS0042 – Directional Fiber Optic Power Monitors (Taps/Photodiodes)



# PM Fiber Optic Circulators

## DTS0070: Fiber Optic Circulators

- 0.7 dB Typical Insertion Loss
- 532 – 1550 nm Wavelength Versions
- Up to 30 dB Extinction Ratios



DTS0070 – Fiber Optic Circulators



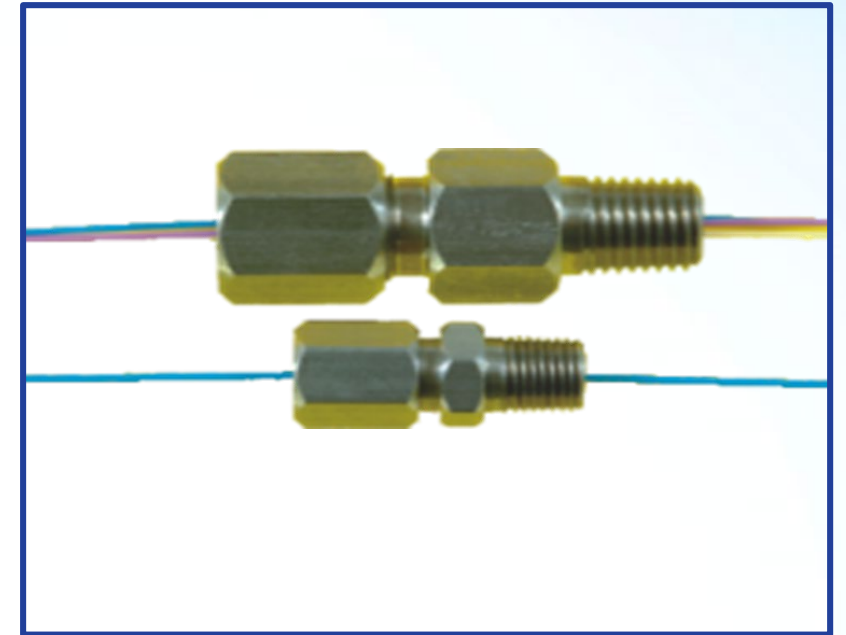


# Penetrating Vacuum Feedthroughs

## DTS0023: Vacuum Pressure Feedthrough – Fiber Optic

VAC-01-V-SMJ-3A3A-1300/1550-9/125-1-1.5

- No Intrinsic Insertion Loss or Back Reflection
- Low Cost, Rugged and Compact Size
- Gas Leak Rate  $10^{-9}$  scc/sec



DTS0023 – Vacuum Pressure Feedthrough – Fiber Optic

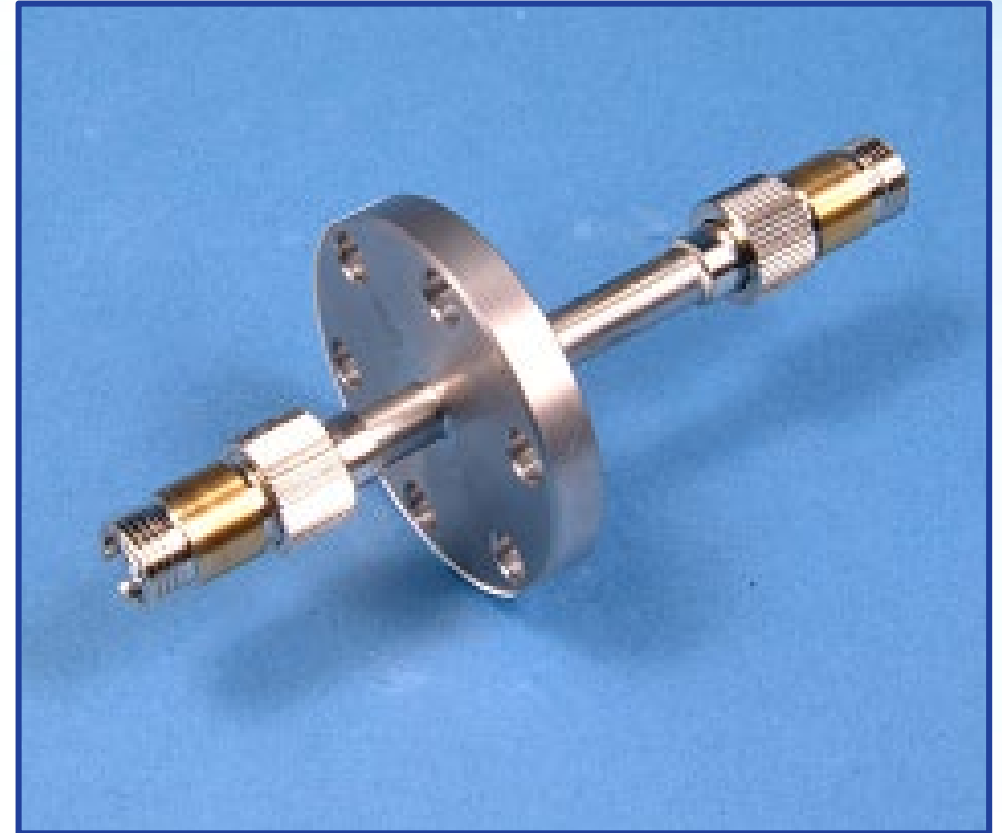


# Vacuum Feedthroughs – Receptacle Style

**DTS0023: Vacuum Pressure Feedthrough – Fiber Optic**

VAC-3S3S-IRVIS-105/125-M

- **Single Mode, Polarization Maintaining and Multimode Versions**
- **Easy to Install & Use**
- **Rugged and Compact Size**
- **Gas leak rate  $10^{-6}$  scc/sec**



**DTS0023 – Vacuum Pressure Feedthrough – Fiber Optic**





# High Power Patchcords & Connectors

## DTS0037: High Power / High Temperature Fiber Optic Patchcords

- Able to Transmit Over 100 W of Optical Power
- Operating Wavelengths from 200 nm to 2000 nm
- PMF, SMF, and MMF High Power AR Coatings



DTS0037 - High Power / High Temperature Fiber Optic Patchcords



# High Power Fiber Patchcords

**DTS0037: High Power / High Temperature Fiber Optic Patchcords**

## Versions Offered:

- **HP:** High power polish, air gap connector
- **HPM:** High power mechanical cleave, air gap connector
- **HPC:** High power coreless fiber end cap, air gap connector
- **HPL:** High power laser treated end face, air gap connector



**DTS0037 - High Power / High Temperature Fiber Optic Patchcords**

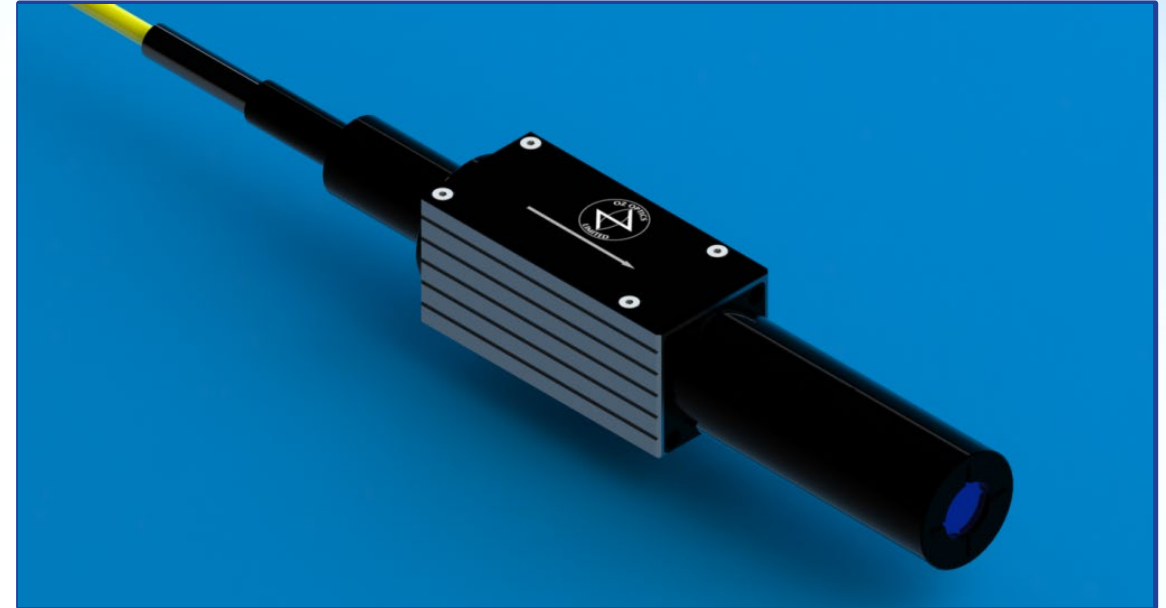




# High Power Fiber Pigtailed Isolators

## DTS0123: High Power Free Space and Fiber Pigtailed Isolators

- Low Insertion Loss, Up to 100 Watts
- Available from 400 – 2000 nm
- Polarization Independent, High Isolation



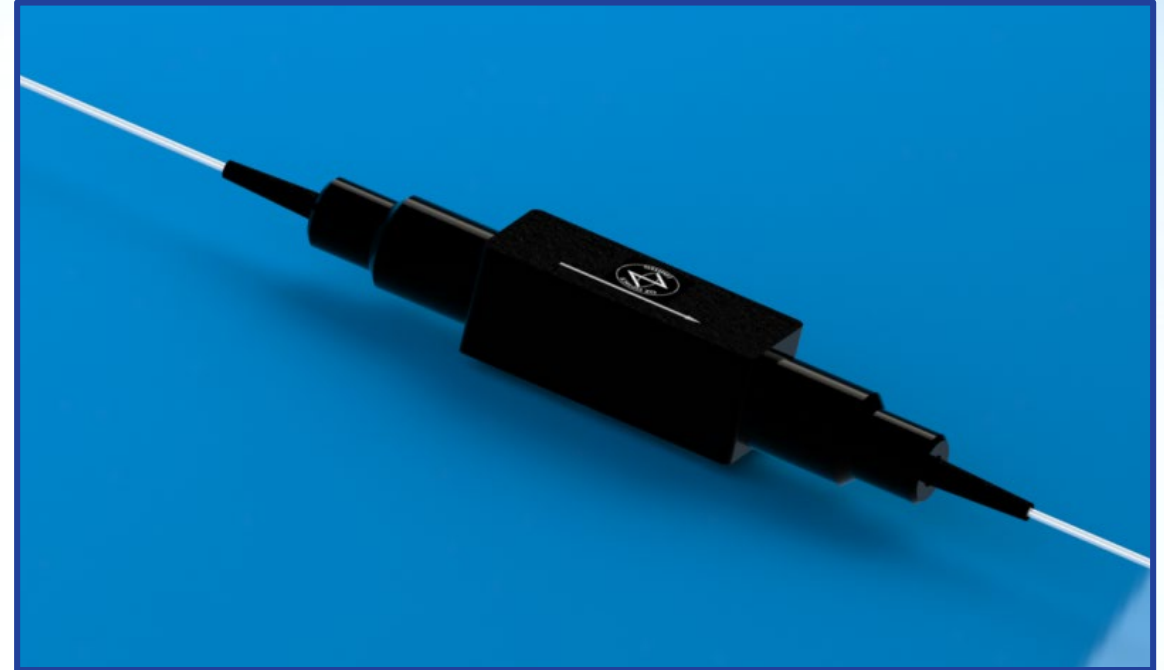
DTS0123 - High Power Free Space and Fiber Pigtailed Isolators



# High Power Fiber Pigtailed Isolators

## DTS0123: High Power Free Space and Fiber Pigtailed Isolators

- Multiple Watts CW Power Handling
- Shutter Speed of  $< 5$  msec
- Temperature, Contact or Proximity Sensors for Safety Interlock
- SMA 905 or FC Receptacles



DTS0123 - High Power Free Space and Fiber Pigtailed Isolators





# Digital Variable Attenuators

## DTS0007: Digital Variable Attenuators

- 0.01 dB Resolution, Fast Response Time
- 0.6 dB to 60 dB Attenuation Range
- Available from 350 nm – 2000 nm wavelengths for SM, PM and MM fibers.
- USB Interface
- Up to four calibrated wavelengths



DTS0007 - Digital Variable Attenuators



# Multichannel Electrically Controlled Variable Attenuator (Rack Mount)

## DTS0153: Multichannel Electrically Controlled Variable Attenuator (Rack Mount)

- Your choice of up to 32 individual attenuators per unit
- USB Interface
- Optional integrated power monitoring for precise output power control
- 0.6 dB to 60 dB Attenuation Range
- Available from 350 nm – 2000 nm wavelengths for SM, PM and MM fibers.
- Calibrated for dual wavelengths
- Maintains Attenuation with Power Off



**DTS0153 - Multichannel Electrically Controlled Variable Attenuator (Rack Mount)**





# Benchtop Digital Multichannel Attenuator

## DTS0154: Benchtop Digital Multichannel Attenuator

- Your choice of up to 4 individual types of attenuators per unit
- USB Interface
- 0.6 dB to 60 dB Attenuation Range
- Can be calibrated for up to four individual wavelengths
- Optional integrated power monitoring for precise output power control
- Available from 350 nm – 2000 nm wavelengths for SM, PM and MM fibers
- Maintains Attenuation with Power Off



DTS0154 - Benchtop Digital Multichannel Attenuator



MCDD-1000 Front View



# Fiber Modules/Systems/Routings

- **Advanced fusion splicers for multimode, singlemode, polarization maintaining and specialty fibers.**
- **3D CAD capabilities for enclosure and mounting hardware design.**
- **Extensive inventory of test and measurement equipment, including broadband and tunable laser sources, optical power meters, return loss meters, optical spectrum analyzers, polarization meters and controllers, etc.**
- **Skilled technicians well versed in fiber routing and layout.**

# Thank You for Choosing OZ Optics

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