Fiber Optic Components for Optoelectronic Packaging

OZ Optics Limited

June 2020
Corporate Background

- Founded in 1985;
- Corporate headquarter 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, Fiber Optic Test Equipments, and Fiber Optic Sensor Systems;
- Sales offices in Canada, USA, Europe, Turkey and China.
**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 to non-telecom sectors

**Our Core Value**
- 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 450 employees worldwide:

OZ Canada
250+ employees

OZ China
120+ employees

OZ Turkey
80+ employees
Company Profile

Advanced Proprietary Processing Technology

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 (35 years)
* Zahide Sezerman, VP of Human Resources
  * With OZ Optics since inception (35 years)
* Garland Best, VP of Components Division
  * 28 years at OZ Optics
* Gordon Youle, VP of Test Equipment Division
  * 21 years at OZ Optics
* Martin Powell, Operation Manager
  * 16 years at OZ Optics
* Metin Sezerman, General Manager of OZ Turkey
  * 19 years at OZ Optics
* Bing Li, General Manager of OZ Optics China
  * 16 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
- 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
- Now available: Bias Controllers, Spectrometers, Optical Noise Generators and Broadband Polarization-Entangled Photon Source
Leading Technology

Three Product Groups

Fiber Optic Components, 85%
Fiber Optic Sensor, 5%
Optical Test Equipments, 10%

Over 1,000 Products

Leading Edge R&D

shop.ozoptics.com
www.ozoptics.com
Leading Technology

Featured Products
Industry Standards

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

- Qualified for F35 JSF and F18 Program
- **Telecordia Compliance**
- **CE Compliance**
- **RoHS Compliance**
- REACH Compliance
- ISO 9001:2015 Certified (Canada, China and Turkey)
- Controlled Goods Directorate Registered
Marketing Strategy

Application Market:

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

**Application Market:**

**Revenue Allocation:**

- **Educational, 5%**
- **Industrial, 10%**
- **Telecom/Datacom, 40%**
- **Military & Homeland Security, 30%**
- **Energy, 5%**
- **Medical & Pharmaceutical, 10%**
Marketing Strategy

Global Sales Network

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

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

Manufacturing Strategy

Customer

✓ OZ CND Qualification
✓ Customer Qualification

Made in China

Worldwide Sourcing

Customer

Sub-Components

OZ Canada

✓ OZ CND Qualification

Made in Turkey

Customer

Sub-Components

R&D/Design/Engineering

Customer

Sub-Components

R&D/Design/Engineering

Made in China

Customer

OZ Canada

✓ Customer Qualification

Customer

Sub-Components

R&D/Design/Engineering

Customer
Marketing & Operation Strategy

Competitive Advantage

Superior Technology
Innovative Engineering

Exceptional Quality
And Service

Competitive Pricing

Extensive Experience
In Fiber Optics Manufacturing

Global Presence

Success
Branch Network

OZ OPTICS CANADA (Headquarters)

OZ OPTICS TR (Turkey 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 - Turkey Factory**

Izmir, Turkey

- Operational since 2000
- 33,000 sq ft. Manufacturing Facility
- Located in Free Trade Zone
- Low Tax Rates
- Sub Component Parts Manufacturing
- High Quality Labor
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 - Admin, 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
Fiber Optic Components for Optoelectronic Packaging

* 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 Spacing
- 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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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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- 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
Thank You for Choosing OZ Optics

Please Contact Our Sales Dept:

Tel: 613-831-0981 ext 3370
Toll Free: 1-800-361-5415
Email: sales@ozoptics.com.