

OZ Optics leverages fiber optic R&D into more than 20 years of successful productization

OZ Optics founder and CEO Ömür Sezerman capitalized on optics in Ottawa 105 years after Alexander Graham Bell decided that his wireless optical “photophone” was a better idea

Fast facts

Corporate profile

OZ Optics has attracted a broad range of customers in the telecommunications, cable television, medical, military, industrial, aerospace, oil and gas, power-line, petrochemical and educational sectors. OZ Optics was the first company in the world to introduce optical polarization-maintaining components and test equipment to the marketplace. It was also the first company to integrate wireless technology into its designs of remote fiber optic measurement systems and instruments.

Why Ottawa

OZ Optics has clearly benefited from its location in Ottawa’s talent-rich telecom heartland that embraces campuses for Cisco, Nortel, and RIM. It has also taken advantage of university research and partnerships across the city to produce a truly global company. The company’s head office is co-located with a manufacturing, research and development, and administration facility with approximately 100,000 square feet.

Business advantage

Today, OZ Optics is applying its expertise and patented technologies to enabling ‘smart structures’ with built-in next-generation sensors that automatically detect damage, leaks, or high temperatures in power-lines, pipelines, and even bricks and walls.

In 1880 Alexander Graham Bell developed an optical voice transmission system he called the photophone. The invention used free-space light to carry the human voice 200 meters. The changing intensity of light altered the current that passed through the telephone receiver, which then converted the light back into speech. Bell believed this invention was superior to the telephone he invented just four years earlier because it did not require wires to connect the transmitter and receiver. 105 years after the photophone, another entrepreneur, Ömür Sezerman, started OZ Optics Limited.



By 1985, the telecommunications industry was finally exploiting the potential of Bell's wireless discovery, and Sezerman started his Ottawa company to take advantage of global growth in fiber optics.

OZ Optics was the first company in the world to introduce optical polarization-maintaining components and test equipment to the fiber optic marketplace. It was also the first company to integrate wireless technology into its designs of remote fiber optic measurement systems and instruments.

OZ Optics has since attracted a broad range of customers in the telecommunications, cable television, medical, military, industrial, aerospace, oil and gas, power-line, petrochemical and educational sectors.

Along with a family of fiber lasers for EDFA amplifiers, telecom, and CATV applications, the company has also developed fiber lasers for cutting and marking applications. These are also suitable for tattoo removal, laser surgery or other medical applications.

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The oil and gas sector can use OZ Optics distributed sensors to detect leakages and cracks in oil rigs, while the engineering and construction sector can prevent bridge collapses becoming more prevalent as highway infrastructure ages in many countries.

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OZ Optics has sales offices in Florida, California, and China, and has established manufacturing facilities in Turkey. The company recently opened a design and manufacturing facility in Beijing. Its global footprint widens further via partnerships with distributors and resellers in 31 countries.



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The OZ Optics leadership team believes participating in local, national and international communities has allowed the company to prosper. Sezerman is a soccer enthusiast, and built the "OZ Dome" indoor soccer sports centre and attached restaurant, patio and bar for both the use of OZ Optics employees and community soccer clubs to help promote soccer and sports activities of all kinds in a year-round facility.

As past chair of the Canadian Photonics Consortium, Sezerman has also acted as the voice of Canadian Photonics. In that role he aggressively promoted the Photonics North trade show and conference, participated in policy setting National Round Table Discussions on photonics, and represented the industry in Arizona, China and Taiwan.

Business advantage

The applications served by the new generation OZ Optics distributed sensors has opened up markets unavailable to traditional sensors. It would require hundreds of thousands of traditional sensors to get information across a large building or structure, which isn't cost effective. OZ Optics distributed sensors offer complete coverage while also reducing installation costs. For instance, the oil and gas sector can use OZ Optics distributed sensors to detect leakages and cracks in oil rigs, while the engineering and construction sector can prevent bridge collapses becoming more prevalent as highway infrastructure ages in many countries.

Future growth plans

In addition to the company's new line of distributed sensors, OZ Optics continues its leadership role in polarization maintaining components and test equipment.

The company's growth strategy includes expanding its leading edge R&D program, leveraging patented technology and proprietary expertise, developing new customer relationships while growing existing relationships, increasing sales and marketing efforts, and expanding manufacturing capacity to improve operating efficiency.

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