AVERAGE WORK FORCE: PhDs – 7
Engineers & Scientists – 12
Technicians – 11
Others – 6

GROSS SALES: 1986 – $1.5M
1987 – $3.0M

PLANT SIZE: 14,000 Sq Ft

EQUIPMENT: Laser fabrication, and test facilities; optical, electronic, and mechanical assembly areas. Laser propagation laboratories. DEC & SUN computer systems for data acquisition and analysis and CAD systems for PC layouts.

EXPERIENCE: Optech Inc experience includes:

- Mobile atmospheric lidars for Ontario Hydro and the Canadian Atmospheric Environment Service.
- Development and operation of Coastal Mapping Airborne Laser Bathymeter for Canada Center for Remote Sensing and the Canadian Hydrographic Service.
- Development of Laser Bathymeter systems for US Defense Advanced Research Projects Agency (DARPA) and the US Army Corp of Engineers.
- Precision airborne Laser Terrain Profilometer for the Canadian Department of the Environment, Ice Reconnaissance Branch.
- Laser Cloud Mapper for the Canadian Department of National Defense.
- Two channel Raman lidar for water content measurements in a maritime atmosphere developed for Memorial University, St John's, Newfoundland.
- Airborne laser wave height analysis system for the Defense Research Establishment Pacific.
- Raman lidar for hydrocarbon gas detection for British Gas Corporation.
- Gallium arsenide laser rangefinders for high resolution distance measurements delivered to a number of commercial and defense projects.
- Precision Aerial Reconnaissance laser altimeter/profilometer for airborne surveys, developed for customers in Canada and the US.
- Military electro-optic studies and laboratory measurement programs for Defense Research Establishment Valcartier.
- Water depth studies using Airborne Laser Bathymeter for Swedish Department of Defense.
- Military Electro-Optics Systems manufactured.
- Lidar systems complete with mobile vans and data handling computers for boundary layer meteorological and pollution dispersion measurements.
- Software consulting.
- Manufactured products – Laser Rangefinders (Model 60 & 501), Terrain Profiling Systems (Model 501 & Profilometer 5000), Coastal Mapping Systems.

KEYWORDS: Altimeter; Atmospheric Optics; Bathymeter; Electro-Optics; Laser Altimeter; Laser Radar; Laser Rangefinders; Lidar Systems; Radar (Laser); Range Finder; Remote Sensing; Terrain Profiler.

REVISED: April 88

OPTO-ELECTRONICS Inc

ADDRESS: 2538 Speers Road, Units 8, 9, & 10
Oakville, Ontario, Canada
L6L 5K9

CONTACT: Dr B K Garside, President – (416) 827-6214

HISTORY: Opto-Electronics is a high technology company incorporated in late 1976 with a subsidiary in the US (775 Main St, Unit #202, Buffalo, NY 14202, Telephone 216-856-1322). The company was formed with the primary goal of carrying out research, development, manufacturing, and marketing of high technology electro-optical components, devices, and instruments.

CAPABILITY: Opto-Electronics fields of expertise lie in the areas of industrial control instrumentation, fiber optic systems, optical communications, electro-optics & instrumentation, fast optical sources & detectors, solid state electronics, laser devices, and sensors & transducers. Past year activities include new product development and manufacturing as well as research on special ultra-high speed photodetectors, ultra-high speed diode laser light sources, millimeter resolution optical time domain reflectors, and a line of industrial fiber-optical test and measurement instruments, controllers and sensors. Current research projects include ultra-fast photodetectors, ultra-fast laser diode sources, photon counting for fiber test instrumentation, passive waveguide splitters and combiners, high-speed optical switches, and fiber-based liquid sensors.

AVERAGE WORK FORCE: Scientists, Engs, & Techs – 16
Others – 8

GROSS SALES: 1986 – $1.45M
1987 – $1.60M

PLANT SIZE: 12,000 Sq Ft

EQUIPMENT: OEI's facilities include a machine shop, assembly room, dark room, & circuit etching, electronics test & optics test areas, stock room, and shipping & receiving rooms. Eight people are currently assigned to manufacturing and sales. Their R&D facility consists of lasers, optics, electronics & optics design, electronic assembly areas, materials processing rooms, areas of microscope & spectral analysis, vacuum work & measurement, and a high voltage shielded room. Also included are special rooms for furnace work, machining and modeling, and a library.

Major equipment includes high vacuum evaporator, electron microscope, cryogenic, electrical and optical facilities, spectrophotometer, ellipsometer, diffusion furnace, vacuum furnace, optical microscopes, multiple beam interferometer, electrometers, oscilloscopes, and other associated instruments.

EXPERIENCE: OEI's R&D contract experience has for the most part been with the Canadian Government, although they have recently carried out contractual work on liquid leak fiber optic sensors for NASA. Most products are exported. They have expressed interest in doing R&D contract business with the USAF – a significant amount of OEI's commercial business is with USAF prime contractors.

KEYWORDS: Detectors; Electro-Optics; Fast Optical Detection; Fast Optical Sources; Fiber Dispersion Measurement; Fiber Optic Instruments; IR Detectors; IR Sources; Industrial Control Instrumentation; Infrared Diode Lasers; Infrared Instrumentation; Instrumentation; Laser Diodes; Measurement Systems; Optical Communications; Optical Switches; Photodetectors; Sensors; Reflectometry (High Resolution).

REVISED: February 88

OPTOTEK Ltd

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