

- Manufacturing (example) – Monarch VMC45 CNC with GE 2000 control with contouring travel 18" x 30" x 10". Nakamura Tome Model TMC-3B CNC Lathe with Fanuc 6T control. Nakamura Super 2A CNC Lathe with Fanuc 10T-F control.

- Inspection (example) – Mitutoyo coordinate measuring machine type FN 905.

EXPERIENCE: Present customers include – The Department of National Defence, Boeing, Pratt & Whitney Canada, Canadair, Avco-Lycoming, General Electric, Rolls Royce and deHavilland.

KEYWORDS: AOG Service; R&O (Accessories); Mechanical Fuel System; Hydraulic Systems; Specialized Controls.

REVISED: February 88

LUMONICS Inc

ADDRESS: 105 Schneider Road
Kanata, Ontario, Canada
K2K 1Y3

CONTACT: Dr Jim Higgins, Vice President Sales & Marketing – (613) 592-1460

HISTORY: Lumonics Inc is a Canadian-owned high-technology company incorporated in 1970 with three subsidiary companies in the US, providing equipment and services for laser marking and laser materials processing. The company also has a subsidiary in the UK, Lumonics Ltd, that specializes in a range of Nd:YAG lasers for industrial machining tasks and one in West Germany, Photon Sources GmbH, that specializes in industrial CO2 lasers for materials processing. The company was originally formed to manufacture and sell the pulsed CO2 lasers developed at the Defense Research Establishment Valcartier.

CAPABILITY: Lumonics specializes in pulsed gas lasers including excimer, tunable dye, CO2 and HF/DF types. It is the third largest North American laser manufacturer serving both the scientific and industrial markets. They have twelve series of lasers available with various models within each series. A significant portion of their business is contract R&D, but it is carried out only when Lumonics anticipates and retains rights for commercial exploitation. Their scientific market includes university, government and corporate researchers. The primary fields in which their customers are active are spectroscopy, photo-chemistry, isotope separation, material processing and plasma research. Lumonics has been manufacturing their excimer lasers for scientific application since 1978, and introduced the first of an extensive range of industrial applications in 1986. Lumonics' key functions of material procurement and control, electrical and mechanical assembly, and final performance testing are carried out in-house. Machined and sheet metal components are sub-contracted.

AVERAGE WORK FORCE: Scientists & Engineers – 40 (In Canada)
Others – 120 (In Canada)
Others – 240 (In the US)
Others – 180 (In the UK)
Others – 30 (In West Germany)

GROSS SALES: 1986 – \$65M
1987 – \$72M

PLANT SIZE: 75,000 Sq Ft (In Canada)
150,000 Sq Ft (In the US)
75,000 Sq Ft (In the UK)
10,000 Sq Ft (In West Germany)

EXPERIENCE: Lumonics is interested in working with the USAF and has done so in the past in the form of providing standard lasers. They have not undertaken any USAF-sponsored R&D. They carry out extensive in-house R&D for the Canadian Government.

KEYWORDS: CO2 Lasers; Cutting (Laser); Drilling (Laser); Dye Lasers; Excimer Lasers; Gas Lasers; Heat Treating; Laser Marking Systems; Laser Materials Processing; Lasers; Pulsed Gas Lasers; TEA Lasers; Welding (Laser).

REVISED: May 88

MA ELECTRONICS CANADA Ltd

ADDRESS: 3135 Universal Drive
Mississauga, Ontario, Canada
L4X 2E7

CONTACT: Mr Peter Balodis, Sales & Marketing Mgr – (416) 625-4605

HISTORY: MA Electronics Ltd was established in January 1977 to support the Canadian communications industry's expanding needs for advanced technology components and subsystems. Over the last years, a hybrid microwave integrated circuit (HMIC) production facility has been established. The company is part of the M/A Com Inc operating companies.

CAPABILITY: MA Electronics is a major supplier of GaAs FET amplifiers and related microwave components for commercial, military, and telecom markets. Their Mississauga facility houses microwave design and test laboratories, an extensive machine shop, and plating and finishing facilities, complemented by engineering, administrative and sales offices. They have the capability to provide standard components from a diversified product line, design active and passive devices to customer specifications, and interface requirements and combine technologies into subsystems, thus maximizing overall performance and cost effectiveness. In general, they offer a comprehensive in-house product capability spanning 0.5 to 28 GHz.

MA Electronics has three product groups:

- Passive Microwave Components – coaxial and waveguide devices including ferrites, evanescent mode filters, multiplexers, and precision electroformed components.
- Commercial Satellite Electronics – low noise communication band amplifiers, power amplifiers, and integrated subsystems containing up and down conversion, filters, multipliers, and sources.
- Hybrid Microwave Integrated Circuit (HMIC) Components – multioctave wideband amplifiers over .5 to 28 GHz. Small signal to 1 watt. Built in-facility under MIL-Q-9858A Quality Program.

AVERAGE WORK FORCE: 105 (Total)

GROSS SALES: 1986 – \$4.5M
1987 – \$4.5M

PLANT SIZE: 22,000 Sq Ft

EQUIPMENT: Equipment includes Class 10,000 clean room manufacturing area for HMIC products, laser welder for hermetic packages, and electroforming capability.

EXPERIENCE: MA Electronics' product market is world-wide.

KEYWORDS: Microwave Components; Waveguides; Switches; Pin Diode Switches; Waveguide Attenuators; Couplers; Attenuators; Waveguide Transducers; Amplifiers; Microwave Amplifiers; Low Noise Amplifiers; Medium Power Amplifiers; High Power Amplifiers; Multiplexers; Electroforming; GaAs FET Amplifiers; Filters; Microwave Filters; Ferrite Devices; Isolators; Circulators; Coaxial Ferrite Devices; Microwave Subassemblies.

REVISED: February 88

MACDONALD DETTWILER

ADDRESS: 3751 Shell Road
Richmond, British Columbia, Canada
V6X 2Z9

CONTACT: Ms Ann Poelvoorde, Information Officer – (604) 278-3411