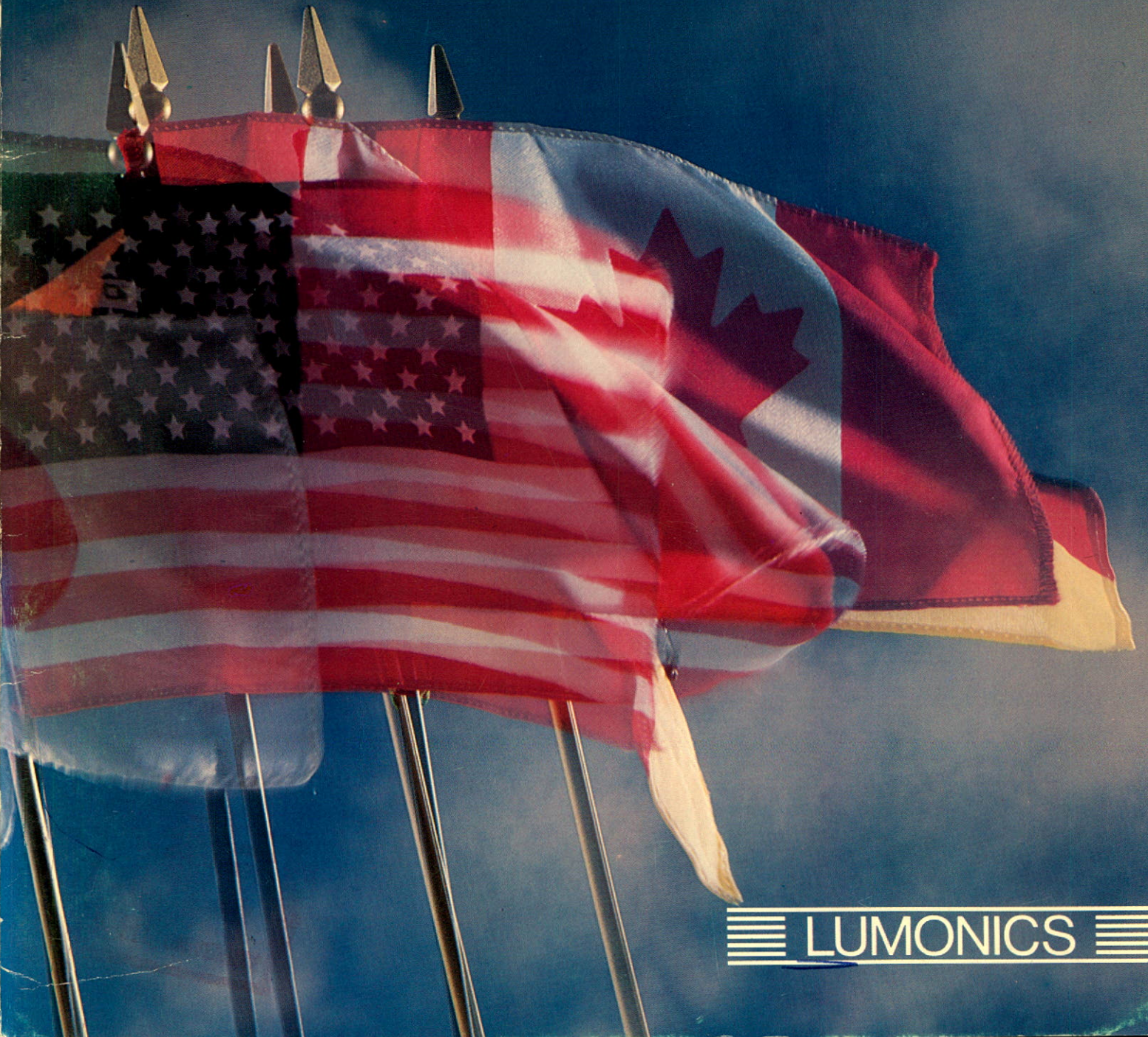


Annual
Report
1981

The world
is our
market



≡ LUMONICS ≡

5-Year Financial Summary

	1981	1980	1979	1978	1977
Operating results:					
Sales	\$9,087,919	\$7,356,767	\$5,863,729	\$3,866,273	\$1,895,861
Net earnings	1,519,905	1,037,197	748,660	535,519	239,144
Net earnings as a % of sales	16.7%	14.1%	12.8%	13.9%	12.6%
Financial data:					
Working capital	9,466,277	8,187,508	1,735,873	1,184,762	880,514
Current ratio	4.9:1	8.9:1	2.1:1	2.3:1	2.7:1
Fixed assets — net	2,108,691	2,139,727	1,588,297	857,426	416,864
Shareholders' equity	11,648,179	10,128,274	2,607,353	1,830,228	1,235,084
Share data:*					
Average number of outstanding common shares	2,691,320	2,255,514	2,030,270	1,997,062	1,988,720
Earnings per share	.56	.46	.37	.27	.12

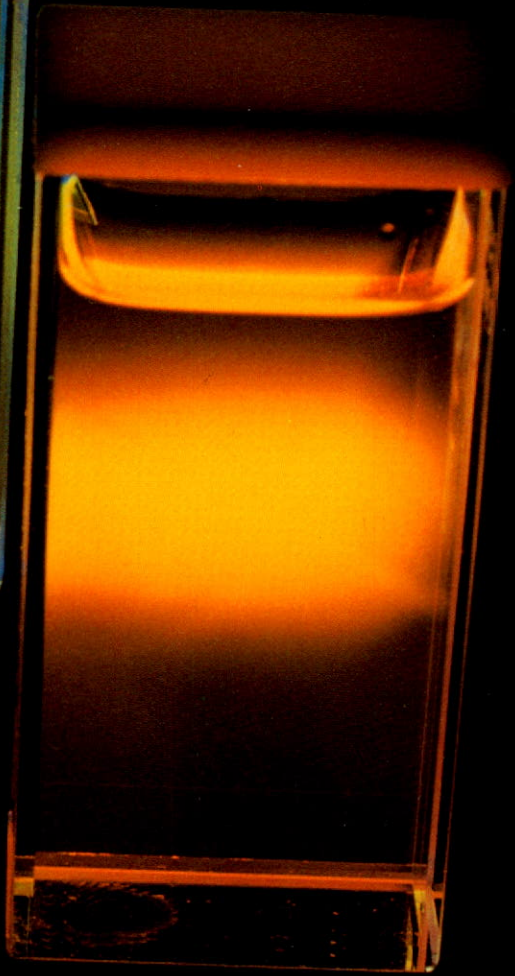
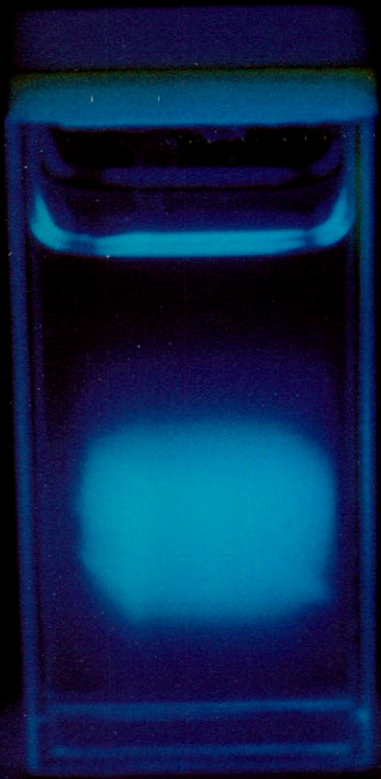
*After giving retroactive effect to a 2-for-1 split on July 10, 1980.

An ultraviolet beam from a Lumonics excimer laser passes through three containers of dye, exciting the dye molecules to give off light. This light, a pure narrow band from the visible spectrum, can be harnessed in a dye laser for photochemistry research.

Photo courtesy of National Research Council, Canada

Contents

To Our Shareholders	2
Corporate Overview	4
Industrial Lasers	6
Scientific Lasers	8
Other Important Areas	
Contract R & D	10
Military Sales Potential	10
Status of Patent Litigation	10
Technical Notes	10
Financial Statements	11
Notes to Financial Statements	14
Corporate Information	17



To Our Shareholders

Fiscal 1981 was a most favourable year for Lumonics. Net earnings increased 46% to \$1,520,000, or 56¢ per share, and sales increased 23% to \$9,088,000. At the same time the company was able to increase its investment in research and product development by 88% to \$1,770,000.

A strong balance sheet was also maintained during the year as a result of continued emphasis on asset management, particularly in the area of inventory control where the level decreased by \$212,000 from 1980.

Research and development expenditures during the year resulted in a number of significant technical advances and several new products, including a dye laser, a low-cost excimer laser and an industrial silicon wafer marking system. These activities, described in more detail in the body of this report, represent Lumonics' focus on the future.

To accommodate this year's growth, and in anticipation of future requirements, Lumonics' organization and facilities were expanded and strengthened in the following areas:

- LaserMark® sales and service staff were increased in our Chicago office to better serve the U.S. Midwest.
- In the U.S. East Coast region, Lumonics changed its selling method for scientific and industrial products to direct sales rather than operating through manufacturer's representatives. One of the company's longstanding manufacturer's representatives was recruited as a full-time employee and has established a Lumonics sales office in Long Island, New York.
- A wholly owned U.S. subsidiary company was established, and a commitment was made to construct a company-owned facility in Phoenix, Arizona. Sales, service and operations personnel were recruited to start up this facility which will be primarily concerned with LaserMark® in its initial phase. Several people will be transferred from Kanata to round out the team.
- Additions were made to our middle management during the year and we also announced an organizational change with the appointment of R.J. Atkinson as president and chief operating officer and A.R. Buchanan as chairman and chief executive officer. This change was made to enable us to respond to external growth opportunities, including military requirements.

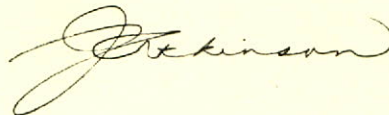
Growth in product sales for 1981 was primarily due to greater market penetration with our industrial LaserMark® systems. LaserMark® accounted for over 80% of the sales increase.

First-time sales of LaserMark® systems continue to be made for new commercial applications and in new industries.

Lumonics enjoys a broadening geographic market. Export sales accounted for over 90% of product sales in 1981, about the same level as 1980.

We enter 1982 with ambitious goals for continued growth. To accomplish this we must increase our sales of existing products, expand by introducing new products and maintain our commitment to imaginative and productive research and product development. It is, of course, difficult to predict the impact of the current world economic situation on our growth rate. However, the strength of our financial position, the positive outlook for product sales and the dedication of our management and employees give us a high degree of confidence in Lumonics' future endeavours.

Sincerely,

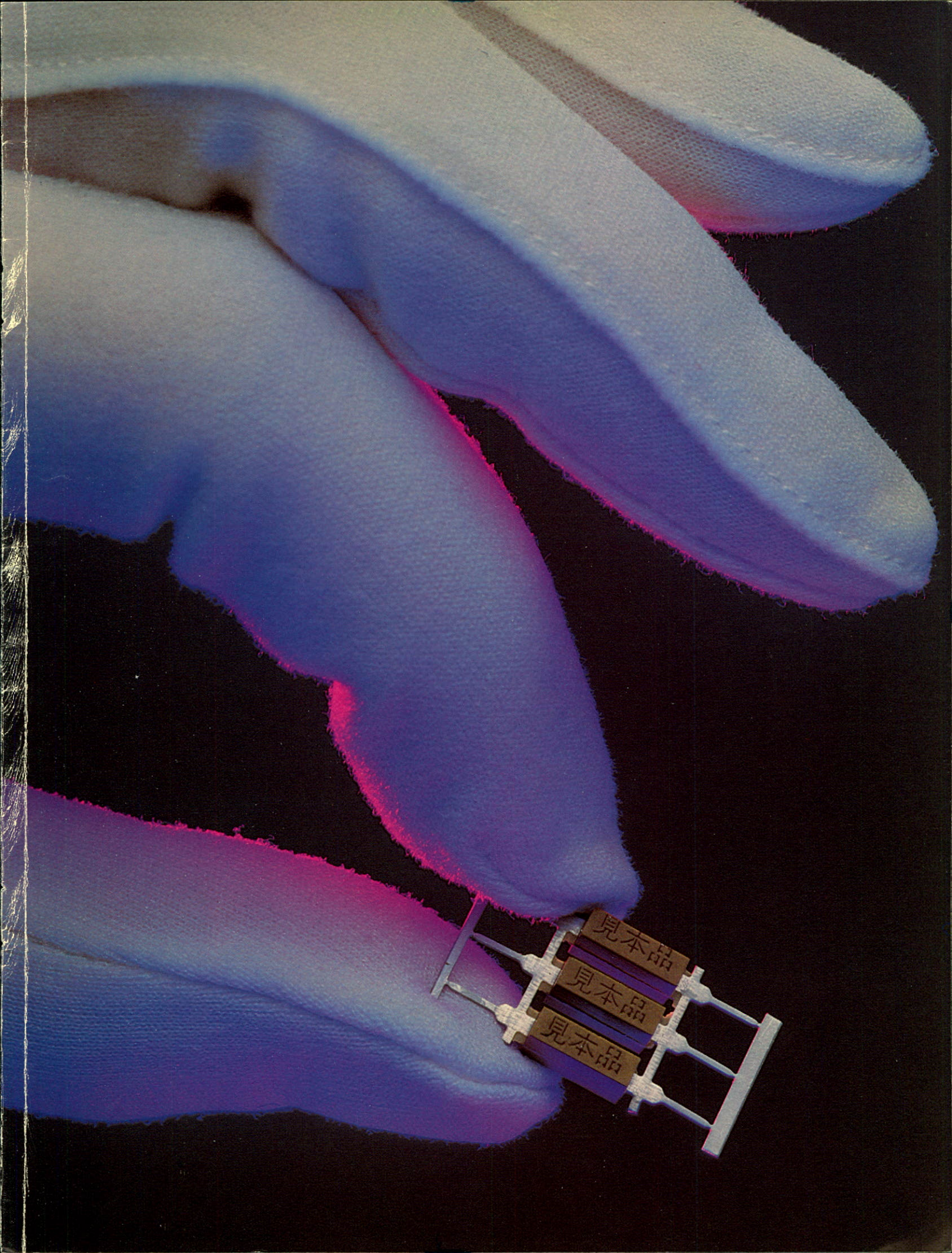


R.J. Atkinson, President



A.R. Buchanan, Chairman

Codes are applied to electronic components using a LaserMark® system. LaserMark® can produce marks in virtually any language or type style — simply and easily.



Corporate Overview

Lumonics Inc. entered its second decade of operations in January 1981 as a new public company with a solid record of accomplishment and exciting future potential. As the year progressed, sales targets were achieved in spite of a faltering economy; new products, developed to further broaden the company's sales base, were introduced on schedule; and the company's marketing efforts were greatly increased through aggressive promotion and direct sales activities.

After making unsuccessful attempts during 1981 to establish a Lumonics presence in the United States through corporate relationships with U.S. companies, management decided at year-end to make a direct move by establishing a Lumonics subsidiary company in the U.S. Firm plans were made for construction of a 7,800 sq. ft. facility in Phoenix, Arizona, and staff hiring and training were under way by the end of the year. The Phoenix plant will become the centre of Lumonics' industrial laser sales, service and customer engineering activities during 1982.

Established to take full advantage of increasing momentum in industrial laser sales, the new operation does not preclude the possibility of other corporate associations, including acquisitions.

Lumonics' broad geographical base, in Europe, Asia, the United Kingdom and throughout North America, provides some protection against adverse policy or economic swings in individual countries,

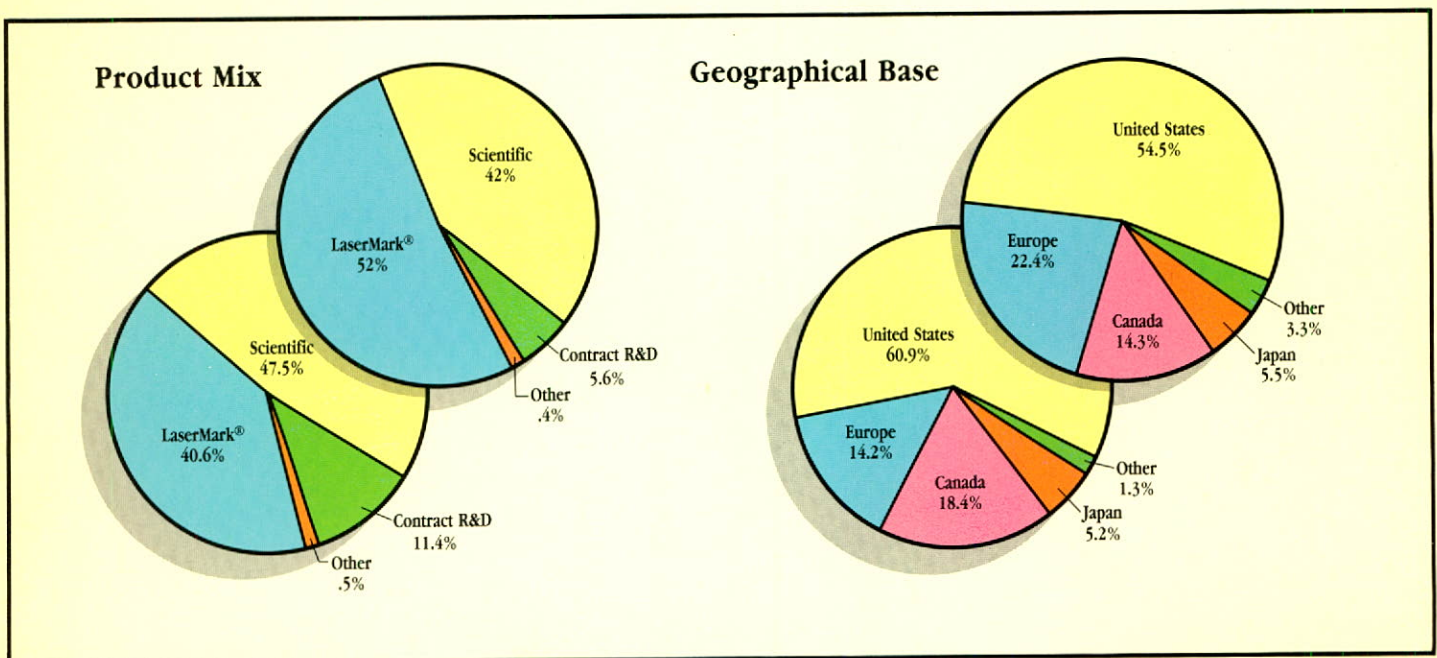
and also allows the company to exploit opportunities created by government action. For example, in 1981 the European Economic Community countries introduced legislation requiring consumer-readable date codes on food, beverage and other items with a maximum safe shelf life. This prompted an encouraging upsurge in Lumonics' European business. The trend is likely to move to other countries as consumer protection legislation becomes more sophisticated.

A broad customer base in diverse industries also offers protection against swings in the fortunes of individual industries or companies. The largest purchaser of Lumonics products represents less than 5% of annual company sales.

A competitive disadvantage in the scientific market was overcome in 1981 with the introduction of Lumonics' dye laser. In the past, Lumonics did not offer dye lasers and as a result lost sales for excimer lasers which are frequently purchased with dye lasers.

The current economic situation has had an impact on our 1981 performance and continues to do so, as will be detailed in various sections of this report. Although our solid financial position and the underlying strength of our markets have produced reasonable results in 1981, we look forward to a return to more nearly normal conditions and an increased growth rate, hopefully in the latter half of 1982.

Sales



Some Users of Lumonics' Scientific Lasers

National Research Council of Canada
Atomic Energy of Canada
Ontario Hydro
Union Carbide Corporation, Nuclear Division
Jet Propulsion Laboratory, California Institute of Technology
Stanford University
Columbia University
Massachusetts Institute of Technology
Dow Chemical U.S.A.
Naval Research Laboratory (U.S.A.)
Xerox Corporation
Armstrong Cork Company
National Bureau of Standards (U.S.A.)
NASA, Goddard Space Flight Center
Lawrence Livermore National Laboratory
T.R.W. Inc.
Exxon Corporation
IBM Research Centre
Corning Glassware Inc.
University of Toronto
Naval Air Development Center (U.S.A.)
Aerochem Research Corporation
Westinghouse Electric Corporation
McDonnell Douglas Corporation
China National Machinery Co.
China National Trust Co.
University of Canterbury (New Zealand)
University of Tokyo
University of Osaka
Kyoto University
University of Nagoya (Japan)
I.P.C.R. (Japan)
Nippon Electric
University of Berne (Switzerland)
University of Cordoba (Argentina)
Frascati (Italy)
Indian Institute of Technology
A.E.C. (France)
Max Planck Institute
Oxford University
Culham Laboratories (U.K.)

Companies Using LaserMark®**Product Manufacturers****Electronic Components**

- Texas Instruments
- Motorola Inc.
- Phillips (Holland)
- Sony
- Fairchild Semiconductor
- Union Carbide (Kemet Div.)
- Centralab
- Emcon
- A.V.X. Ceramics
- A.T.C.
- Sprague Electric
- Bourns Inc.
- C.T.S.
- Mepco Electra
- Mullard (U.K.)
- Murata
- Siemens
- S.G.S. (Italy)
- Oy Evox (Finland)
- Plessey (Italy)

Automobile

- General Motors
- Ford
- Fram

Electrical

- Honeywell - Microswitch
- I.B.M.
- Delco
- Berg Div., Dupont
- Control Data Corp.
- Thomas & Betts

Glass

- Owens Illinois
- Libby St. Clair
- Corning

Misc. Manufacturing

- Memorex (Bell & Howell)
- De Laval Separator
- Douglas Aircraft
- Easton Aluminum

Package Goods**Food Products**

- Kraft Inc.
- General Foods
- Best Foods
- Lipton
- Lever Bros.
- Lawry's
- Tropicana
- Planters, Standard Brands
- C.S.P. Foods

Beverage

- Coca Cola
- PepsiCo
- Gray Beverages
- Latrobe Brewing
- Whitbread (U.K.)
- Whitehead (U.K.)
- Bass (U.K.)
- Valser Min Water (Switzerland)
- Underberg (Germany)

Pharmaceutical

- Westwood
- Miles
- Smith & Nephew
- Abbott Labs
- Beecham Products
- McNeil Labs
- Norwich Eaton
- Wampole

Cosmetics

- Mary Kay
- Shiseido (Japan)
- Maybelline

Confectionary

- M & M Mars
- Suchard

Misc. Packaged Goods

- S.C. Johnson
- Procter & Gamble
- Lever Bros.
- Clorox
- Soprocos (France)

Industrial Lasers

Many new LaserMark® customers, and new applications for the LaserMark® system, were added to an already impressive list in 1981.

Two new markets, both of which have great potential for multiple unit orders, were entered successfully. Our first installations were made in the brewery industry in both the United States and the United Kingdom, and initial sales were made to the distillery industry in the U.S., U.K. and Japan.

Other new industry segments adopting LaserMark® for coding and marking in 1981 included:

- margarine manufacturers, for open date-coding on plastic tubs and wrappers, and
- computer memory manufacturers, for lot numbering of computer discs.

Although a significant number of electronic component manufacturers are already using LaserMark® as their standard marking method, applications in the electronics industry would be increased considerably if more component encapsulation materials were laser-markable. To broaden the range of applications, Lumonics is conducting a joint development program with a major U.S. supplier of such encapsulation or coating materials to make them laser-markable.

This program has already achieved considerable success. A new formulation of gold-coloured material with greatly enhanced laser-markability is now widely used throughout the electronics industry for passive component products. Development of materials for active semiconductor products continues. Success in this area will mean a very major increase in LaserMark® use.

The introduction of date-coding regulations in the European Economic Community has greatly increased interest in LaserMark®. Several major European companies have purchased quantities of LaserMark® systems, with more than 50 systems being sold by our United Kingdom distributor alone. This high level of activity in Europe is expected to continue as compliance with date-coding regulations is adopted by other EEC members.

The North American packaging industry continued to represent close to 50% of LaserMark® sales. A large number of major food, cosmetic, pharmaceutical and household product manufacturers are now satisfied users of Lumonics equipment. Repeat quantity sales are being made to many of these companies, following trials of single LaserMark® systems.

Having developed a growing market for carbon dioxide (CO₂) laser-marking systems, Lumonics is entering a new phase: development of excimer laser technology for industrial applications. The company is in a strong position to exploit this area. Combined with computers to store and control access to marking information, the new systems are expected to apply to a wide range of manufacturing processes including marking of silicon wafers and a variety of metal parts. Silicon wafers are used in the manufacture of miniaturized electronic "chip" circuits.

Initial sales of industrialized excimer laser-marking systems to the semiconductor industry are expected in 1982.

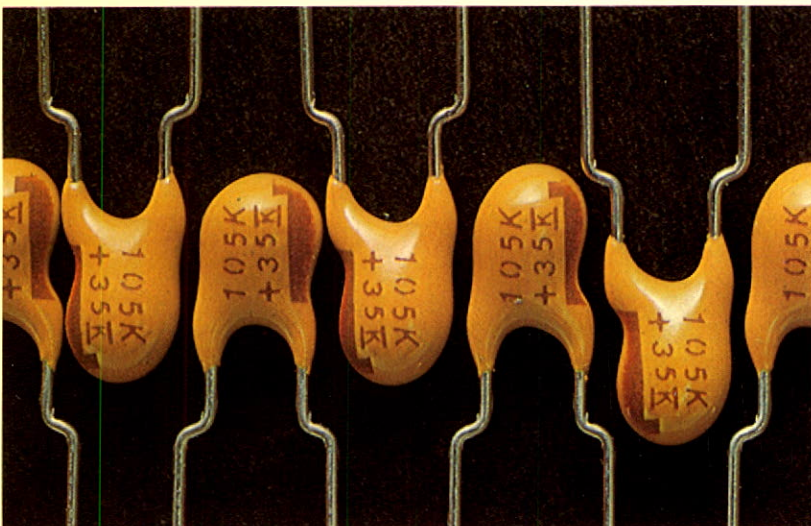
Lumonics took the following action in 1981 to maintain its strong competitive position:

- decision to establish a subsidiary plant in Phoenix, Arizona, to further improve service to the large U.S. market;
- increased advertising in trade journals;
- hired major U.S. firm for increased public relations for LaserMark® products;
- increased trade show activity;
- expanded capability to supply custom laser-marking systems;
- expanded sales and service staff in Chicago office;
- opened a New York sales office to serve the U.S. east coast.

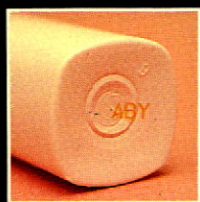
Given a reasonable economic situation, significant growth is expected in Lumonics' industrial products sales for 1982.

Opposite: An effective trade advertisement, directed to the packaging and consumer product industry, appearing in major international trade journals.

Below: Electronic component with new gold-coloured material, developed in cooperation with a major U.S. supplier, readily accepts the standard industry codes produced by LaserMark®.



Mary Kay chose LaserMark for more than cosmetic reasons.



Mary Kay Cosmetics uses LaserMark® Systems to achieve consistently clear, high quality coding on its prestigious packaging. . .no matter what the shape or sur-

face texture of the container. They also find that production downtime for code changing and maintenance is minimal.

LaserMark Systems permit faster line speeds, higher productivity and greater labor utilization.

If you think these are good reasons to choose LaserMark, contact us. We'll be pleased to look at your marking requirements and recommend cost-effective solutions.

LASERMARK®



We put the laser into marking.

LaserMark® is a registered trademark of Lumonics Inc.
105 Schneider Road, Kanata (Ottawa)
Ontario, Canada K2K 1Y3
(613) 592-1460 Telex: 053-4503

In the Mid-West U.S.A. contact
LaserMark Chicago
2300 E. Devon Ave., Suite 155
Des Plaines, IL., 60018
(312) 299-4077

Scientific Lasers

Laser sales to research scientists continue to represent a large share of Lumonics' business. Scientists working in universities and in government and military-oriented laboratories provide an immediate market which can justify the relatively high prices of new or experimental laser models.

Since these scientists are also investigating new ways to use lasers, they are an essential if unofficial part of Lumonics' applications investigation team, helping to open the way to new industrial applications.

1981 was a difficult year for scientific instrument manufacturers generally, and manufacturers of scientific lasers did not escape the trend. Overall industry sales were virtually unchanged, mainly because of worldwide cutbacks in government funding for research. In the export market, problems for North American manufacturers were compounded by pricing difficulties, caused by the sharp devaluation of most European currencies during the year.

In spite of these industry problems, sales of Lumonics' scientific lasers increased about 10% over 1980 sales.

The main concentration in research work using Lumonics' lasers has gradually shifted from fusion studies to chemical applications, particularly photochemistry — the use of light to control chemical reactions.

Lumonics has sold many lasers to researchers who are using photochemical effects for isotope separation, particularly for energy-related work. A number of specialized, high-power systems have been delivered to such customers as Ontario Hydro and Atomic Energy of Canada for heavy water (deuterium) separation, a process which has great potential for use in CANDU nuclear reactors.

To maintain its position as technical leader in an increasingly competitive market, Lumonics continued its major programs of new product development and product improvement. Two new scientific lasers were introduced in 1981:

- **The EPD-330 dye laser** has direct appeal to photochemists since it is "tunable" — that is, it allows the user to tune laser transmission continuously across a very broad range of colours. Since the dye laser is driven by an excimer laser, sales of the EPD-330 will give an added boost to the sale of Lumonics excimer lasers.
- **The TE-430 low-cost excimer laser** has opened a new market for lower-priced lasers. In combination with the EPD-330, the TE-430 mini-laser can perform work previously done by systems costing more than twice as much, and with more flexibility.

Lumonics' new line of tunable dye lasers and the major improvements in excimer lasers were beginning to show positive sales results by the end of the year, and can be expected to have a favourable effect on 1982 results. With a return to more nearly normal economic conditions during the year, we expect to increase sales of scientific lasers by a significant percentage.

Opposite: Corporate advertisement directed to the scientific market, currently appearing in major international trade journals and buyer's guides.

Below: The TE-430 mini-excimer laser has opened a new market for lower-priced lasers. In combination with Lumonics' EPD-330 dye laser, it can do the work of systems costing more than twice as much.



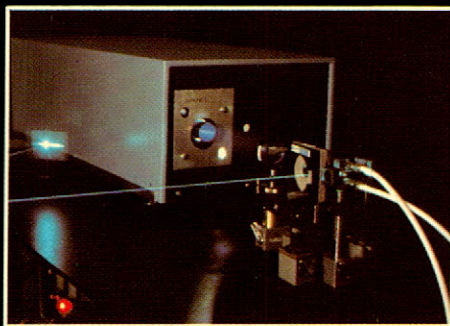
Photons for Research



Lumonics offers the researcher by far the broadest range of TEA and excimer lasers of any company. In addition to over 25 standard models, Lumonics provides at economic cost special modifications, accessories or complete special lasers to suit specific needs or budgets. With an R & D staff of more than 40 scientists and engineers, Lumonics not only serves the scientific community but is an active member of it. Our company policy of flexibility and service reflects our understanding of

the individual needs of the researcher.

Over the years, the Lumonics R & D team has consistently developed lasers which out-distance the competition in performance and reliability.



Our goal for the future is to continue this tradition of excellence. Major announcements of our new, state-of-the-art excimer, dye and TEA/CO₂ lasers are planned.

Contact us now for information on these latest developments.

Lumonics Inc.,
105 Schneider Road,
Kanata (Ottawa),
Ontario, Canada
K2K 1Y3

Phone: (613) 592-1460,
Telex: 053-4503

LUMONICS

We're attuned to the pulse of research.

Other Important Areas

Contract R & D

A major part of Lumonics' research and development effort has been directed to augmenting our expertise in excimer lasers. Increased knowledge of the chemistry of excimer laser gases and of techniques to produce high-energy, spatially uniform outputs places us in a strong position to capitalize on industrial applications. Parallel application studies of the interaction of ultraviolet laser pulses with semiconductors have aided the design and development of a silicon wafer marking system.

Development for scientific products included two new excimer lasers, one designed as a low-cost unit primarily for pumping dye lasers. In addition, a tunable ultraviolet/visible dye laser has been developed, with a range of accessories.

Military Sales Potential

In 1981 Lumonics pursued potential applications of its pulsed gas laser technology to military defense. Military applications of pulsed lasers include range finding, target designation and other specialized applications, some of which are classified. While it is too early to assess the impact of Lumonics entering this new area of business activity, the company has been requested to submit bids to two major U.S. aerospace companies currently competing for two significant military requirements. In both cases, an initial R & D phase, if successful, could be followed by production contracts running over several years.

Status of Patent Litigation

The statement in note 13 to the financial statements is unchanged from the statement in note 11 to the 1980 statements. While the position regarding materiality of patent litigation is unchanged, there has been some progress in both U.S. and Canadian actions to bring these cases to trial.

The plaintiffs in the U.S. action have apparently been preoccupied with other legal actions in the United States, so there has been little activity in the past several months on the Lumonics case. We consider it fortunate that the Federal Court judge in Chicago, in a status hearing in December 1981, requested that the plaintiffs present their case to the court by mid-March 1982.

The Canadian case has been proceeding slowly for the past year and Lumonics has been pressing for an early trial. We now look forward to the possibility of both actions coming to trial in 1982 with favourable judgements.

Technical Notes

What is Silicon Wafer Marking?

Ultra pure silicon, in the form of thin wafers 1" to 5" in diameter, is the basic material used in the manufacturing of a very large percentage of semiconductor electronic devices. Users have long had the desire to mark each wafer with its particular electrical characteristics and an identification number for traceability. Conventional marking methods, however, have been unable to perform this task, since they invariably damage the wafer's fragile crystal structure or add an unacceptable amount of contamination.

Lumonics has recently demonstrated the ability to apply wafer identification marks using a new type of laser, the ultraviolet excimer, in which it has developed a leading position. Marking is accomplished with a projection technique, which causes minimal crystal damage. Development of this system is now being completed and initial deliveries are planned for the third quarter of 1982.

What is Spectroscopy?

Most scientific lasers are used in the fields of spectroscopy and photochemistry. To understand the technique of spectroscopy, imagine that the laser is a radio broadcasting transmitter and the atoms or molecules of different chemical substances are miniature transistor radios, each permanently tuned to a different point on the dial. (For example carbon might be tuned to, say, 580, copper to 597, uranium to 1340 and so on.) If you wanted to tell whether an unknown mixture contained copper, you would broadcast with your laser/transmitter at a frequency of 597. You would then listen to determine if any of the atom radios were playing. Only copper would receive the signal. From the loudness, you would get an idea of how many, if any, copper atoms were present. By changing the broadcast frequency, you could then look for the atoms or molecules of any other substance, until you had a complete chemical analysis of the unknown substance.

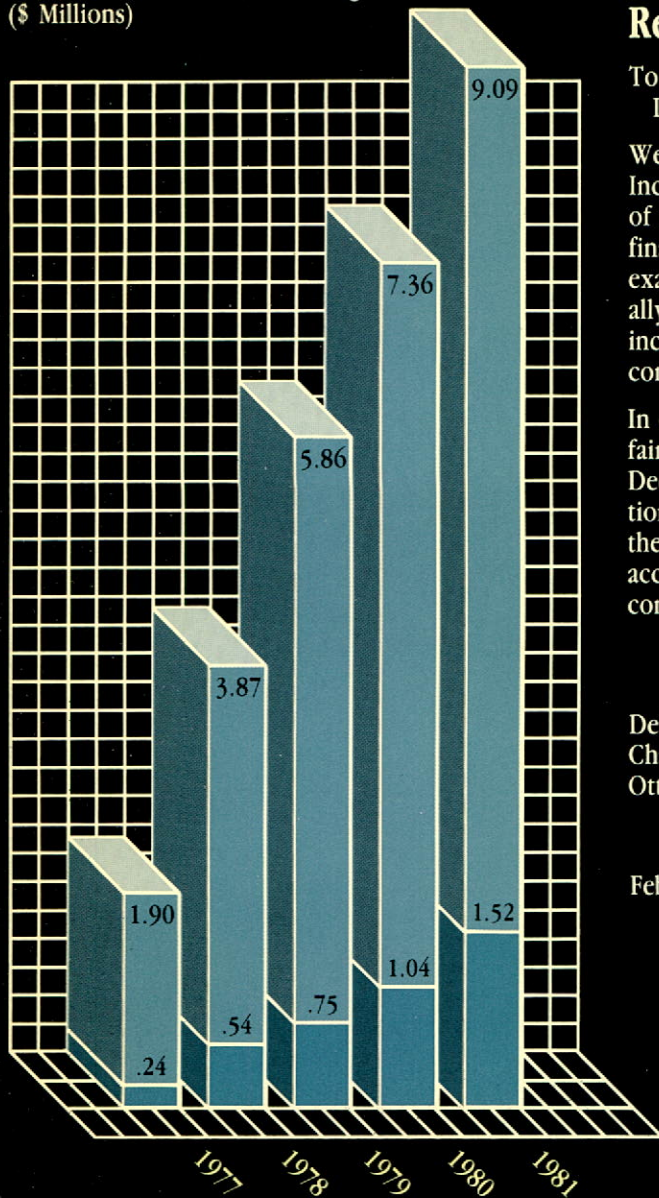
What is Photochemistry?

Photochemistry works on the same principle as spectroscopy except the laser/transmitter is much more powerful, producing very strong effects in the atoms or molecules tuned to its frequency. These atoms alone will then react chemically, while others remain unaffected.

Applications of photochemistry which appear to have the most potential are in areas such as uranium and heavy water separation, production of Vitamin D, and purification of silicon for semiconductor applications. The field is in its infancy, however, and the potential range of practical application is enormous.

Financial Statements

Sales and Net Earnings (\$ Millions)



Auditors' Report

To the Shareholders of
Lumonics Inc.:

We have examined the balance sheet of Lumonics Inc. as at December 31, 1981 and the statements of income and retained earnings and of changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these financial statements present fairly the financial position of the company as at December 31, 1981 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Deloitte Haskins & Sells
Chartered Accountants
Ottawa, Ontario

February 12, 1982

Balance Sheet

December 31, 1981	1981	1980
Assets		
Current assets		
Cash	\$ 150,308	\$ 128,878
Short-term investments — at cost	7,092,317	5,677,789
Accounts receivable (Note 2)	3,145,534	1,740,162
Inventories (Note 3)	1,441,433	1,653,715
Prepaid expense	57,261	25,070
	11,886,853	9,225,614
Notes receivable	176,057	205,078
Property, plant and equipment (Note 4)	2,108,691	2,139,727
Deferred development costs (Note 5)	624,046	288,120
	\$14,795,647	\$11,858,539
Liabilities		
Current liabilities		
Accounts payable and accrued charges	\$ 1,779,861	\$ 996,978
Income taxes	631,262	33,114
Current portion of long-term debt	9,453	8,014
	2,420,576	1,038,106
Long-term debt (Note 6)	157,892	176,957
Deferred income taxes	569,000	515,202
	3,147,468	1,730,265
Shareholders' Equity		
Share capital		
Authorized		
190,500 5% non-cumulative, non-voting preferred shares redeemable at the par value of \$1		
20,000,000 common shares of no par value		
Issued and fully paid		
90,500 preferred shares	90,500	90,500
2,691,320 common shares	7,367,999	7,367,999
Contributed surplus	125,700	125,700
Retained earnings	4,063,980	2,544,075
	11,648,179	10,128,274
	\$14,795,647	\$11,858,539

Approved by the Board: A.V. Castledine, Director

R.J. Atkinson, Director

Statement of Income and Retained Earnings

Year ended December 31, 1981	1981	1980
Sales	\$9,087,919	\$7,356,767
Cost of goods sold	6,685,583	5,409,778
Gross profit	2,402,336	1,946,989
Research and development costs (Note 8)	1,032,321	416,246
Income from operations	1,370,015	1,530,743
Interest income (Note 9)	1,081,445	90,454
Income before income taxes	2,451,460	1,621,197
Income taxes (Note 10)	931,555	584,000
Net income	1,519,905	1,037,197
Retained earnings, beginning of year	2,544,075	1,577,884
Share issue expense	—	(71,006)
Retained earnings, end of year	\$4,063,980	\$2,544,075
Earnings per common share		
Net income	\$1,519,905	\$1,037,197
Average number of common shares outstanding	2,691,320	2,255,514
Earnings per common share (Note 11)	\$.56	\$.46

Statement of Changes in Financial Position

Year ended December 31, 1981	1981	1980
Sources of working capital		
Operations		
Net income	\$1,519,905	\$1,037,197
Items not affecting working capital		
Deferred income taxes	53,798	161,916
Depreciation and amortization	320,925	193,572
Gain on disposal of equipment	(2,225)	—
	1,892,403	1,392,685
Decrease in notes receivable	29,021	66,362
Issue of common shares	—	6,554,730
Proceeds on disposal of equipment	24,500	—
	1,945,924	8,013,777
Uses of working capital		
Additions to property, plant and equipment	216,164	745,002
Reduction in long-term debt	19,065	458,014
Deferred development costs	431,926	288,120
Share issue expense	—	71,006
	667,155	1,562,142
Increase in working capital	1,278,769	6,451,635
Working capital, beginning of year	8,187,508	1,735,873
Working capital, end of year	\$9,466,277	\$8,187,508

Notes to the Financial Statements

December 31, 1981

1. Significant accounting policies

The financial statements have been prepared in accordance with generally accepted accounting principles, and reflect the following policies:

Inventories

Inventories are valued on the following basis:

Finished goods — at the lower of cost and net realizable value. Work-in-process and raw materials — at the lower of cost and replacement cost.

Property, plant and equipment

Property, plant and equipment are stated at cost. Building, machinery and equipment are depreciated using the diminishing-balance method.

Research and development costs

Development costs relating to specific products that in the company's view have a clearly defined future market are deferred and amortized on a straight-line basis over three years, commencing in the year following the year in which the new product development was completed.

Except as disclosed above, research and development costs (except for capital assets) are charged against income in the year incurred. Capital assets are treated as equipment purchases.

Government assistance

Grant amounts resulting from government incentive programs are recorded in the accounts on the following basis:

Capital grants related to capital expenditures are reflected as a reduction of the cost of such assets. Operating grants related to current period expenditures on research and development are recorded as a reduction of expenses at the time the eligible expenses are incurred.

Translation of foreign currencies

Foreign currency accounts in these financial statements are translated to Canadian dollars on the following basis:

Current assets and current liabilities — at the rate of exchange prevailing at the end of the period. Income, expenses and fixed asset acquisitions — at a rate approximating the rate of exchange prevailing on the dates of the transaction. Gains and losses on translation of foreign currencies are included in income.

2. Accounts receivable

	1981	1980
Trade	\$2,745,793	\$ 1,285,895
Government assistance	130,942	238,308
Other	268,799	215,959
	<u>\$3,145,534</u>	<u>\$ 1,740,162</u>

3. Inventories

	1981	1980
Finished goods	\$ 141,452	\$ 70,868
Work-in-process and raw materials	1,299,981	1,582,847
	<u>\$1,441,433</u>	<u>\$ 1,653,715</u>

4. Property, plant and equipment

	Rates	1981	1980
Land	—	\$ 57,506	\$ 57,506
Building	5%	1,783,000	1,782,802
Machinery and equipment	20%	970,633	835,940
		2,811,139	2,676,248
Less accumulated depreciation		702,448	536,521
		<u>\$2,108,691</u>	<u>\$ 2,139,727</u>

5. Deferred development costs

	1981	1980
Deferred development costs, beginning of year	\$ 288,120	\$ —
Development costs deferred in the year	431,926	288,120
Accumulated amortization	(96,000)	—
	<u>\$ 624,046</u>	<u>\$ 288,120</u>

Notes to the Financial Statements

December 31, 1981

6. Long-term debt

	1981	1980
8% Ontario Development Corporation mortgage loan due in monthly instalments of \$1,857 each, including principal and interest, through March 15, 1994	\$ 167,345	\$ 184,971
Less current portion	9,453	8,014
	<u>\$ 157,892</u>	<u>\$ 176,957</u>

The 8% mortgage loan is secured by a specific mortgage on land, buildings and equipment and a floating charge on all other assets.

7. Stock options

On March 3, 1981, the Board of Directors approved both a basic and key employee stock option plan allotting a total of 135,000 common shares for distribution under these plans.

As at December 31, 1981 options to purchase 104,385 shares were granted under the plans at prices ranging from \$11.02 to \$17.57 for a total consideration of \$1,209,651.

Of the stock options granted, approximately 20,000 shares may be purchased at any time within a six-month period following March 3, 1982 and approximately 16,800 shares may be purchased in each of five twelve-month periods thereafter.

8. Research and development costs

	1981	1980
Research and development costs	\$1,770,359	\$ 939,841
Amortization of deferred development costs	96,000	—
	<u>1,866,359</u>	<u>939,841</u>
Deferred development costs	431,926	288,120
	<u>1,434,433</u>	<u>651,721</u>
Government assistance	402,112	235,475
	<u>\$1,032,321</u>	<u>\$ 416,246</u>

9. Interest income

	1981	1980
Interest on long-term debt	\$ (13,295)	\$ (75,852)
Interest income	<u>1,094,740</u>	<u>166,306</u>
	<u>\$1,081,445</u>	<u>\$ 90,454</u>

10. Income taxes

The effective tax rate differs from the statutory federal and provincial combined rates due to the manufacturing and processing tax reduction and the business investment tax credits.

The company has available at December 31, 1981 investment tax credits of approximately \$324,000 for reduction of future federal income taxes, which expire as follows:

1985	\$ 129,000
1986	<u>195,000</u>
	<u>\$ 324,000</u>

The company also had at that date capital losses carried forward for income tax purposes of approximately \$110,000 which may be deducted from any future taxable capital gains.

No recognition has been given in these financial statements to the potential tax savings which may result from these items.

Deferred income taxes relate primarily to claiming capital cost allowances for income tax purposes in excess of depreciation and amortization charged in the financial statements, and to claiming deferred development costs for income tax purposes in the year they are incurred.

11. Fully diluted earnings per share

Although no stock options could have been exercised during 1981, if it were assumed that all of the stock options granted as at December 31, 1981 had been exercised as of January 1, 1981 the earnings per share for 1981 would have been \$.54. The options granted are exercisable over the next five years of which approximately 36,800 may be exercised in 1982 and approximately 16,800 shares per year from 1983 through 1986.

Notes to the Financial Statements

December 31, 1981

12. Remuneration of directors and senior officers

Remuneration of the company's directors, senior officers and senior personnel for the year ended December 31, 1981 was \$422,250 (1980 — \$328,592).

13. Litigation

The company is currently the defendant in two actions alleging patent infringement, one in Canada and one in the United States. In both cases, the plaintiffs are various persons, including Gordon Gould and Refac International Limited, with an interest in certain patents originally issued to Mr. Gould.

The Canadian patent under litigation was issued August 8, 1972 and is titled "Light Generating and Amplifying Apparatus." In the action, which was commenced in the Federal Court of Canada on December 19, 1978, the plaintiffs' claim against the company is for an injunction against manufacturing or selling lasers in Canada in infringement of the patent, an order to deliver up to the plaintiffs all lasers in the possession of the company made in infringement of the patent and damages suffered by the plaintiffs or an accounting of the profits made by the company by reason of the infringement.

The United States patent under litigation was issued July 17, 1979 and is titled "Method of Energizing a Material." In the action, which was commenced in the United States District Court for the Northern District of Illinois, Eastern Division on November 6, 1979, the plaintiffs' claim against the company is for an injunction against continuing activity constituting patent infringement or the inducing of patent infringement by others and treble the damages actually suffered by the plaintiffs as a result of such activities. Early in 1980, General Motors Corporation successfully moved to intervene in this action as a defendant on the basis that, as a laser user, it had a large financial interest in the case.

The company has retained separate counsel in Canada and the United States to defend these actions and believes it has good defences on the merits in each case. Pleadings have been exchanged but at this time it is not possible to determine when these cases will be resolved. It is the company's opinion that even in the event of an adverse judgement in either or both actions, it is reasonable to believe that licence arrangements could be negotiated which would not result in a material adverse effect on the company.

14. Subsequent events

Subsequent to December 31, 1981 the company incorporated a United States of America subsidiary, Lumonics Corporation. The subsidiary has committed to capital expenditures of approximately \$526,000 which will be funded through industrial revenue bonds.

15. Segmented information

The company's activities represent one industry segment, manufacture and sale of lasers, and are conducted in one geographic segment, Canada.

Export sales are as follows:

	1981	1980
United States of America	\$4,950,000	\$ 4,479,000
Europe	2,040,000	1,043,000
Japan	502,000	383,000
Other	296,000	98,000
	<u>\$7,788,000</u>	<u>\$ 6,003,000</u>

Corporate Information

Directors

Robert J. Atkinson
President & Chief
Operating Officer
Lumonics Inc.

Allan R. Buchanan
Chairman & Chief
Executive Officer
Lumonics Inc.

Douglas C. Cameron
Vice President & Treasurer
James Maclaren
Industries Inc.

Allan V. Castledine
Chairman
Davidson Partners Limited

Charles J. Gardner, Q.C.
Partner
Goldberg, Shinder, Gardner,
Kronick & Tavel

R. Timothy Kenny
President and Chief Executive
Officer
James Maclaren
Industries Inc.

Gordon A. Mauchel
Vice President
Lumonics Inc.

Bernard Shinder, Q.C.
Partner
Shinder, Ages, Wiseman

Officers

Allan R. Buchanan
Chairman & Chief
Executive Officer

Robert J. Atkinson
President & Chief
Operating Officer

Gordon A. Mauchel
Vice President

Richard E. Hall
Secretary

Auditors

Deloitte Haskins & Sells
Ottawa, Ontario

Transfer Agents

The Canada Trust Company
Toronto, Ontario

Stock Exchange Listing

The Toronto Stock Exchange
Symbol — LUM

Solicitors

Goldberg, Shinder, Gardner,
Kronick & Tavel
Ottawa, Ontario

Tory, Tory, Deslauriers &
Binnington
Toronto, Ontario

Bankers

Canadian Imperial Bank of
Commerce
Ottawa, Ontario

Office Locations

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Other Locations

Contact Head Office for
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representatives and
distributors throughout
the world.

