Fiber Optic Components for Optoelectronic Packaging

June 2018
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 Canada, USA, Europe, Turkey, and China
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
OZ Optics Products

Global Leader in Fiber Optic Products since 1985

Polarization Maintaining Fiber Optic Components

Patent Numbers: USA 7058275, 705931, 7295731, China 1072073

- Polarization Maintaining Connectors / Patchcords
- Polarization Maintaining and Polarizing Splitters / Combiners / Fused Couplers / Switches
- All Fiber Manual and Electrically Driven Polarization Controllers / Scramblers
- PM Fiber Directional Taps / Power Monitors
- Manual / Electrically Controlled PM Fiber Pigtailed Variable Attenuators
- Fiber Pigtailed Polarizers
- PLC Splitters
- PM Fiber Pigtailed Circulators

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High Power Fiber Optic Components

Patent Numbers: Canada 2494163, USA 7058275, 705931, 7295731, China 1072073

- High Power Laser to Fiber Connectors / Couplers / Collimators / Focusers
- High Power Taps / Power Monitors
- High Power Mode Field Adapters
- High Power Isolators
- CO2, Oxy-fuel Laser Components
- High Power Sockets / WDM's
- Control, Trigger, Switch, Sensors

OZ Optics Ltd.
Headquarters, Canada
Tel: +1-800-346-5475
Fax: +1-866-346-5476
sales@ozoptics.com

OZ Optics USA
California Division
Tel: +1-910-312-1000
Fax: +1-910-770-1216
sales@ozoptics.com

OZ Optics China Ltd.
Tel: +86-573-8323-1078
Fax: +86-573-8323-1079
sales@ozoptics.com.cn

OZ Optics Turkey
Tel: +90-312-232-1232
Fax: +90-312-232-1498
yazarman@ozoptics.com.tr

www.ozoptics.com
OZ Optics Products

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Fiber Optic Attenuators for SM, PM, and MM Fibers

- Digital Variable Attenuators
- Electrically Controlled Variable Attenuators
- MEMS Variable Attenuators
- SM / PM / MM Fiber Pigtailed Inline Variable Attenuators
- Single/Multi Channel Miniature Variable Attenuators
- Reflective Style Variable Attenuators
- Air Gap Variable Attenuators
- Plug Type Fixed Attenuators
- Attenuating Fiber Patchcords

Laser & Laser Diode to Fiber Delivery Systems

- Laser to Fiber Couplers
- Bare Fiber Adapters with Magnetic Clips
- Pigtail/Receptacle Style High/Low Power COLIMATORS/Focusers
- High/Low Power Connectors
- WDM/RGB Combiners
- OCM Modules and 2 micron Components
- OAM Laser Diode to Fiber Couplers
- Turnkey Ultra Stable Laser Modules

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California Division
Tel.: +1-800-361-5415
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ysaemian@ozoptics.com

OZ Optics China Ltd.
Tel.: +86-755-334-3308
Fax: +86-755-334-3390
sales@ozoptics.com.cn

OZ Optics Turkey
Tel.: +90-212-352-1632
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Company Profile

Over 420 employees worldwide

- 240 in Ottawa and US
- 70 in Turkey
- 110 in China
OZ Optics is lead by an experienced team:

- Ömür Sezerman, Chairman, President & CEO
  - Founder and CEO since inception (33 years)
- Zahide Sezerman, VP of Human Resources
  - With OZ Optics since inception (33 years)
- Garland Best, VP of Components Division
  - 26 years at OZ Optics
- Gordon Youle, VP of Test Equipment Division
  - 19 years at OZ Optics
- Martin Powell, Operation Manager
  - 14 years at OZ Optics
- Sarah Miller, Controller
  - 8 years at OZ Optics
- Metin Sezerman, General Manager of OZ Turkey
  - 17 years at OZ Optics
- Bing Li, General Manager of OZ Optics China
  - 14 years at OZ Optics
 Company Profile

- ISO 9001:2015 certified
- Broad patent portfolio
- Advanced proprietary processing technology
Company Profile

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

- OZ Optics has resellers and distributors in over 30 Countries & Regions and over 10,000 customers globally:

- Australia
- Austria
- Belgium
- Brazil
- Canada
- China
- Czech Rep.
- Denmark
- France
- Germany
- Greece
- Hong Kong
- India
- Ireland
- Israel
- Italy
- Japan
- Netherlands
- Luxembourg
- Norway
- Poland
- Portugal
- Singapore
- South Korea
- Spain
- Switzerland
- Sweden
- Taiwan
- Thailand
- Turkey
- United Kingdom
- United States
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
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

- Operational since 2000
- 33,000 sq ft. Manufacturing Facility
- Located in Free Trade Zone
- Low Tax Rates
- Sub Component Parts Manufacturing
- Cost Effective Manufacturing
- High Quality Labor
OZ Optics China

- Operational since 2009
- Wholly Foreign Owned Enterprise
- Subcomponent Parts Manufacturing
- Cost Effective Manufacturing
- High Quality Labor
- Extensive Training (3-6 months in OZ Canada)
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
- Made-in China
  - OZ CND Qualification
  - Customer Qualification
  - World-Wide Sourcing
  - 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:

- Qualified for F35 JSF Program
- Telecordia Compliance
- CE Compliance
- RoHS Compliance
- ISO 9001:2015 Certified (Canada, China and Turkey)
- 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

- **Leader in High Power Fiber Optic Delivery Systems**
  - specializes in custom design

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

- Silicon V-Groove Substrates
- V-Groove Assemblies
- Metalized Fiber
- Hermetically Sealable Patchcords with Metal Solder
- Glass Solder Preforms
- Hermetically Sealable Patchcords with Glass Solder
- Inline Optical Taps and Monitors
- Soldering Stations and Polarization Test Equipment
- Tapered / Lensed Fibers
- Pigtail Style Fiber Collimators / Focusers
- Polarization Maintaining Patchcords and Connectors
V-Groove Substrates

- Up to 48 Fiber Substrates
- Better than 0.5 Micron Accuracy
- Use with Either UV or Thermal Epoxies
Fiber Pigtailed V-Groove Arrays

- Up to 48 Fibers in a Single Array
- 127, 250, & 500 Micron Spacings
- SMF, MMF & PMF
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Metalized Fibers

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

- Metalized Ribbon Fibers
- Midspan and Endpoint Metalization
- Cleaved Fiber Endfaces, Masked Regions
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
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Glass Solder Preforms

• Solders Glass Directly to Metal
• Ideal for Hermetic Sealing, Device Packaging
• Circular & Oval Preform Shapes
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- Customer Specific OEM Designs
Inline Optical Taps and Monitors

- No Interruptions to the Optical Path
- Can be Integrated into Assemblies and Packages
- Low Insertion Losses, Return Losses and PDL
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- No Interruptions to the Optical Path
- Can be Integrated into Assemblies and Packages
- Low Insertion Losses, Return Losses and PDL
Tapered/Lensed Fibers

• As Small As 2.5 Micron Spot Sizes
• Circular And Oval Spot Profiles
• Custom OEM Designs, Metalized Versions
Pigtail Style Fiber Collimators/Focusers

• > 2 Micron Spot Sizes, Up to 5W Power
• Up to -60dB Backreflection SMF, PMF & MMF
• 1.6mm, 2.5mm, 4mm & 8mm OD Housing
Precision Fiber Collimator/Focuser Arrays

• Generate a Precise Array of Collimated Beams or Focused Spots
• High Density, Small Footprint
• Single Mode and PM Fiber Versions Available
Your solution provider for existing and next generation fiber optic components and test equipment

Please Contact Our Sales Dept:
Tel: 613-831-0981 ext 3370
Toll Free: 1-800-361-5415
Email: sales@ozoptics.com.
Thank You for Choosing OZ!