Company Profile

- Company founded in 1985;
- Corporate headquarters located in Ottawa, Canada;
- Manufacturing facility in Ottawa/Canada, Izmir/Turkey, and Jiaxing/China
- Seven Product Groups: Laser-to-Fiber Delivery Systems, High Power Fiber Optic Components, Polarization Maintaining Products, Attenuators, Opto-Electronic Packaging, Test Equipment, Fiber Optic Sensor Systems
- Sales offices in California and Jiaxing (Near Shanghai)
Company Profile

Three Product Groups:

- Fiber Optic Components 70%
- Optical Test Equipment 25%
- Fiber Optic Sensors 5%

- Over 1,000 products
- Leading Edge R&D
Product Innovation

Fiber Optic Distributed Strain and Temperature Sensors

- BOTDA only, BOTDR only, or both BOTDA and BOTDR modules in one unit
- Fast, dynamic measurement of strain and/or temperature up to 100 km sensing range
- Simultaneous measurement of strain and temperature
- Uses standard telecommunication fiber to minimize costs

OZ Optics

Global Leader in Fiber Optic Products since 1965

Fiber Optic Fault Finder for Optical Network Safeguard™

- Monitors and reports network health status in real time, 24 hours/day, 365 days/year
- Reduces revenue loss due to fiber plant outages
- Reports fault location, giving GPS coordinates with time stamp
- Lowers network operation and maintenance expenses
- User friendly interface via various wireless interfaces (WiFi, GPRS, GSM, or RS-232)
- Early alert and outage reports via cellular phone, email, IM, SMS, or text messaging

OZ Guard Automated Test Solution
Remote Monitoring of WDM Network

Remotely Accessible Wireless Fault Finders
GPS Locator

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Over 330 employees worldwide:

- 200 in Ottawa and US
- 50 in Turkey
- 80 in China
**Company Profile**

**OZ Optics is lead by an experienced team:**

- Ömür Sezerman, Chairman, President & CEO  
  - Founder and CEO since inception (30 years)
- Zahide Sezerman, VP of Human Resources  
  - With OZ Optics since inception (30 years)
- Garland Best, VP of Components Division  
  - 23 years at OZ Optics
- Gordon Youle, VP of Test Equipment Division  
  - 16 years at OZ Optics
- Sarah Miller, Controller  
  - 2 years at OZ Optics
- Metin Sezerman, General Manager of OZ Turkey  
  - 14 years at OZ Optics
- Bing Li, General Manager of OZ Optics China  
  - 11 years at OZ Optics
Company Profile

- ISO9001:2008 certified
- Broad patent portfolio
- Advanced proprietary processing technology
Company Profile

- Using our strong direct sales and distributors, we address the following markets:
OZ Optics has resellers and distributors in over 30 Countries & Regions and over 10,000 customers globally:
In-House Production Capabilities

- Experienced and well-trained staff in following fields:
  - optical, mechanical, electronics & software

CNC Machine Shop  AR Coating  Femtosecond Laser Lab

Clean Room  Laser Conditioning/Cleaving
Branch Network

OZ OPTICS CANADA (Headquarters)

OZ OPTICS TR (Turkey Factory)

OZ OPTICS CHINA (Jiaxing Factory)
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 Facility
- R&D, Product Design, Engineering, Final Assembly & QA
Facility – Ottawa Headquarters

Production Area

Training Centre Building

Meeting Room

Swimming Pool
OZ Optics – Turkey Factory

• Since 2000
• 33,000 sq ft. Manufacturing Facility
• Located in Free Trade Zone
• Low Tax Rates
• Sub Component Parts Manufacturing
OZ Optics – China Factory

- Operational since 2009
- 2000 sq meters
- Cost Effective Manufacturing
- High Quality Labor
- Low Cost Procurement
- Supply Chain Integration
- Subcomponent Part Manufacturing
OZ China Facility

Jiaxing, China

- Located in Economic Development Zone
- 500 sq meters – Admin, Sales and Marketing
- 1500 sq meters – Manufacturing Area
  - 100 sq meters – Class 10,000 Clean Room
  - 100 sq meters – ESD Working Area
Manufacturing Strategy

- **OZ Canada**
  - R&D Design Engineering

- **Sub-Components**

- **World-Wide Sourcing**

- **Made-in China**

- **Made-in Turkey**

- **OZ CND Qualification**

- **Customer Qualification**

- **Final Assembly Quality Assurance**

- **Customer**

Industry Standards

All products manufactured are in strict accordance with international industry standards:

- Telecordia Compliance
- CE Compliance
- RoHS Compliance
- ISO 9001:2008 Certified (China, Turkey and Canada)
- Controlled Goods Directorate Registered
Core Competencies

- Pioneer in Polarization Maintaining (PM) Components
- Leader in Wavelength Flattened, High Power & Low PDL Components
- Leader in High Power Fiber Optic Delivery Systems
- Custom Test Equipment, Including Polarization Test Equipment and FTTH Equipment
- Widest Range in Attenuator Product Offering
- Fiber Optic Distributed Strain and Temperature Sensors
- Complete product line for OCT applications & 2 Micron
Leading Technology

- **High Power Isolators**
  - power handling > 50W
  - low loss, low cost
  - turnkey solution

- **Pioneer in Polarization Maintaining (PM) Components**
  - wavelength flattened
  - high power & low PDL
  - PM test equipment

- **Fiber Optic Sensor**
  - fast and simultaneous measurement of strain & temp
  - large structure health monitoring

- **Leader in High Power**
  - Fiber Optic Delivery Systems
  - specializes in custom design
OUR VISION
• Be the preferred Supplier of choice
• Capture and expand market share
• 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
• Commitment
• 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 and continuous improvement
• Promote opportunities of professional development for all members of our Company through education, training and personal challenge

Ömür Sezerman
President
Competitive Advantage

Superior Technology
Innovative Engineering

Exceptional Quality & Service

Competitive Pricing

Extensive Experience
In Fiber Optics Manufacturing

Global Presence

Success
Fiber Optic Test Equipment

OZ Optics offers a wide range of standard test equipment, as well as a range of specialized equipment for polarization related measurements

Features:

• Many types of optical sources are offered
• Fixed and tunable filters are available
• A variety of types of optical power meters are available
• Instruments for measuring polarization are offered
• Fixed or Variable Delay Lines for Polarization Compensation are offered
Recent additions to the OZ line of Test and Measurement Equipment Includes:

• Benchtop Backreflection Meter for Visible and Near Infrared
• Non-Contact High Power Visible Fiber Optic Fault Finder
• Ultra Stable Narrow Line 1550nm Laser Sources
• Digital Attenuators Calibrated for S, C & L Bands (1470-1620nm)
• Optical Power Meters with Multi-Channel Smart Detectors
• Smart patchcords for in-line monitoring
• Optical Time Domain Reflectometers / Fault Finders
• OEM laser diode sources
Many types of interfaces to OZ Optics instruments are offered, including:

- **USB** - standard (for speed and ease of use)
- **RS-232** - standard on Legacy products
- **SPI** - for embedded systems
- **GPIB** - for multi-instrument environments
- **Wireless** - for remote access

Custom interfaces are also available.
Polarization Extinction Ratio Meters

- Measure up to 40dB Extinction Ratio
- 0.3 Degree Angle Resolution
- Up to 2 Watts with removable fix no filters
- Broadband wavelength: 400-2050 nm
- RS-232 or USB interfaces available
Highly Stable Polarized Sources

- As Good as 40dB Extinction Ratio
- Pigtail & Receptacle Versions
- 375 nm to 2050 nm Wavelengths (no isolator for <600 nm)
Fiber Optic Polarized Sources

- As Good as 40dB Extinction Ratio
- Pigtail & Receptacle Versions
- 635nm to 2050 nm Wavelengths
Polarization Measurement System for V-Groove PM Fiber Assemblies

- Automatically Positions Fiber for Optimum Power
- Measures Angles to within 1°
- Measures up to 40dB ER
Polarization Measurement System for V-Groove PM Fiber Assemblies

- Automatically Positions Fiber for Optimum Power
- Measures Angles to within 1°
- Measures up to 40dB ER
Electrically Driven Polarization Controllers

- Continuous Control of Polarization
- No Insertion Losses or Return Losses
- > 100 Hz Response Speed
- Low activation loss
Differential Polarization Delay Lines

- Varies the Delay Between Two Polarizations
- $\pm 50\text{psec}$ Delay, $0.1\text{psec}$ Resolution
- $< 1.2\text{dB}$ Losses over the Delay Range
Polarization Dependent Loss Emulator

- 0.05dB To 10dB Polarization Dependent Loss
- Fixed Or Manually Variable PDL
- Broad Wavelength Range, Compact, And Low Cost
- PMD Free optional ( <0.1 ps)
- Very low wavelength dependence
Test Sensitivity to Backreflection
-1.5dB to -60dB Backreflection
RS-232 or USB Interfaces available
Highly Stable Laser Diode Source

• Stable to ±0.001dB @ 1550 nm with FC/APC
• 375nm to 2050 nm Wavelengths (no Isolator for <600 nm)
• Built in TE Cooler and Isolator
Stable to ±0.01dB, LED, LD Source @ 1550 nm with FC/APC

635nm to 2050nm Wavelengths

TE Cooled Versions Available with OZ-X000 and HIFOSS styles
Laser Diode/LED Source

- 1, 2, or 3 wavelengths in one unit
- Selectable power levels
- Continuous or modulated output
- MM, SM, or PM versions available
- Long battery life (more than 40 hours)
Laser Diode/LED Source

- Insertion loss measurement
- Fiber identification using internal modulation
- Splicing and connection testing
- FTTX/PON
- Quality assurance
Ultra Stable OEM Laser Diode Source

- Output powers to > 100 mW
- Power stability to better than 0.025 dB * depending on the wavelength
- Wavelength stability to < 0.1 nm
- Wavelengths from 375 to 2100 nm available
- External modulation to 50 MHz available
• Multimode, Singlemode, or PM fiber versions
• Free Space, Pigtail or receptacle styles
• Guaranteed lifetime 18 months or 5000 hours
• Power control via external analog voltage
• Custom versions available
Ultra Stable OEM Laser Diode Source

- Multimode, Singlemode, or PM fiber versions
- Free Space, Pigtail or receptacle styles
- Guaranteed lifetime 18 months or 5000 hours
- Power control via external analog voltage
- Custom versions available
Ultra Stable OEM Laser Diode Source

- Insertion loss or attenuation measurement
- High power or remote fiber delivery system
- Materials evaluation and testing
- Life science illumination
- Laser scanning microscopy
- Red/Green/Blue illumination systems
Ultra Stable Narrow Linewidth Source

- 1550nm narrow and single longitudinal Single mode, or PM fiber versions
- Selectable peak wavelength on C-band:ITU-T, DWDM
- Pigtailed or receptacle styles
- Low RIN and High SMSR
- Wavelength tunable and power modulation options are available
Digital Variable Attenuators

- 0.01dB Resolution, Fast Response Time
- 0.6dB to 60dB Attenuation Range
- Low PDL and High Power Capability
- RS-232 or USB Interface
- Wavelength Flatness in L, C, S Band
Variable Optical Delay Lines

- Motor Driven Version is Available
- Over 300ps Delay Range, < 1dB IL
- As Fine as 0.003ps Resolution
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- Over 300ps Delay Range, < 1dB IL
- As Fine as 0.003ps Resolution
Polarization Rotators / Analyzers

- Motor Driven Version is Available, 1dB IL
- Fiber to Fiber & Fiber to Photodiode Versions
- -40, -50, -60dB Backreflection Levels
Polarization Rotators / Analyzers

• Motor Driven Version is Available, 1dB IL
• Fiber to Fiber & Fiber to Photodiode Versions
• -40, -50, -60dB Backreflection Levels
Polarization Rotators / Analyzers

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- -40, -50, -60dB Backreflection Levels
Non Contact High Power Visible Fiber Optic Fault Finder

• High Visibility

• Higher Output up to 30mw

• Available with 520nm (green) or 635nm (red)

• Non-contact fiber and suitable with bare fiber adapter
Pen & Pocket Size Fault Locators

• Detect Breaks in Fiber Optic Cables
• Use as an End-To-End Fiber Identifier, 635nm
• Up to 30mW (Bench-top version)
• Up to 40 hours of battery operation
Pen & Pocket Size Fault Locators

- Detect Breaks in Fiber Optic Cables
- Use as an End-To-End Fiber Identifier, 635nm
- 0.5 mW for pen-sized version
Pen & Pocket Size Fault Locators

- Detect Breaks in Fiber Optic Cables
- Use as an End-To-End Fiber Identifier, 635nm
- Up to 30mW, Inexpensive
Digital Tunable Filters

- < 1.2nm Line Width, 0.1nm Resolution
- 50nm Tuning Range, Fast Response Time
- RS-232 or USB Interfaces available
Power Meter with Smart Detector Heads

- 85dB Dynamic Range, Fast Response Time
- 400 - 2050nm Wavelengths (not calibrated for > 1700nm), Built-in Attenuator
- Dual Detector Head Capability
- RS-232 or USB Interfaces available
Power Meter with Smart Detector Heads

• 85dB Dynamic Range, Fast Response Time
• 400 - 2050nm Wavelengths (not calibrated for > 1700nm), Built-in Attenuator
• Dual Detector Head Capability, USB or RS232 Port
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Power Meter with Smart Detector Heads

• 85dB Dynamic Range, Fast Response Time
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• Dual Detector Head Capability, USB or RS232 Port
Smart Detector Head Accessories

- Integrating spheres for high power measurements
- Optical filters
- Attenuators
- Lenses
- Custom designs
Backreflection Meter

- Sensitive to – 70dB
- 1300/1550nm Dual Wavelength Source
- Also Measures Insertion Losses
- RS-232 or USB Interfaces available
Benchtop Backreflection Meter for Visible and Near Infrared Wavelengths

- Wide wavelength offering for special applications: 635-1625nm
- Built in Broadband SLED for improved stability
- Sensitivity up to – 70dB
- Optional Insertion Loss measurement capability
- Touch screen display
Inline Optical Power Meter/Monitor

- Calibrated Power Meter
- Wide Wavelength Range, up to 2 Watts Power
- SM and PM Fiber Versions
Mini Power Meter

- Calibrated Power Meter
- Measures up to 10 mW
- Small size
- Low Cost
- Good for FTTH applications
Handheld Optical Power Meter

- Wide dynamic range
- Wide wavelength range
- Long battery life
- Interchangeable optical connectors
- RS-232, GPIB, and USB Interfaces available
Handheld Optical Power Meter

- Fiber optic assembly and testing
- Quality control
- Network installation
- Component and system troubleshooting
- Education
Smart Patchcord

- Low cost
- Miniature size
- Continuous fiber – no interruptions to optical path
- RS-232, USB, or wireless communications
- High power handling
Smart Patchcord

- Low insertion loss and return loss
- Specialty fiber and PM versions available
- High extinction ratios for PM versions
- Versions available for any wavelength
Smart Patchcord

- Monitoring in FTGX networks
- Channel balancing in WDM systems
- Dynamic amplifier gain monitoring
- Polarization stabilization
- PMD compensation
- Real-time in-line test and measurement
Smart Patchcord

- Monitoring in FTTX networks
Wireless Fiber™ (Smart Patchcord)

- Monitoring in FTTH networks
OZ- Guard™ Fiber Optic Fault Finder

- Provide continuous real-time fiber optic health monitoring for your network.
- Automatic determination of faults
- Transforms data into actionable information
- Sends time and location stamped alerts via email, SMS and IM
- Escalates alarms until problem solved
Polarization Maintaining Fiber Switch

- > 20 dB Polarization ER
- Latching and Non-Latching versions
- < 0.6 dB loss
- Now offering MEMS based 1 x N optical Switches (Non-Latching)
Fiber Length Meter

- Measures lengths from a few mm up to 500 m
- No dead zone. Can measure fibers less than 1 cm long
- Better than 2 mm resolution and <0.1 % measurement error
- Works with singlemode, multimode, polarization maintaining and specialty fibers
Polarization Dependant Loss Test Sets

- Broadband & Wavelength Sweep Capability
- Insensitive to Input Power Drift
- Fast Measurements
- 0.001dB Resolution
Polarization Dependant Loss Test Sets

- Broadband & Wavelength Sweep Capability
- Insensitive to Input Power Drift
- Fast Measurements
- 0.001dB Resolution
Environmental Test Set

- Long Duration Testing for Reliability Studies
- Multiple Wavelength Configurations
- Insertion Loss
- Optional ORL or PDL Measurements
OZ Optics welcomes the opportunity to provide custom designs. Our optical and electronics expertise can solve tough test and measurement problems.

Custom software for specialized monitoring and control applications can also be provided.
Your solution provider for existing and next generation fiber optic components and test equipment

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Thank You for Choosing OZ!