

Keywords: 4 = Chemistry; 7 = Electronics; 8 = Energy; 9 = Environment; 19 = Testing/Test Equipment; 20 = Miscellaneous; Environmental Sciences = 9; High Voltage Science = 8; High Voltage Engineering = 8; Power Systems = 8; Nuclear Waste Management = 4, 8, 9; Nuclear Engineering = 8; Pollution Control = 8, 9; Energy Conversion = 8; Engineering Sciences = 4, 8, 9, 20; Non-Destructive Testing = 19; Environmental Assessment = 8, 9; Instrumentation & Techniques = 4, 8, 9, 19, 20; Concrete Technology = 4, 19, 20; Geotechnical Engineering = 20; Alternate Fuels Technology = 4, 8; Biomass = 8; Materials Testing = 19; Failure Mechanics = 19, 20; Atmospheric Research = 9; Biological Research = 9; Combustion Research = 8, 9; Corrosion Science = 4, 8, 19; Electronics Research = 7, 8; Organic Materials Research = 4, 8, 9, 20.

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OPTECH Inc

Code: OPI

Address: 701 Petrolia Road
Downsview, Ontario, Canada M3J 2N6

Contact: Mr. S Sizgoric, General Mgr - (416) 661-5904

History: Incorporated in 1974, Optech Inc is Canadian owned. There is only one location at the above address.

Capability: Optech Inc has a broad capability in electro-optical systems with specialization in laser ranging systems. They have designed, developed and manufactured laser systems for atmospheric diagnostics (i.e., atmospheric lidars), water depth measurement, wave height analysis, terrain profiling and high resolution (0.1m) distance measurements. Custom fabrication and R&D capabilities. Primary capabilities are in research, development and systems engineering. Production to date has been limited to custom systems and small volume runs.

Average Work Force: PhDs - 5
Engs & Scs - 7
Techs - 5
Others - 3

Gross Sales: 1981 - \$0.75M
1982 - \$1.00M
1983 - \$1.2M (Projected)

Plant Size: 7,700 sq ft

Equipment: Laser fabrication, and test facilities; optical, electronic, and mechanical assembly areas. Laser propagation laboratories. PDP computer systems for data acquisition and analysis.

Experience: Mobile atmospheric lidars for Ontario Hydro and the Canadian Atmospheric Environment Service.

- Development and operation of Airborne Laser Bathymeter for Canada Center for Remote Sensing.
- Precision airborne Laser Surface Profilometer for the Canadian Department of the Environment, Ice Reconnaissance Branch.
- Laser Smoke 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 range finders for high resolution distance measurements delivered to a number of commercial customers.
- Precision 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.

Keywords: 1 = Aircraft; 8 = Energy; 9 = Environment; 10 = Image Processing & Optics; 11 = Lasers; 20 = Miscellaneous; Lidar = 8, 9, 11; Bathymeter = 1, 9, 11; Terrain Profiler = 1, 9, 11; Range Finder = 8, 9, 20; Electro-Optics = 10; Atmospheric Optics = 9, 10, 11; Laser Altimeter = 1, 11; Altimeter = 1, 11.

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OPTO-ELECTRONICS Inc

Code: OEI

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 no subsidiaries in the US. 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, high voltage pulse techniques, solid state electronics, laser devices, and sensors & transducers. Past year activities include new product development and manufacturing as well as contract research on special ultra-high speed photodetectors, ultra-high speed diode laser light sources, tunable infrared diode lasers, and a line of industrial electro-optical process monitors & controllers. The company has introduced an average of at least four products per year. Current research projects include ultra-fast photodetectors, ultra-fast laser diode sources, industrial monitors & controllers, a fiber optic data link, high voltage pulse measurements, an electronic streak camera, high-speed optical switches, fiber-based liquid sensors and infrared sources, and detectors based on lead salt materials.

Average Work Force: Scientists, Engs, & Techs - 19
Others - 2

Gross Sales: 1981 - \$0.8M
1982 - \$1.1M
1983 - \$1.3M

Plant Size: 12,000 sq ft

Equipment: OEI's capability consists of a machine shop, assembly room, dark room, & circuit etching, electronics test & optics test areas, stock room, and shipping & receiving rooms. Five persons are currently assigned to manufacturing. Their R&D facility consists of lasers, optics, electronics & optics design, electronic assembly areas, a chemistry laboratory, materials processing room, areas of microscope &