

Tracing its origins back to Himeji Light Bulb Co., a manufacturer of home-use light bulbs established in 1916, Ushio Inc. began operations as a maker of industrial-use light sources in 1964.

Since that time, Ushio has developed light sources essential to a wide variety of industries, including lighting, office automation (OA), electronics, and imaging, as well as acquired the peripheral technologies necessary to create light products with a high degree of added value, such as computer control and precision machine control technologies. Drawing on this expertise, Ushio has expanded its business to include light units, light devices, and light systems.

The Ushio Group today is firmly positioned as an organization able to provide a complete lineup of light-related products, holds high global market shares and is well respected internationally.

### **PROFILE**

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### **Future-oriented statements**

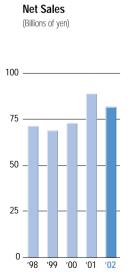
The plans, strategies, and other statements related to the outlook for future results in this annual report reflect the assumptions and beliefs of management based on currently available information. However, it should be noted that there is a possibility for actual results to differ significantly owing to such factors as changing social and economic conditions.

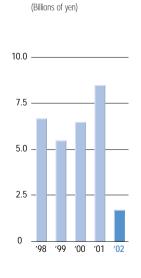
### CONSOLIDATED FINANCIAL HIGHLIGHTS

USHIO INC. AND SUBSIDIARIES Years ended March 31, 2002, 2001 and 2000

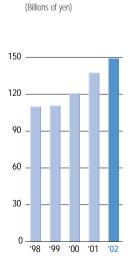
			Millions of yen	Thousands of U.S. dollars	
	2002	2001	2000	2002	
For the year:					
Net sales	¥ 81,301	¥ 89,138	¥ 73,109	\$ 610,139	
Operating income	9,775	15,338	9,154	73,358	
Net income	1,643	8,464	6,525	12,330	
At the year-end:					
Total assets	¥149,669	¥137,758	¥121,230	\$1,123,220	
Total shareholders' equity, net	106,837	93,262	87,566	801,779	
Per share of common stock (yen and U.S. dollars):					
Net income	¥ 11.77	¥ 60.62	¥ 46.73	\$0.09	
Cash dividends	13.00	15.00	12.00	0.10	
Net assets	765.32	667.93	627.17	5.74	

Note: Fiscal 2002 yen amounts have been translated into U.S. dollar amounts at ¥133.25=US\$1.00, the exchange rate prevailing on March 31, 2002.





**Net Income** 



**Total Assets** 



### Focusing on light solutions, Ushio delivers all kinds of light for wide and varied niche markets.



Since its founding, Ushio has developed and provided unique light sources for specialized niche markets. Retaining this niche market focus, we have grown as a company by aiming for the first or second position in terms of global market share for each of our business areas.

About a decade ago, the light business evolved from basic light sources to light units or light fixtures and light systems, products with high added value. Currently, Ushio is taking its strategy of "market interaction" one step further, to "customer interaction," a concept that meticulously incorporates customer requirements and existing systems to meet demand for light system integration with a high degree of added value.

The light products business in the 21st century will not

be led by hardware but by software and operating systems, as well as by related financial services such as leasing, loans, and insurance. The addition of these related services heralds a new era in light products.

The Ushio Group in the new century is seeking to grow beyond the current definition of a manufacturer by building on its core light solutions business. While increasing steadily competitiveness in this age of globalization, we are seeking to become a new light system creator.

SYSTEM-CREATOR
OF LIGHTS
Light System
Creator

nent and market growth
or interaction"

**SOLUTION-BUSINESS OF LIGHTS** 

JIRO USHIO Chairman and

Ushio Group Representative

Light Sources

Light Fixtures

High value added

Systems

### In a harsh economic environment, Ushio is pursuing quality management and widespread cost cutting to enhance its revenue structure.

Looking back on the state of the Japanese economy in fiscal 2002, the year ended March 31, 2002, individual consumption further declined in line with languishing stock markets. Financial uncertainty increased as employment and income environments deteriorated, and exports and IT-related investment fell due to the slow-down in the U.S. economy and the September 11 terrorist attacks. Consequently, apprehension regarding the future direction of the economy prevailed, and conditions tended to worsen.

Overseas, economic stagnation in the U.S. economy negatively affected the European and Asian economies. Overall, the economic climate seemed to slow further.

In this challenging environment, the Ushio Group attempted to improve business performance by proactively developing new technologies and products for the future, improving productivity and cutting production costs in existing businesses, and enhancing the Group's sales and marketing structure.

The negative effect of declining demand was extensive, however, with consolidated net sales dropping 8.8% from the previous term's result to ¥81,301 million, and operating income falling 36.3% to ¥9,775 million.

Stock market prices also declined greatly. As a result of the recording of a loss on revaluation of investment securities, net income dropped 80.6% from the previous term's result to ¥1,643 million.

Although we do not foresee a rapid recovery in the near future, the Ushio Group will continue to pursue quality management, transfer business to overseas facilities, and cut production costs, while at the same time significantly strengthening its income structure by

increasing efficiency and upgrading the marketing structure both in Japan and overseas. We are also focusing on research and development in high technology fields where we can make maximum use of the light source and optical technologies that are the Group's forte. In this way, we expect to secure an advantageous position over the competition.

I would like to thank our shareholders for their support and encouragement, now and in the future.

A. Tanaka

President and Chief Executive Officer

September, 2002

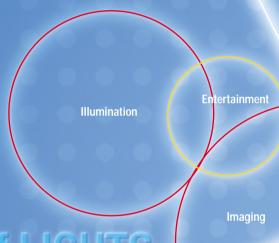


# The 21st Century— The Age of Light Ushio provides the light sources for the specialized fields of the future.

In the latter half of the 20th century, a technical revolution, mainly in the electronics manufacturing industry, made high-precision and ultrafine components a reality. Ushio's light technologies played an important role in solving the technical hurdles to achieve these developments.

In the 21st century, the world of nanotechnology is the cutting edge of technology, and light will play an even greater role in this field.

Ushio is focusing on the special needs of the customer as the best way to succeed in this new age, developing new light sources and new light systems, and creating a light solutions business with a high degree of systems integration.



## SOLUTION-BUSINESS of LIGHTS



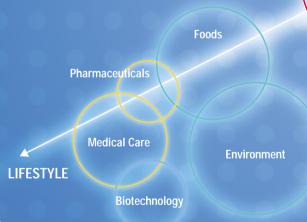
### **DIGITAL MOVIE PROJECTORS**

From film to digital-boldly pioneering a new kind of cinema as the top maker of projection equipment



### NEXT-GENERATION SEMICONDUCTOR AND EXPOSURE SYSTEMS

From lamps to lasers-imagining new types of semiconductors made possible by a top maker of extreme ultraviolet light sources





### HIGH DENSITY INTERCONNECTION

The first steps to nanotechnology—Ushio's projection exposure technology making micromachining possible



### **ENVIRONMENT FOCUSED BUSINESS**

Exploring new business fields to make environmentally responsible, cutting-edge production a reality

### CURRENT AND FUTURE FIELDS IN WHICH USHIO'S LIGHT SOURCES PLAY A VITAL ROLE

(Note: Light fields do not necessarily match the coordinate axes.)





### From film to digital-boldly pioneering a new kind of cinema as the top maker of projection equipment

### Ushio aims to hold the top share of market for digital movie projectors by 2004.

### Movie theaters worldwide switching to digital projection

The digital cinema does not use traditional film, but instead has a system to project digital data sent via satellite, fiber-optic cable, or DVD directly onto the screen.

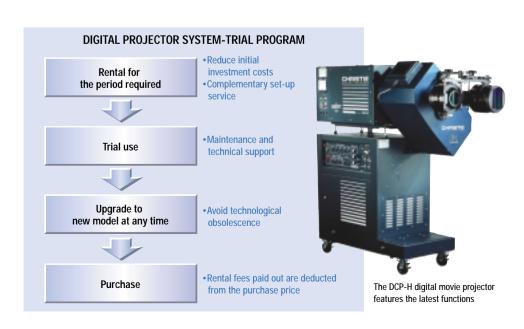
The cost of distributing the actual film used to screen movies in the United States is estimated to be US\$500 million annually. Digital projection systems eliminate the need to duplicate film, drastically reduce distribution costs, and offer a variety of other benefits, such as clear and clean image storage indefinitely, without degradation.

The volume of digital content is constantly increasing, and it is expected that the 60,000 screens in movie theaters around the world will soon switch from a film base to a digital base.

### A lease system to support the introduction of digital projectors

Many movie distribution companies in the United States have implemented programs to lease digital projection systems to theaters across the country. As the leading manufacturer of such systems, the Ushio Group's Christie Digital Systems, Inc. (CDS), has had a hand in designing these leasing programs from the earliest stages, proactively broadening these activities to promote the digitization of the movie industry.

In Japan, Ushio's Group Company, Xebex, Inc., launched the D-cinema Trial Program for renting out digital projectors in May 2002. Leasing programs reduce the burden on theaters of initial investment, and are attracting much attention as a useful way to promote the use of digital movie projectors.



### Development of a working model digital projector for widespread use

CDS has developed DCP-H, a state-ofthe-art digital movie projector, and commenced marketing it in April 2002. In addition to digital movies, the DCP-H allows the projection of video and HDTV. It also addresses many of the concerns that will be faced by digital cinema, such as protection against unauthorized copying. Featuring all the functions necessary to show movies, the DCP-H is a practical working model ready for widespread use. The first DCP-H in Japan will be installed at the Keisei Rosa, a cinema complex near Chiba Central Station opened in September 2002. As Japan's first foray into digital theater, this cinema has aroused high expectations.





The Keisei Rosa Cinema interior (top) and the DCP-H digital projector in the projection room

### The Ushio Group and the digital cinema business

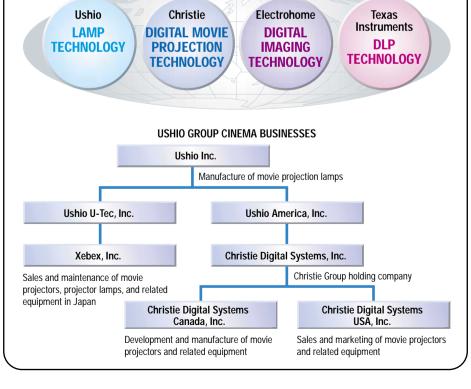
Ushio, which holds a 45% share of the global market for xenon lamps for projectors, acquired the U.S. projector manufacturer Christie, Inc. (currently CDS), in 1992. Since that time, Christie has grown in line with the number of cinema complexes to maintain the top share of the global market.

In 1999, the Ushio Group purchased the Visual Equipment Division of Electrohome, a Canadian company with an established global reputation in digital imaging technology. The follow-

ing year, Ushio entered into a supply agreement with U.S.-based Texas Instruments for digital light processing (DLP) engines, which are essential to digital movie projectors.

The Ushio Group, which has accumulated world-class digital movie technology through its acquisition of Christie, is currently a pioneer in the field of digital movie projection equipment. We are focusing on winning the top share of this global market.

### **DIGITAL CINEMA SYSTEMS** 4 AREAS OF EXPERTISE





### From lamps to lasers-imagining new types of semiconductors made possible by a top maker of extreme ultraviolet light sources

The Ushio Group continues to hold the top market share in light sources for lithography.

### Pulling ahead of the competition in excimer lasers

Competition is fierce among the world's device makers to develop the next generation of semiconductors in the megabit (106) and gigabit (109) classes. The semiconductor manufacturing equipment industry has entered an age of competition in technological innovation, in which the company that is able to develop these devices most rapidly will attain a first developer advantage in the industry.

The key to finer-width semiconductor circuit patterns is the resolution capabilities of the stepper (reduction projection exposure device). These resolution capabilities, in turn, are largely dependent on the capabilities of the stepper's light source.

Gigaphoton, Inc., a joint venture between Ushio and Komatsu Ltd., has been developing light sources for laser steppers since its August 2000 inception, beginning with KrF (krypton fluoride) excimer lasers. Currently, Gigaphoton is now developing the ArF (argon fluoride) excimer lasers used in 90nm (10-9m) manufacturing processes. Gigaphoton will introduce a mass production model in 2002, a step ahead of its U.S. competitors.

Gigaphoton is currently engaged in the development of candidates for next-generation light sources such as F2 (fluorine dimmer) excimer lasers, and next-nextgeneration EUV (extreme-ultraviolet) light

> sources. The Company continues to meet semiconductor makers' need for light sources as they struggle to make the fanciful semiconductors of the future a reality.



KrF excimer laser (G21K series)

ArF excimer laser (G40A series)

### LIGHT SOURCES FOR LITHOGRAPHY PROCESSES-ROAD MAP

									(Year)
2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
	130	115	110	90	80	70	65	55	50
	90	75	65	55	50	45	40	35	32
MATSU	GIGAP	HOTON							
	KOMAT	SU	USHIO		GIGAPHOTON				
					ASET	(KOMATSU+U	SHIO+GIGAPI	HOTON)	
				EUVA					
		2000 2001 130 90 MATSU GIGAP	2000         2001         2002           130         115           90         75	2000         2001         2002         2003           130         115         110           90         75         65	130 115 110 90 90 75 65 55 MATSU GIGAPHOTON USHIO	2000 2001 2002 2003 2004 2005  130 115 110 90 80  90 75 65 55 50  MATSU GIGAPHOTON  KOMATSU USHIO GIGAPHOTON  ASET	2000 2001 2002 2003 2004 2005 2006  130 115 110 90 80 70  90 75 65 55 50 45  MATSU GIGAPHOTON  KOMATSU USHIO GIGAPHOTON  ASET (KOMATSU+U	2000 2001 2002 2003 2004 2005 2006 2007  130 115 110 90 80 70 65  90 75 65 55 50 45 40  MATSU GIGAPHOTON  KOMATSU USHIO GIGAPHOTON  ASET (KOMATSU+USHIO+GIGAP)	2000         2001         2002         2003         2004         2005         2006         2007         2008           130         115         110         90         80         70         65         55           90         75         65         55         50         45         40         35           MATSU         GIGAPHOTON           ASET (KOMATSU+USHIO+GIGAPHOTON)

### Regular and emergency maintenance handled by REDeeM, a remote diagnostic system

To increase market share for excimer lasers, it is important to provide a solid support system that enhances convenience for device and stepper makers.

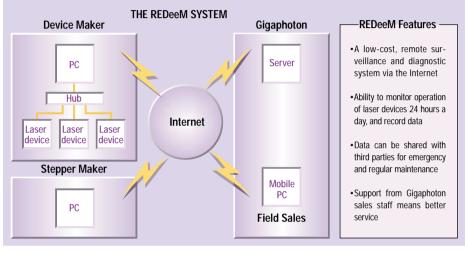
With this in mind, in 2001 Gigaphoton introduced REDeeM, a monitoring and diagnostic system for laser devices used in steppers.

The REDeeM system allows both the stepper maker and user (device maker), as well as the field representative (Gigaphoton) to share operating data on a company's laser devices around the world by means of the Internet. This facilitates remote monitoring and diagnosis, which in turn allows appropriate technical support and timely maintenance. The system also reduces communication costs and downtime. REDeeM has earned high acclaim for its effectiveness and convenience.





The R&D division at the Gigaphoton Oyama office



### Building a joint research structure to take the leadin next-next-generation exposure technology

The next-next-generation semiconductor exposure technology that will follow ArF excimer lasers and F2 excimer lasers is EUV (extreme-ultraviolet). The SoC (system on chip) process, marked by finer-width circuit patterns and higher integration, is becoming mainstream for manufacturing LSIs (large-scale integrated circuits). To keep pace with current technological advances, a mastery of EUV technology is increasingly necessary.

From left: Fujio Mitarai, President and CEO, Canon Inc.; Jiro Ushio, Chairman, Ushio Inc.; Shoichiro Yoshida, Chairman and CEO, Nikon Corporation

In May 2002, 10 major Japanese manufacturers of light sources, exposure equipment, and semiconductors (listed below) launched a nationwide technological research association, the Extreme Ultraviolet Lithography System Development Association (EUVA), with the aim of narrowing the research gap between companies in Japan and their counterparts in the United States and Europe. The first chairman of this association is Ushio's

Chairman, Jiro Ushio.

Participating Companies (in alphabetical order) Light source makers: Gigaphoton, Komatsu, Ushio Exposure equipment makers: Canon, Nikon Semiconductor makers:

Fujitsu, Hitachi, Mitsubishi Electric, NEC, Toshiba



### The first steps to nanotechnology— Ushio's projection exposure technology making micromachining possible

### The Ushio Group holds a commanding market share in the large-area projection exposure systems field.

### Exposure technology is leading the way to micromachining

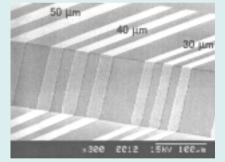
Beginning in the latter half of the 1980s, research into micromachining has today produced such devices as pressure sensors, acceleration sensors, microgyros.

Recent research has focused on applications for optical switches, not only in optical and high-frequency devices but also in LSI production systems, medicaluse devices, and biotechnological applications. These cutting-edge technologies and applications of the 21st century hold great promise for the future.

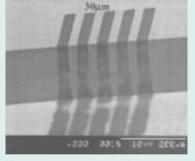
High quality three-dimensional microfabrication technology is integral to micromachine production, and it is exposure technology that makes this possible. For example, the projection exposure method, which facilitates exceptionally minute processing, makes possible the precision processing of three-dimensional components because of its superior focal depth.

### Stepped Substrate Exposure Accuracy

The projection exposure method allows precision processing both above and below the step, as in diagram (a).

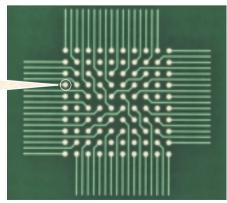


(a) Sample of step projection exposure



(b) Sample of proximity exposure (Source: Tohoku University Esashi Laboratory)





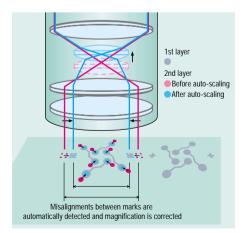
**Step-and-Repeat Projection Exposure System Registration Accuracy** 

A land (inner circle) of 203-µ diameter is superimposed over the via (outer circle) of 263-µ diameter with extreme accuracy.

### Pioneering the micromachining world

As a top maker of exposure light sources and exposure devices for high density interconnection technologies, Ushio attracted much attention with its early development of an exposure device for micromachine production. Since that time, the Company has developed applicationspecific and meticulous systems to handle the various technical factors arising in line with the expanding range of applications for micromachines, such as exposure tuning systems, autoscaling systems, and numerical aperture (NA) variable systems.

Some of the most important applications of micromachining technology are predicted to be in medical-use devices. Minuscule components that have been processed to micron-level precision are expected to be the driving force behind a medical revolution in the near future.



### **Auto-scaling and Variable NA Functions**

Expansion or shrinkage of a pattern caused by similar shifts in the substrate is detected, and the projection magnification is automatically adjusted. The NA can be varied by changing the aperture in the lens.

With its superior projection exposure technologies, Ushio will tirelessly take on new challenges in micromachining, a

world that has captivated the human imagination.

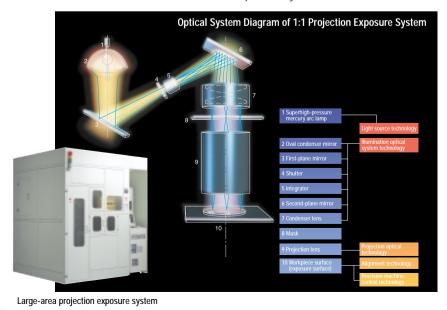
### **Exposure systems for high density interconnection** technologies are creating micromachines

Such devices as driver ICs connecting LCD (liquid crystal display) panels in cellular phones and digital cameras, for example, and packaging solutions such as CSP (chip scale package), use TAB (tape automated bonding) tape on which is etched precision circuit patterns.

Combining its proprietary light source exposure and optical technologies, Ushio in 1989 developed a TAB exposure device specifically for TAB tape. This has been highly praised in the market. The number of users in countries such as Korea and Taiwan is

growing, and we now enjoy an almost 100% share of the global market.

Ushio will continue to develop largearea projection exposure systems, block projection exposure systems, and step-and-repeat projection exposure systems incorporating superior focal depths, high-resolution optical systems, high density interconnection alignment, and high-speed clean carrier systems. We hold an unchallenged position in the high density interconnection systems field as the sole manufacturer providing total solutions, from light sources to exposure systems.





### Exploring new business fields to make environmentally responsible, cutting-edge production a reality

### Flash lamps deliver the proper burst of energy at the proper moment.

### Dazzling flash processing

Xenon flash lamps cover a wide spectrum from ultraviolet to infrared, the representative low-energy light source that delivers the proper burst of energy at the proper moment. They are utilized mainly in projection and display lighting, but are also found in a variety of fields and applications includ-

> ing the fixing toner in high-speed printers and OA equipment, connector molds for optical fiber, disk coatings, excimer lasers, and sterilization.

Recently, xenon flash lamps have followed the progress of cutting-edge technology and are being used in a wide variety of applications in fields such as resist exposure, annealing, photo-induced CVD (chemical vapor deposition), and curing.

### Flash Lamp Annealing (FLA) technology makes compact electronics possible

The current method for bonding minute transistors to semiconductor substrates is to infuse boron and arsenic ions on to the surface of the substrate, and heat the material for approximately 10 seconds with a rapid thermal annealing (RTA) system. This heat processing method has a bonding depth of 25nm to 30nm, however, making it unsuitable for the 20nm or less processing necessary for next-generation LSIs. The solution to this problem is flash lamp annealing (FLA) technologies using xenon flash lamps.

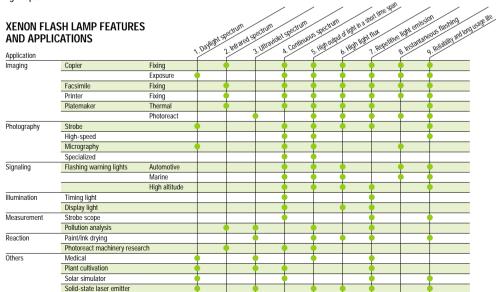
FLA technology was jointly developed by Toshiba, Dainippon Screen, and Ushio. With this technology, we are drawing nearer to the minuteness needed for next-generation LSIs, and are making electronic devices more compact and lightweight. Currently, these three companies are conducting field tests on practical applications.







An assortment of flash lamps, From top: linear. helical, and ring shaped.



### High energy, highly absorbent electron beams make non-solvent processing possible.

### Ushio's proprietary electron beam technology for emitting soft electrons



The Min-EB ultra-compact electron beam, which emits a "soft electron" (low-energy) beam

New solutions that are alternatives to light can be found in Ushio's electron beam business. In 1997 Ushio acquired American International Technologies (currently Ushio International Technologies), the company

that developed the world's first Min-EB ultracompact electron beam, which emits a "soft electron" (low-energy) beam. The addition of this new company to the Ushio Group was the start of the business of applications for this new electron beam.

Although electron beams have many advantages over ultraviolet beams, such as higher energy and superior absorption, until now the range of applications in which they could be used was limited due to the size and expense of the exposure system. The Min-EB is small enough to be held in hand, and by emitting a soft electron beam not only provides a lightweight and simple construction with a low price, but as a low-energy electron beam that facilitates non-solvent processing at room temperature opens up a wide range of applications in cutting-edge fields such as surface modification and precision cleaning, resist hardening and CVD, and medical-related sterilization.

### Compact testing equipment hastening application development of electron beams

With the successful creation of the Min-EB, the development of compact and low-cost testing equipment that allows for easy application research with soft electrons was eagerly anticipated by the semiconductor production, medical and chemical industries.

Ushio's Min-EBlabo STM-Chamber, an ultracompact electron beam sterilization system is a research experiment system developed in response to these market needs. With this new product, application research with soft electron beams is expected to accelerate rapidly, increasing



Ultracompact electron beam sterilization system: Min-EBlabo STM-Chamber

# Special thin film (Electron beam irradiation window) Sealed glass tube

### Min-EB Structure and Operation

The Min-EB contains an electron source (hot cathode and grid) in a specially designed glass tube, sealed in an ultrahigh vacuum. Electrons from the hot cathode are accelerated to an extremely high speed by the potential difference between the cathode and a special thin-film irradiation window. and emitted into the atmosphere.

### **Practical applications** in printing

In September 2001, Ushio developed a practical application for its ultracompact, ultra low-energy electron beam hardening system in the printing and coating field through a joint development with Toyo Ink Manufacturing Co., Ltd.

The Ecocure electron beam ink curing system is able to dry and harden inks and coatings containing agents that are not filtered out by ultraviolet light. The electron beam hardening method also differs from the ultraviolet hardening method in that it dispenses with the use of solvents and offers greater energy efficiency. This environmentally friendly technology is expected to trigger demand for high-value-added printing.





The Ecocure electron beam ink curing system

### **ELECTRONICS**

### Light sources for semiconductor exposure systems: 80% global share Light sources for printed circuit board exposure systems: 100% global share

### Semiconductor manufacturing equipment

Ever-finer semiconductor circuit patterns depend on the crucial photolithography (exposure) process. Through a combination of joint development with stepper makers and a system of meticulous technical support for device makers, Ushio maintains an 80% share of the global market for lamps for the photolithography process. These products are used not only by most of the world's major device makers, such as Intel, Texas Instruments, NEC, and Fujitsu, but also by the principal stepper makers, such as Nikon, Canon, and ASML.

In August 2000, Ushio established Gigaphoton, Inc., a joint venture with Komatsu Ltd., to develop next-generation semiconductor laser steppers. Beginning with KrF (krypton fluoride) excimer lasers, Gigaphoton is now developing and manufacturing ArF (argon fluoride) excimer lasers, aiming to gain a large share of the market for laser lithography. (See page 10.)

### **Electronics interconnection machines**

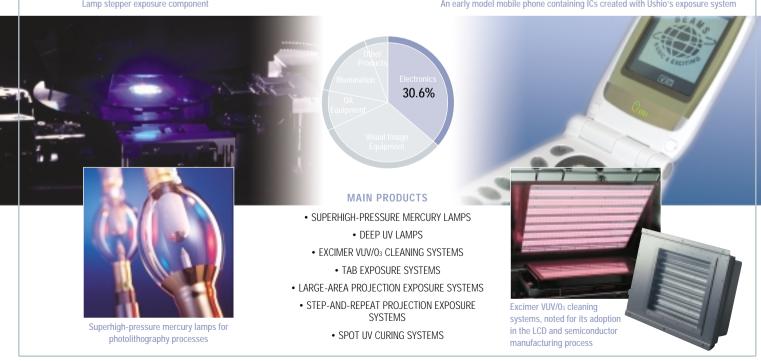
Ushio's light technologies are highly regarded in high-precision exposure, bonding/fixing, cleaning, and coating processes necessary for manufacturing electronic devices and printed circuit boards.

In particular, Ushio has won an almost 100% share of the market for TAB (tape automated bonding) exposure systems, large-area projection exposure systems, and step-andrepeat projection exposure systems, all of which facilitate the precise exposure of circuit patterns. As more new electronic and IT-based products are developed, electronic devices and printed circuit boards born of new technologies will repeatedly find new applications and demand for these exposure systems will continue to grow.

In recent years, Excimer VUV/O3 cleaning systems employing excimer lamps have increasingly been adopted for use in the precision dry cleaning and surface improvement stages of liquid crystal and semiconductor manufacturing processes. These processing technologies are expected to be widely used in electronics interconnection machines.

Lamp stepper exposure component

An early model mobile phone containing ICs created with Ushio's exposure system

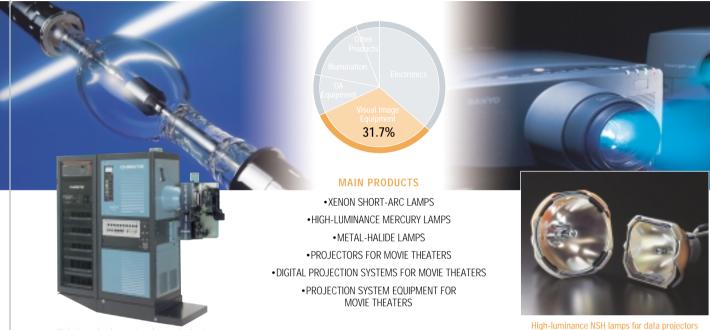


### **VISUAL IMAGE EQUIPMENT**

### The leading manufacturer of movie projectors for the cinema business, and a full lineup of light sources for data projectors

Xenon short-arc lamp for movie theater projection systems

Digital projectors incorporating a high-luminance NSH lamps



### Cinema business

Christie projection system for movie theaters

Ushio's movie theater business began with the Company's attainment of a 45% share of the global market for xenon short-arc lamps for movie theater projectors. With the acquisition of Christie, Inc. (currently Christie Digital Systems, Inc.), in 1992, Ushio expanded to become a full-scale supplier of cinema projection systems.

New styles of movie theaters such as the cinema complex and "multiplex" cinema have spread from the United States to Europe, Japan, and other parts of Asia. Today, Christie is the world's leading manufacturer of movie projection equipment.

In response to the rapid expansion of digitization in the late 1990s, the Ushio Group purchased the Visual Equipment Division of Electrohome (Canada) in 1999 to acquire its digital imaging technology, and the following year concluded a supply contract with Texas Instruments (U.S.) for its digital light processing (DLP) engines. With the technology that it has amassed, the Ushio Group is pioneering new digital movie projection equipment with a focus on expanding its share of this market.

### Light sources for data projectors

The digital projector market has continued its rapid, doubledigit growth for the past few years, and Ushio continues to develop and manufacture the metal-halide lamps, high-luminance mercury lamps (NSH lamps), and xenon short-arc lamps that are used in these projectors.

Ushio offers a broad range of products, from small mobile and portable models to 1,000-watt units, and has earned the full trust of major projector manufacturers such as NEC, Hitachi, and Sony.

Home-use projection television is also forecast to become more widespread in the near future. Expectations are high for this light source application, which Ushio has already begun to develop from a variety of approaches.

### **OA EQUIPMENT**

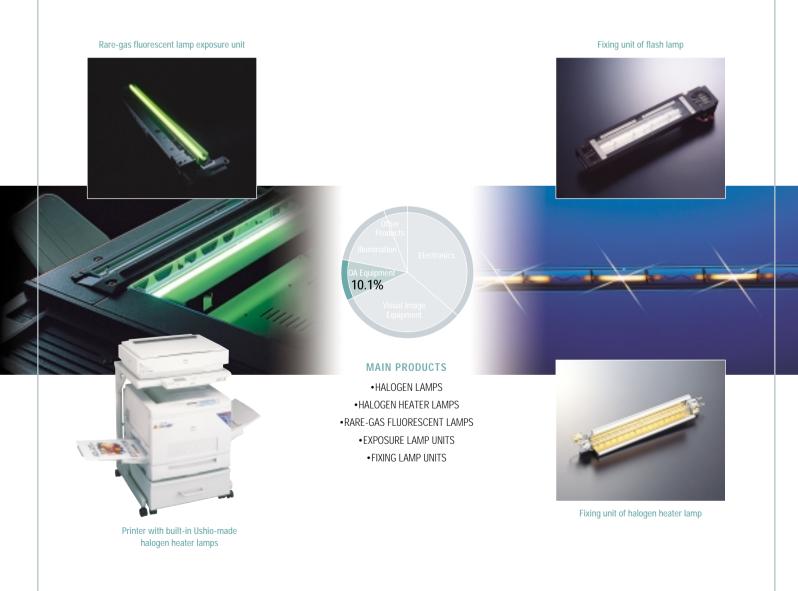
# Maintaining a top global share in the office automation field, and becoming more market-oriented by strengthening Asian-based production

Copiers, facsimiles, and system-networked printers all transmit scanned image data to receptors and fix images to paper. Ushio's light sources perform important roles in facilitating these two key processes.

Ushio's halogen lamps and rare-gas fluorescent lamps are used by most of the world's major manufacturers of OA equipment, including Ricoh, Canon, Xerox, and Sharp.

Ushio's halogen lamps and rare-gas fluorescent lamps have been well received, holding 62% and 71% shares of the global market, respectivery.

Ushio is aggressively shifting production to other Asian countries in order to meet market demands of OA equipment makers.



### **ILLUMINATION**

### A complete lineup of light sources for professional use

High efficiency, low energy metal-halide lamps





Various light fixtures





### MAIN PRODUCTS

- HALOGEN LAMPS
- •METAL-HALIDE LAMPS
- •XENON SHORT-ARC LAMPS
- •XENON FLASH LAMP SYSTEMS
- •FIBER LIGHT SOURCE SYSTEMS
  - •LIGHTING EQUIPMENT
- •ILLUMINATION INCIDENTAL FACILITIES



Moving yoke spotlight

### Creating new markets with total planning services

The illumination that Ushio develops and provides is the kind of high-quality illumination demanded by professionals. Products such as halogen lamps with highly accurate color representation and xenon lamps with powerful white beams are used in a wide variety of fields where quality illumination is crucial, not only in commercial facilities, theaters, studios, and landscaping but also in the automotive, marine, and fishery fields.

The Ushio Group also provides light sources for amusement and theme parks, event halls, and banquet rooms, as well as total solutions that include various kinds of illumination, design, acoustics, fixtures, and fittings.

Illumination show technology from the Ushio Group can be found at Tokyo Disneyland, Tokyo Disney Sea, IKSPIARI, and Universal Studios Japan, where it adds to the enjoyment of the visitors.

# FINANCIAL SECTION

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### FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL DATA

USHIO INC. AND SUBSIDIARIES Years ended March 31, 2002, 2001, 2000, 1999 and 1998

					Millions of yen
	2002	2001	2000	1999	1998
For the year:					
Net sales	¥ 81,301	¥ 89,138	¥ 73,109	¥ 69,216	¥ 71,598
Net income	1,643	8,464	6,525	5,454	6,682
Capital expenditures	4,837	4,960	2,027	4,612	5,034
Depreciation and amortization	2,813	2,604	2,675	2,778	2,575
R&D expenses	3,557	3,683	3,826	2,329	1,849
At the year-end:					
Total assets	149,669	137,758	121,230	111,080	110,316
Total shareholders' equity, net	106,837	93,262	87,566	81,301	77,433
Cash flows*:					
Net cash provided by operating activities	7,305	12,332	4,696	6,624	8,178
Net cash (used in) provided by investing activities	(7,496)	(5,660)	343	(10,439)	7,770
Net cash used in financing activities	(2,112)	(1,492)	(1,029)	(1,927)	(5,959)
Per share of common stock (yen):					
Net income	¥ 11.77	¥ 60.62	¥ 46.73	¥ 39.06	¥ 47.86
Cash dividends	13.00	15.00	12.00	11.00	11.00
Net assets	765.32	667.93	627.17	582.28	554.59
Key financial ratios:					
Return on equity (%)	1.6	9.4	7.7	6.9	8.9
Return on assets (%)	1.1	6.5	5.6	4.9	6.1
Asset turnover (times)	0.6	0.7	0.6	0.6	0.7
Return on sales (%)	2.0	9.5	8.9	7.9	9.3

Note: Return on equity = Net income / Average shareholders' equity X 100

Return on assets = Net income / Average total assets X 100

Asset turnover = Net sales / Average total assets

Return on sales = Net income / Net sales X 100

<sup>\*</sup> Beginning with the fiscal year ended March 31, 2000, principles for the preparation of consolidated cash flow statements were introduced in Japan, and these have been applied by the Company for the year under review. Cash flow statements for fiscal 1999 and previous years were prepared by the Company for the convenience of readers outside Japan. When making year-on-year comparisons, please take note of this change in accounting principles.

USHIO INC. AND SUBSIDIARIES

### **SALES**

Consolidated net sales for the year under declined 8.8% to ¥81,301 million (US\$610.1 million). Although demand was strong for rare-gas fluorescent gas lamps used in OA equipment, excimer lamps for cleaning LCD substrates and digital movie projectors and related equipment, the decrease was the result of falling demand for exposure lamps due to the deterioration in the semiconductor and electronic components market, and slow demand for precision exposure systems for the production of printed circuit boards and ultraviolet radiation devices for the precision fixing of electronic components that accompanied the sudden drop in IT-related demand.

### RESULTS BY BUSINESS SEGMENT

### Light Source Application Products

Products in this segment comprise two product groups, those relating to tube-style lamps and those relating to optical systems.

In the tube-style lamp product group, along with a slight increase in demand for high-luminance lamps for data projectors, strong demand was seen for lamps used for stage lighting and general illumination, rare-gas fluorescent gas lamps used in OA equipment, and excimer lamps for cleaning LCD substrates. Demand declined for various types of exposure lamps, however, due to the slump in demand in the semiconductor and electronic components market. Demand for halogen lamps for OA equipment also fell.

In the optical systems product group, although digital movie projectors and related equipment contributed to sales, accompanying the sudden drop in IT-related demand for products such as mobile phones and portable devices, demand declined for high-precision TAB exposure systems for the production of printed circuit boards and ultraviolet radiation devices for precision fixing applications of the pick-up lenses used in optical disk readers. Demand also fell for resist hardening semiconductor production equipment due to curbs on capital investment in the semiconductor industry.

As a result, sales in this segment declined 9.0% from the previous term to \(\frac{\pmathbf{Y77,707}}{707}\) million (US\(\frac{\pmathbf{S83.2}}{100}\) million), while operating income fell 35.5% to ¥9,823 million (US\$73.7 million).

### Machinery for Industrial Uses and Other Business

Curbs on capital investment contributed to a harsh operating environment, and though demand was strong for injection molding machines and food packaging machinery, sales of automatic control systems declined.

As a result, sales in this segment declined 3.6% from the previous term to ¥3,612 million (US\$27.1 million), and an operating loss of ¥48 million (US\$0.4 million) was recorded.

### RESULTS BY GEOGRAPHIC SEGMENT

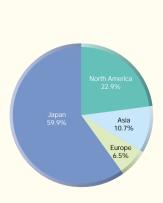
### Japan

Along with a slight increase in demand for high-luminance lamps for data projectors, strong demand was seen for lamps used for stage lighting and general illumination, rare-gas fluorescent gas lamps used in OA equipment, and excimer lamps for cleaning LCD substrates. Demand fell for all types of ultra high pressure mercury lamps following the deterioration in the semiconductor and electronic components market, however, and for halogen lamps for OA equipment due to the effects of the increased digitization and transfer of production overseas. Demand was also reduced for high-precision TAB exposure systems for the production of printed circuit boards and ultraviolet radiation devices for precision fixing applications in electronic and optical components. As a result, sales in this segment declined 15.1% from the previous term to ¥56.068 million (US\$420.8 million).

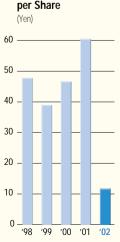
### North America

Investment in movie theaters in the United States is slowing, and although digital movie projectors and related equipment contributed to sales, demand for film-type projectors, as well as large monitoring systems and related equipment declined. Demand also fell for all types of ultra high pressure mercury lamps following the deterioration in the semiconductor and electronic components market, as well as for halogen lamps for OA equipment. As a result, sales in this segment declined 0.9% from the previous term to ¥21,429 million (US\$160.8 million).

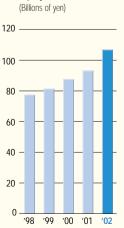
### Proportion of Net Sales, by Geographic Segment



Net Income per Share



Total Shareholders' Equity



### Return on Equity



### Europe

Although demand for halogen lamps for OA equipment and all types of exposure lamps for the semiconductor and electronic components industries declined, strong demand was seen for halogen lamps for stage lighting and general illumination. As a result, sales in this segment increased 11.0% from the previous term to ¥6,097 million (US\$45.8 million).

### Asia

Although demand for high-luminance mercury lamps for data projectors was weak, strong demand was seen for rare-gas fluorescent gas and halogen lamps and used in OA equipment, ultra high pressure mercury lamps for exposure of LCD circuits, and excimer lamps for cleaning LCD substrates. As a result, sales increased 9.8% from the previous term to ¥10,009 million (US\$75.1 million).

Consolidated operating income for the year fell 36.3% from the previous term to ¥9,775 million (US\$73.4 million), following the decline

Consolidated net income for the year declined 80.6% from the previous term to ¥1,643 million (US\$12.3 million), due mainly to the recording of a loss on revaluation of investment securities following the dramatic decline in the stock market.

### **FINANCIAL POSITION**

Consolidated total assets as of March 31, 2002 totaled ¥149,669 million (US\$1,123.2 million), an increase of 8.6% from the end of the previous year. Notes and accounts receivable declined slightly along with the drop in sales, but investment securities rose greatly due to the adoption of current value accounting.

The adoption of current value accounting resulted in an unrealized holding gain on other securities, exclusive of applicable taxes, of ¥13,007 million (US\$97.6 million).

### **CASH FLOWS**

### Cash Flows from Operating Activities

Net cash provided by operating activities was ¥7,305 million (US\$54.8 million). Although income before income taxes and minority interests in earnings of affiliates fell dramatically to ¥4,120 million (US\$30.9 million) as a reflection of our business performance, the ¥5,010 million (US\$37.6 million) loss on revaluation on investment securities, the principal reason for this decline, did not have an effect on cash flow. In terms of working capital, accounts receivable improved to ¥5,785 million (US\$43.4 million) due to a dramatic decline in credits and debts, while accounts payable decreased to ¥4,952 million (US\$37.2 million). Income taxes paid amounted to ¥6,104 million (US\$45.8 million), reflecting earnings from the previous term.

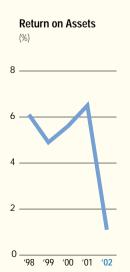
### Cash Flows from Investing Activities

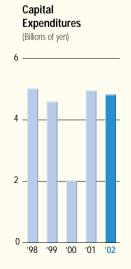
Cash used in investing activities was ¥7,496 million (US\$56.3 million), which was ¥1836 million more than in the previous fiscal year. Principal uses of cash were capital investments, mainly for the parent company, and cash loans to Gigaphoton, an affiliate accounted for by the equity-method.

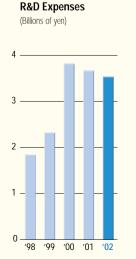
### Cash Flows from Financing Activities

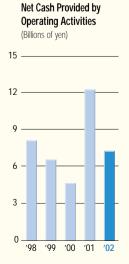
Cash used in financing activities was ¥2,112 million (US\$15.9 million), which was ¥620 million more than the previous term. The principal use of cash was an increase in cash dividends paid out by the parent company. The total amount of debt during the period remained steady, with increases in short-term bank loans roughly equaling repayment of long-term debt.

As a result of the above cash flows, cash and cash equivalents at the end of the year totaled \(\pma22,489\) million (US\\$168.8 million), which was ¥1,906 million less than the previous term.









### **CONSOLIDATED BALANCE SHEETS**

USHIO INC. AND SUBSIDIARIES At March 31, 2002 and 2001

		Millions of yen	Thousands of U.S. dollars (Note 2)
Assets	2002	2001	2002
Current assets:			
Cash and bank deposits	¥ 12,253	¥ 12,141	\$ 91,955
Short-term investments (Note 9)	12,513	14,179	93,906
Notes and accounts receivable	25,252	30,567	189,509
Less: Allowance for doubtful accounts	(339)	(410)	(2,544
Inventories	15,727	15,019	118,026
Deferred tax assets (Note 6)	2,058	2,355	15,445
Prepaid expenses and other current assets	4,893	5,558	36,720
Total current assets	72,357	79,409	543,017
Property, plant and equipment, at cost (Note 4):			
Land	9,533	9,357	71,542
Buildings and structures	16,841	15,647	126,387
Machinery and equipment	24,072	21,253	180,653
Construction in progress	511	1,262	3,835
	50,957	47,519	382,417
Less: Accumulated depreciation	(25,695)	(23,953)	(192,833
Property, plant and equipment, net	25,262	23,566	189,584
Investments and other assets:			
Investment securities (Note 9)	42,523	25,025	319,122
Investments in and advances to affiliates	_	966	_
Deferred tax assets (Note 6)	773	1,733	5,801
Other assets	8,754	7,059	65,696
Total investments and other assets	52,050	34,783	390,619
Total assets	¥149,669	¥137,758	\$1,123,220

		Millions of yen	Thousands of U.S. dollars (Note 2)
Liabilities, minority interests and shareholders' equity	2002	2001	2002
Current liabilities:			
Short-term bank loans (Note 3)	. ¥ 8,549	¥ 6,807	\$ 64,158
Current portion of long-term debt (Note 4)	1,835	3,361	13,771
Notes and accounts payable	12,019	16,853	90,199
Income taxes payable	1,669	5,320	12,525
Deferred tax liabilities (Note 6)	. 44	92	330
Other current liabilities	4,999	7,128	37,516
Total current liabilities	. 29,115	39,561	218,499
Long-term liabilities:			
Long-term debt (Note 4)	2,838	2,479	21,298
Deferred tax liabilities (Note 6)	. 8,166	29	61,283
Retirement benefits (Note 11)	1,346	1,131	10,102
Other long-term liabilities	582	509	4,368
Total long-term liabilities	. 12,932	4,148	97,051
Minority interests	. 785	787	5,891
Shareholders' equity (Notes 5 and 12):			
Common stock:			
Authorized—300,000,000 shares;			
Issued—139,628,721 shares	. 19,556	19,556	146,762
Additional paid-in capital	. 28,119	28,119	211,025
Retained earnings	. 46,116	46,635	346,086
Unrealized holding gain on other securities	. 13,007	_	97,614
Translation adjustments	. 84	(1,047)	630
	106,882	93,263	802,117
Treasury stock, at cost:			
29,447 shares in 2002 and 827 shares in 2001	(45)	(1)	(338)
Total shareholders' equity, net	106,837	93,262	801,779
Total liabilities, minority interests and shareholders' equity	¥149 669	¥137,758	\$1,123,220

### CONSOLIDATED STATEMENTS OF INCOME

USHIO INC. AND SUBSIDIARIES Years ended March 31, 2002 and 2001

		Millions of yen	Thousands of U.S. dollars (Note 2)
	2002	2001	2002
Net sales	¥81,301	¥89,138	\$610,139
Cost of sales	51,661	53,752	387,700
Gross profit	29,640	35,386	222,439
Selling, general and administrative expenses (Note 7)	19,865	20,048	149,081
Operating income	9,775	15,338	73,358
Other income (expenses):			
Interest and dividend income	1,450	1,488	10,882
Interest expense	(412)	(445)	(3,092)
Other, net	(6,693)	(2,035)	(50,229)
	(5,655)	(992)	(42,439)
Income before income taxes and minority interests in earnings of affiliates	4,120	14,346	30,919
Income taxes (Note 6):			
Current	2,404	7,556	18,041
Deferred	(29)	(1,818)	(217)
	2,375	5,738	17,824
Income before minority interests in earnings of affiliates	1,745	8,608	13,095
Minority interests in earnings of affiliates	(102)	(144)	(765)
Net income (Note 12)	¥ 1,643	¥ 8,464	\$ 12,330

### CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

USHIO INC. AND SUBSIDIARIES Years ended March 31, 2002 and 2001

		Millions of yen	Thousands of U.S. dollars (Note 2)
	2002	2001	2002
Common stock:			
Balance at beginning of year			
(2002—139,628,721 shares; 2001—139,628,721 shares)	¥19,556	¥19,556	\$146,762
Balance at end of year			
(2002—139,628,721 shares; 2001—139,628,721 shares)	¥19,556	¥19,556	\$146,762
Additional paid-in capital:			
Balance at beginning of year	¥28,119	¥28,119	\$211,025
Balance at end of year	¥28,119	¥28,119	\$211,025
Retained earnings (Note 12):			
Balance at beginning of year	¥46,635	¥39,898	\$349,981
Add:			
Net income	1,643	8,464	12,330
Deduct:			
Cash dividends paid	(2,095)	(1,675)	(15,722)
Bonuses to directors and corporate auditors	(67)	(52)	(503)
Balance at end of year	¥46,116	¥46,635	\$346,086
Unrealized holding gain on other securities:			
Balance at beginning of year	¥ —	¥ —	\$ —
Net change during the year	13,007	_	97,614
Balance at end of year	¥13,007	¥ —	\$ 97,614
Translation adjustments:			
Balance at beginning of the year	¥ (1,047)	¥ —	\$ (7,858)
Net change during the year	1,131	(1,047)	8,488
Balance at end of year	¥ 84	¥ (1,047)	\$ 630
Con pates to consolidated financial statements			

### CONSOLIDATED STATEMENTS OF CASH FLOWS

USHIO INC. AND SUBSIDIARIES Years ended March 31, 2002 and 2001

		Millions of yen	Thousands of U.S. dollars (Note 2)
	2002	2001	2002
Operating activities:			
Income before income taxes and minority interests in earnings of affiliates	¥ 4,120	¥14,346	\$ 30,919
Depreciation and amortization	2,813	2,604	21,111
Interest and dividend income	(1,450)	(1,488)	(10,882)
Interest expense	412	445	3,092
Equity in loss of affiliates	1,053	187	7,902
Loss on rev aluation of investment securities	5,010	94	37,598
Gain arising from securities, valued at fair market, contributed to employees'			
retirement benefit trust (Note 11)	_	(1,311)	_
Retirement benefits expenses at transition	_	2,485	_
Decrease (increase) in notes and accounts receivable	5,785	(4,599)	43,415
Increase in inventories	(54)	(3,039)	(405)
(Decrease) increase in notes and accounts payable	(4,952)	4,172	(37,163)
(Decrease) increase in accrued expenses	(185)	98	(1,388
Other	(49)	2,496	(368
Bonuses paid to directors and corporate auditors	(67)	(52)	(503)
Subtotal	12,436	16,438	93,328
Interest and dividends received	1,413	1,448	10,604
Interest paid	(440)	(493)	(3,302)
Income taxes paid	(6,104)	(5,061)	(45,808)
<u> </u>	7,305	12,332	54,822
Net cash provided by operating activities	7,303	12,332	34,022
Investing activities:			
Increase in time deposits	(338)	(1,814)	(2,537)
Decrease in time deposits	273	1,802	2,049
Purchases of short-term investments	(1,850)	(1,675)	(13,884
Proceeds from sale of short-term investments	1,277	1,830	9,583
Purchases of property, plant and equipment	(5,118)	(3,643)	(38,409)
Proceeds from sale of property, plant and equipment	382	426	2,867
Increase in investment securities	(1,170)	(1,062)	(8,780
Proceeds from sale of investment securities	1,390	426	10,432
Increase in investments in capital	(560)	(471)	(4,203
Decrease in investments in capital	69	179	518
Increase in long-term loans	(1,785)	(1,777)	(13,396)
Decrease in long-term loans	505	20	3,790
Other	(571)	99	(4,285)
Net cash (used in) provided by investing activities	(7,496)	(5,660)	(56,255)
Financian addition			
Financing activities:	4.040	407	0.044
Increase in short-term bank loans	1,248	427	9,366
Proceeds from issuance of long-term bank loans	2,383	10	17,884
Repayment of long-term debt	(3,565)	(220)	(26,754)
Payment of dividends to minority interests	(47)	(25)	(353)
Cash dividends paid to shareholders of the Company	(2,095)	(1,676)	(15,722)
Other	(36)	(8)	(271
Net cash used in financing activities	(2,112)	(1,492)	(15,850)
Effect of exchange rate changes on cash and cash equivalents	397	877	2,979
Net increase in cash and cash equivalents	(1,906)	6,057	(14,304
Cash and cash equivalents at beginning of the year	24,395	18,338	183,077
Cash and cash equivalents at end of the year (Note 13)	¥22,489	¥24,395	\$168,773



### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

USHIO INC. AND SUBSIDIARIES

### 1. Summary of **Significant Accounting Policies**

### (a) Basis of presentation

USHIO INC. (the Company) and its domestic subsidiaries maintain their accounting records and prepare their financial statements in accordance with accounting principles and practices generally accepted and applied in Japan, and its foreign subsidiaries maintain their books of account in conformity with those of their countries of domicile.

The accompanying consolidated financial statements have been prepared from the financial statements filed with the Ministry of Finance as required by the Securities and Exchange Law of Japan. Accordingly, the consolidated financial position, results of operations and cash flows presented in the accompanying financial statements may differ in certain material respects from accounting principles and practices generally accepted in countries and jurisdictions other than Japan.

For the purposes of this document, certain reclassifications have been made to present the accompanying consolidated financial statements in a format which is familiar to readers outside Japan. In addition, certain reclassifications have been made to the prior year's consolidated financial statements to conform them to the current year's presentation.

### (b) Principles of consolidation and accounting for investments in affiliates

The accompanying consolidated financial statements include the accounts of the Company and all its subsidiaries over which substantial control is exerted through either majority ownership of voting stock and/or by other means. All significant intercompany balances and transactions have been eliminated in consolidation.

Certain foreign subsidiaries are consolidated on the basis of fiscal periods ending December 31, which differ from that of the Company, however, the necessary adjustments have been made if the effect of the difference is deemed material.

Investments in affiliates (companies over which the Company has the ability to exercise significant influence) are stated at cost plus equity in their undistributed earnings or losses. Consolidated net income includes the Company's equity in the current net income or loss of such companies, after the elimination of unrealized intercompany profits.

All assets and liabilities of the consolidated subsidiaries and affiliates are revalued on acquisition, if applicable, and the excess of cost over underlying net equity in assets at the date of acquisition is amortized over a period of five years on a straight-line basis if such excess is material, or charged or credited to income when incurred if immaterial.

### (c) Foreign currency translation

The revenue and expense accounts of the foreign subsidiaries are translated into yen at the average rates of exchange in effect during the year. The balance sheet accounts, except for the components of shareholders equity, are translated into yen at the rates of exchange in effect at the balance sheet date. The components of shareholders equity are translated at their historical exchange rates. The differences arising from translation when two exchange rates have been used are presented as translation adjustments, a component of shareholders' equity in the accompanying consolidated financial statements.

All monetary assets and liabilities of the Company and its domestic consolidated subsidiaries denominated in foreign currencies are translated at the current exchange rates in effect at each balance sheet date. Gains and losses resulting from the settlement of these items are credited or charged currently to income.

### (d) Cash equivalents

All highly liquid investments, generally with a maturity of three months or less when purchased, which are readily convertible into known amounts of cash and are so near maturity that they represent only an insignificant risk of any change in value attributable to changes in interest rates, are considered cash equivalents.

### (e) Short-term investments and investment securities

Until the year ended March 31, 2000, short-term investments and investment securities were stated at cost determined principally by the moving average method.

A new accounting standard for financial instruments, which became effective April 1, 2000, requires that securities be classified into three categories: trading, held-to-maturity or other securities. Under the new standard, trading securities are carried at fair value and held-to-maturity securities are carried at amortized cost. Marketable securities classified as other securities are carried at fair value with changes in unrealized holding gain or loss, net of the applicable income taxes, included directly in shareholders equity. Non-marketable securities classified as other securities are carried at cost. Cost of securities sold is determined by the moving average method.

However, the Company stated all marketable securities classified as other securities at cost, taking advantage of an exception rule which allows the Company to measure marketable securities classified as other securities at cost until the year ended March 31, 2001. (Refer to note 9. Securities.) As of April 1, 2000, the Company and its consolidated subsidiaries assessed their intent to hold their investments in securities and classified their investments as trading, held-to-maturity or other securities and accounted for the securities at March 31, 2001 in accordance with the new standard referred to above.

The effect of the adoption of this new standard for financial instruments was to decrease income before income taxes by ¥433 million for the year ended March 31, 2001.

Effective April 1, 2001, the Company and its consolidated subsidiaries have adopted this new accounting standard for financial instruments with respect to securities classified as other securities with quoted market prices. These securities are stated at market value although they were stated at cost in the previous year as described above. The effect of this change was to account for unrealized holding gain on other securities of ¥13,007 million (\$97,614 thousand) in the shareholders equity, and to increase investment securities by ¥22,239 million (\$166,898 thousand), investments in capital by ¥292 million (\$2,191 thousand), deferred tax assets by ¥104 million (\$780 thousand) and deferred tax liabilities by ¥9,557 million (\$71,722 thousand), and to decrease marketable securities by ¥73 million (\$548 thousand) and minority interests by ¥2 million (\$15 thousand) at March 31, 2002 compared with those at March 31, 2001.

### (f) Inventories

Finished goods, merchandise and work in process of the Company are stated at cost determined by the average method. Finished goods, merchandise and work in process of the subsidiaries are stated principally at the lower of cost or market, cost being determined by the first-in, first-out method. Raw materials of the Company and its consolidated subsidiaries are stated principally at cost determined by the moving-average method and at the lower of cost or market, cost being determined by the first-in, first-out method, respectively.

### (g) Depreciation and amortization

Depreciation of property, plant and equipment of the Company and its domestic subsidiaries is mainly calculated by the declining-balance method based on the estimated useful lives of the respective assets. However, buildings (excluding leasehold improvements) acquired after April 1, 1998 by the Company and its domestic subsidiaries are depreciated by the straight-line method.

Property, plant and equipment of the foreign subsidiaries are depreciated mainly by the straight-line method over the estimated useful lives of the respective assets.

Intangible assets are amortized by the straight-line method over their estimated useful lives.

### (h) Leases

Except for finance lease agreements, under which the ownership of the leased assets is deemed to be transferred to the lessee, lease fees are charged to income when incurred.

### (i) Research and development expenses

Research and development expenses are charged to income when incurred.

### (j) Allowance for doubtful accounts

An allowance for doubtful accounts is provided at an amount sufficient to cover possible losses on the collection of receivables, which is determined based on a review of the collectibility of individual receivables.

### (k) Allowance for employees bonuses

The allowance for employees bonuses represents a provision for the future payment of employees bonuses. The allowance is provided at the amount which is expected to be paid.

### (I) Retirement and severance benefits

Effective the year ended March 31, 2001, the Company adopted a new accounting standard for retirement benefits (Opinion Concerning the Establishment of Accounting Standard for Retirement Benefits issued by the Business Accounting Deliberation Council of Japan on June 16, 1998).

In accordance with this new accounting standard for retirement benefits, accrued retirement benefits for employees at March 31, 2001 have been provided mainly at an amount calculated based on the retirement benefit obligation and the fair value of the pension plan assets as of March 31, 2001, as adjusted for the unrecognized net retirement obligation at transition, unrecognized actuarial gain or loss, and unrecognized prior service cost. The net retirement benefit obligation at transition was fully charged to income for the year ended March 31, 2001. Actuarial gain and loss are amortized in the year following the year in which the gain or loss is recognized by the straight-line method over the average remaining years of service of the employees (15 years). Prior service cost is being amortized as incurred by the straight-line method over the average remaining years of service of the eligible employees (15 years).

The Company and certain of its domestic subsidiaries provides for retirement allowances for directors and corporate auditors at the full amount which would be required to be paid if all directors and corporate auditors retired at the balance sheet date based on the Company's internal regulations.

The Company and certain of its domestic subsidiaries participate in a contributory defined benefit pension plan, which entitles employees of the Company and these domestic subsidiaries upon retirement to either a lump-sum payment or pension annuity payments for life, or a combination of both, based on length of service, basic salary at the time of retirement and the number of years of participation in the plan.

### (m) Derivative financial instruments

The Company and certain consolidated subsidiaries have entered into primarily currency related derivative transactions in order to manage certain risks arising from adverse fluctuations in foreign currency exchange rates. In accordance with a new accounting standard for financial instruments, which became effective April 1, 2000, derivative financial instruments are carried at fair value with any changes in their unrealized gain or loss charged or credited to operations, except for those which meet the criteria for deferral hedge accounting under which unrealized gain or loss is deferred as an asset or a liability. Receivables and payables hedged by qualified forward foreign exchange contracts are translated at the corresponding foreign exchange contract rates. Specific treatment is allowed for certain interest rate swaps which meet the criteria for hedge accounting. Under this treatment, qualified swaps are not valued at fair value, and net interests paid or received from interest rate swaps are directly credited or charged to those arising from hedged assets or liabilities.

### (n) Deferred income taxes

Deferred tax assets and liabilities have been recognized in the consolidated financial statements with respect to the differences between financial reporting and tax bases of the assets and liabilities, and were measured using the enacted tax rates and laws which will be in effect when the differences are expected to reverse.

### (o) Appropriation of retained earnings

Under the Commercial Code of Japan, the appropriation of retained earnings with respect to a given financial period is made by resolution of the shareholders at a general meeting held subsequent to the close of such financial period. The accounts for that period do not, therefore, reflect such appropriations. See Note 15.

### 2. U.S. Dollar Amounts

For the convenience of the reader, the accompanying consolidated financial statements with respect to the year ended March 31, 2002 have been presented in U.S. dollars by translating all yen amounts at ¥133.25 = US\$1.00, the exchange rate prevailing on March 31, 2002. This translation should not be construed as a representation that yen have been, could have been, or could in the future be, converted into U.S. dollars at the above or any other rate.

### 3. Short-Term Bank Loans

Short-term bank loans consisted mainly of unsecured and secured loans payable to banks at interest rates ranging from 0.53% to 9.50% and from 0.53% to 9.75% per annum at March 31, 2002 and 2001, respectively.

### 4. Long-Term Debt

Long-term debt at March 31, 2002 and 2001 consisted of the following:

		Millions of yen	Thousands of U.S. dollars
	2002	2001	2002
USHIO INC.:			_
Loans from banks, due through 2004 at rates from 0.64% to 1.39%	¥3,200	¥3,970	\$24,015
Subsidiaries:			
Loans from banks, due through 2006 at rates from 0.50% to 5.80%	1,473	1,870	11,054
Total long-term debt	4,673	5,840	35,069
Less: Current portion	1,835	3,361	13,771
	¥2,838	¥2,479	\$21,298

The assets pledged as collateral for debt at March 31, 2002 were as follows:

	Millions of yen	Thousands of U.S. dollars
Land	¥244	\$1,831
Buildings and structures	_	_
Machinery and equipment		458
	¥305	\$2,289

The related debt for which the above assets were pledged as collateral at March 31, 2002 is summarized as follows:

	Millions of ven	Thousands of U.S. dollars
Current portion of long-term debt	¥27	\$203
Long-term debt	. 12	90
	¥39	\$293

The aggregate annual maturities of long-term debt subsequent to March 31, 2002 are summarized as follows:

	Millions of yen	Thousands of U.S. dollars
2003	¥1,835	\$13,771
2004	462	3,467
2005	2,368	17,770
2006	5	38
2007	3	23
	¥4,673	\$35,069

### 5. Legal Reserve and Additional Paid-in Capital

In accordance with the Commercial Code of Japan (the Code), the Company has provided a legal reserve, which was included in retained earnings. The Code provides that an amount equal to at least 10% of the amount to be disbursed as distributions of earnings be appropriated to the legal reserve until the total of such reserve and the additional paid-in capital account equals 25% of the common stock account. Retained earnings in the accompanying financial statements include the legal reserve of ¥2,638 million (\$19,797 thousand) as of March 31, 2002.

The Code provides that neither additional paid-in capital nor the legal reserve is available for dividends, but both may be used to reduce or eliminate a deficit by resolution of the shareholders or may be transferred to common stock by resolution of the Board of Directors. On October 1, 2001, an amendment (the Amendment) to the Code became effective. The Amendment provides that if the total amount of additional paid-in capital and the legal reserve exceeds 25% of the amount of common stock, the excess may be distributed to the shareholders either as a return of capital or as dividends subject to the approval of the shareholders. In addition, the Amendment eliminates the stated par value of the Company's outstanding shares, which resulted in all outstanding shares having no par value as of October 1, 2001. The Amendment also provides that all share issuances after September 30, 2001 will be of shares with no par value. Prior to the date on which the Amendment came into effect, the Company's shares had a par value of ¥50.

### 6. Income Taxes

Income taxes applicable to the Company and its domestic subsidiaries comprised corporation tax, inhabitants taxes and enterprise tax which, in the aggregate, resulted in a statutory tax rate of approximately 42.1% for 2002 and 2001. Income taxes of the foreign consolidated subsidiaries are based generally on the tax rates applicable in their countries of incorporation.

The significant components of deferred tax assets and liabilities as of March 31, 2002 and 2001 are summarized as follows:

		Millions of yen	Thousands of U.S. dollars	
<del>-</del>	2002	2001	2002	
Deferred tax assets:				
Enterprise tax payable¥	123	¥ 439	\$ 923	
Allowance for employees bonuses	499	586	3,745	
Retirement benefit expenses	1,231	1,197	9,238	
Allowance and accrual for retirement benefits for directors and corporate auditors	604	578	4,533	
Net loss carryforward	817	668	6,131	
Other	1,532	1,197	11,498	
Total deferred tax assets	4,806	4,665	36,068	
Deferred tax liabilities:				
Gain on revaluation of securities	(9,557)	_	(71,722)	
Depreciation	(30)	(50)	(225)	
Gain on contribution of securities to employees' retirement benefit trust	(551)	(551)	(4,135)	
Other	(47)	(96)	(353)	
	10,185)	(697)	(76,435)	
Net deferred tax (liabilities) assets¥	(5,379)	¥3,968	\$(40,367)	

A reconciliation between the statutory tax rate and the effective tax rate as a percentage of income before income taxes for the year ended March 31, 2002 is summarized as follows:

	2002
Statutory tax rate	42.1%
Reconciliation:	
Equity in losses on investments in affiliates	10.8
Deferred tax assets not recorded with respect to deficit in consolidated subsidiaries	3.1
Net change in valuation allowance for deferred tax assets	2.9
Income unrecognized for income tax purposes	(3.6)
Expense non-deductible for income tax purposes	4.5
Different tax rates applied to foreign subsidiaries	(7.3)
Other	5.1
Effective tax rate	57.6%

### 7. Research and Development Expenses

Research and development expenses charged to income for the years ended March 31, 2002 and 2001 were as follows:

	Millions of yen	Thousands of U.S. dollars
2002	2001	2002
¥3,557	¥3,683	\$26,694

### 8. Leases

The following pro forma amounts represent the acquisition costs, accumulated depreciation and net book value of the leased assets as of March 31, 2002 and 2001, which would have been reflected in the balance sheets if lease accounting had been applied to finance leases currently accounted for as operating leases.

			Millions of yen
Year ended March 31, 2002	Machinery and vehicles	Other (tools and equipment)	Total
Acquisition costs	¥99	¥624	¥723
Accumulated depreciation	60	298	358
Book value	¥39	¥326	¥365
		Thousa	nds of U.S. dollars
	Machinery and vehicles	Other (tools and equipment)	Total
Acquisition costs	\$742	\$4,683	\$5,425
Accumulated depreciation	450	2,236	2,686
Book value	\$292	\$2,447	\$2,739
			Millions of yen
Years ended March 31, 2001	Machinery and vehicles	Other (tools and equipment)	Total
Acquisition costs	¥98	¥565	¥663
Accumulated depreciation	52	358	410
Book value	¥46	¥207	¥253

Lease expenses relating to finance leases accounted for as operating leases for the years ended March 31, 2002 and 2001 were ¥164 (\$1,231 thousand) million and ¥175 million, respectively. The following pro forma amounts represent interest expense and depreciation for the years ended March 31, 2002 and 2001, which would have been reflected in the statements of income if lease accounting had been applied to finance leases currently accounted for as operating leases.

		Millions of yen	Thousands of U.S. dollars
	2002	2001	2002
Interest expense	¥ —	¥ 12	\$ 2
Depreciation	164	157	1,231

Future minimum lease payments (including the interest portion thereon) subsequent to March 31, 2002 for finance leases accounted for as operating leases, except for lease agreements which stipulate the transfer of ownership of the leased property to the Company and its subsidiaries, are summarized as follows:

	Millions of yen	Thousands of U.S. dollars
Due within one year or less	¥130	\$ 976
Due subsequent to one year		1,651
Total	¥350	\$2,627

The amount of future minimum lease payments has become less than the threshold indicated by the accounting board of the Japanese Institute of Certified Public Accountants, acquisition costs of the leased assets and future minimum lease payments include from this fiscal year interests thereon. The inclusion of interest, however, is insignificant.

Information regarding securities classified as trading securities, held-to-maturity securities and other securities as of March 31, 2002 and 2001 is as follows:

### 1. Trading securities

9. Securities

				Millions of yen	Thous	ands of U.S. dollars
		2002		2001		2002
	Carrying value	Gain (loss)	Carrying value	Gain (loss)	Book value	Gain (loss)
Stock	¥466	¥(207)	¥742	¥(405)	\$3,497	\$(1,553)
Investment trust	90	(11)	102	(48)	675	(83)
Total	¥556	¥(218)	¥844	¥(453)	\$1,523	\$(1,636)

### 2. Marketable held-to-maturity debt securities

					Mi	llions of yen		Thousands of	f U.S. dollars
			2002			2001			2002
	Carrying	Estimated	Unrealized	Carrying	Estimated	Unrealized	Carrying	Estimated	Unrealized
	value	Fair value	gain (loss)	value	Fair value	gain (loss)	value	Fair value	gain (loss)
Securities whose estimated fair value									
exceeds their carrying value:									
(1) Government bonds, municipal bonds	¥ 1	¥ 1	¥ 0	¥140	¥171	¥31	\$ 7	\$ 7	\$ 0
(2) Corporate bonds	200	202	2	100	102	2	1,501	1,516	15
(3) Other	_	_	_	30	32	2	_	_	_
Subtotal	¥201	¥203	¥ 2	¥270	¥305	¥35	\$1,508	\$1,523	\$15
Securities whose carrying value exceeds their estimated fair value:									
(1) Government bonds, municipal bonds	¥ —	¥ —	¥ —	¥ —	¥ —	¥—	\$ <b>—</b>	\$ <b>—</b>	\$
(2) Corporate bonds	114	109	(5)	_	_	_	856	818	(38)
(3) Other	_	_	_	101	100	(1)	_	_	_
Subtotal	114	109	(5)	101	100	(1)	856	818	(38)
Total	¥315	¥312	¥ (3)	¥371	¥405	¥34	\$2,364	\$2,341	\$(23)

### 3. Marketable other securities

			Millions of yen		Thous	ands of U.S. dollars
As of March 31, 2002	Acquisition cost	Carrying value	Unrealized gain (loss)	Acquisition cost	Carrying value	Unrealized gain (loss)
Securities whose carrying value exceeds their acquisition cost:						
(1) Stock	¥ 7,862	¥28,400	¥20,538	\$ 59,001	\$213,133	\$154,131
(2) Bonds						
Government bonds, municipal bonds	4,226	6,159	1,933	31,715	46,221	14,507
Corporate bonds	2,332	3,199	867	17,501	24,008	6,507
Other	_	_	_	_	_	_
(3) Other	4,922	4,959	37	36,938	37,216	278
Subtotal	¥19,342	¥42,717	¥23,375	\$145,155	\$320,578	\$175,423

			Millions of yen		Thousa	nds of U.S. dollars
As of March 31, 2002	Acquisition cost	Carrying value	Unrealized gain (loss)	Acquisition cost	Carrying value	Unrealized gain (loss)
Securities whose acquisition cost exceeds their carrying value:						
(1) Stock(2) Bonds	¥ 4,007	¥ 3,039	¥ (968)	\$ 30,071	\$ 22,807	\$ (7,264)
Government bonds, municipal bond	20	19	(1)	150	143	(8)
Corporate bonds	500	496	(4)	3,752	3,722	(30)
Other	_	_	_	_	_	_
(3) Other	1,971	1,711	(260)	14,792	12,840	(1,951)
Subtotal	¥ 6,498	¥ 5,265	¥ (1,233)	\$ 48,765	\$ 39,512	\$ (9,253)
Total	¥25,840	¥47,982	¥22,142	\$193,920	\$360,090	\$166,170

The Company stated all marketable securities classified as other securities at cost, taking advantage of an exception rule which allows the Company to measure marketable securities classified as other securities at cost until March 31, 2001.

The effect if the new accounting standard had been applied is estimated as follows:

	Millions of yen
Carrying value	¥26,456
Estimated fair value	
Unrealized gain	13,232
Deferred tax liability	9,624
Minority interests	(2)

# 4. Other securities sold during the years ended March 31, 2002 and 2001

		Millions of yen	Thousands of U.S. dollars
	2002	2001	2002
Sale of securities	¥20,714	¥202	\$155,452
Gain on sale	278	88	2,086
Loss on sale	5	0	38

# 5. Securities without quoted market value

	Millions of yen		Thousands of U.S. dollars	
	2002	2001	2002	
		Carrying value	Carrying value	
(1) Held-to-maturity bonds	¥ 315	¥ —	\$ 2,364	
(2) Other securities:				
Unlisted stocks (excluding over-the-counter traded securities)	1,204	955	9,036	
Medium-term government bond funds	1,091	1,672	8,188	
Money management funds	1,887	4,654	14,161	
Free financial funds	2,000	2,203	15,009	
Security investment trust in closed periods	_	2,051	_	

6. The redemption schedule for securities with maturity dates classified as other securities and held-to-maturity debt securities as of March 31, 2002 is as follows:

	Millions of yen				Thousan	ds of U.S. dollars
		Due after	Due after		Due after	Due after
	Due	one year	five years	Due	one year	five years
	within	through	through	within	through	through
	one year	five years	ten years	one year	five years	ten years
1. Bonds						
(1) Government bonds, municipal bonds	¥ 0	¥6,131	¥ —	\$ 0	\$46,011	\$ <b>—</b>
(2) Corporate bonds	266	2,798	_	1,996	20,998	_
(3) Other	_		_	_	_	_
2. Other	_	297	299	_	2,229	2,244
Total	¥266	¥9,226	¥299	\$1,996	\$69,238	\$2,244

# 10. Derivative **Transactions**

Summarized below are the notional amounts and the estimated fair value of the derivative instruments outstanding at March 31, 2002, and 2001:

# (Currency-related transactions)

			Millions of yen		Thousand	ds of U.S. dollars
	National		Unrealized	National		Unrealized
As of March 31, 2002	amount	Fair value	gain (loss)	amount	Fair value	gain (loss)
Bi-Lateral Transaction:						
Forward foreign exchange contracts						
Sell: US\$	¥1,299	¥1,296	¥(3)	\$9,749	\$9,726	\$(23)
Buy: US\$	19	19	0	143	143	0
Total	¥1,318	¥1,315	¥(3)	\$9,892	\$9,869	\$(23)

As of March 31, 2001, no specific disclosure for derivatives was made as the Company and its consolidated subsidiaries primarily had only derivative positions which met the criteria for hedge accounting.

# 11. Retirement Benefit **Plans**

The Company and its domestic consolidated subsidiaries have defined benefit plans such as welfare pension fund plans and lump-sum payment plans, covering substantially all employees who are entitled to annuity or lump-sum payments, the amounts of which are determined by reference to their basic rates of pay, length of service, and the conditions under which termination occurs.

During the fiscal period ended March 31, 2001, the Company contributed certain marketable securities to an employees' retirement benefit trust with no cash proceeds received. Upon contribution of these marketable securities, net unrealized gain of ¥1,310 million (\$9,831 thousand) was realized, which was used to accelerate the amortization of the net retirement obligation at transition.

The following table sets forth the funded and accrued status of the plans, and the amounts recognized in the consolidated balance sheets as of March 31, 2002 and 2001 for the Company's and the consolidated subsidiaries' defined benefit plans:

		Millions of yen	Thousands of U.S. dollars
_	2002	2001	2002
(1) Retirement benefit obligation¥(	11,062)	¥(8,547)	\$(83,017)
(2) Plan assets at fair value (including the trust fund for retirement benefits)	8,540	8,001	64,090
(3) Unfunded net retirement benefit obligation (1)+(2)	(2,522)	(546)	(18,927)
(4) Unrecognized actuarial gain or loss	2,822	504	21,178
(5) Unrecognized prior service cost (Note 2)	(671)	(250)	(5,035)
(6) Accrued retirement benefits (3)+(4)+(5)	(371)	¥ (292)	\$ (2,784)

Notes: 1. The government-sponsored portion of the benefits under the welfare pension plans is included in the amounts presented in the above table.

2. In accordance with the amendments to the Welfare Pension Insurance Law of Japan in March 2000, effective the year ended March 31, 2001, the Company made amendments to its welfare pension plans with respect to the eligibility age for the government-sponsored portion of the pension benefits. As a result, prior service cost (a reduction of the obligation) was incurred. At the same time, prior service cost (an increase in the obligation) was incurred as the Company revised its lump-sum payment plans. An additional amendments to the Welfare Pension Insurance was decided, which resulted in a decrease in the obligation. Effective the year ended March 31, 2002, as the Company made an amendment to the welfare pension plans with respect to the rate- down of the pension benefits to be provided, prior service cost (a reduction of the obligation) was incurred. 3. Certain consolidated subsidiaries have adopted a simplified method for computing their retirement benefit obligation.

The components of retirement benefit expenses for the years ended March 31, 2002 and 2001 are outlined as follows:

	N	fillions of yen	Thousands of U.S. dollars
	2002	2001	2002
(1) Service cost	¥612 <sup>*1,2</sup>	¥ 655 <sup>*1,2</sup>	\$4,593
(2) Interest expense	332	313	2,492
(3) Expected return on plan assets	(213)	(303)	(1,598)
(4) Amortization of net retirement benefit obligation at transition	_	2,485 <sup>*4</sup>	_
(5) Amortization of actuarial gain or loss	32	_	239
(6) Amortization of prior service cost	(18)	4*3	(135)
Total retirement benefit expenses	¥745	¥3,154	\$5,591

- Notes: 1. The employees' portion of the contributions to the welfare pension plans has been excluded.

  2. The retirement benefit expenses of the consolidated subsidiaries which adopted the simplified method have been included in (1) service cost.
  - 3. This represents the amortization of prior service cost incurred following the events described above in Note 2 to the accrued retirement benefits. 4. The amount of ¥2,331 million which corresponds to the marketable securities contributed to the employees' retirement benefit trust has been included.

The assumptions used in accounting for the retirement benefit obligation were as follows:

As of March 31	2002	2001
Discount rate	3.0%	4.0%
Expected return on plan assets	4.0%	4.0%
Actuarial cost method	Unit credit m	nethod
Amortization period of prior service cost	15 years (straight-	line method)
Amortization period of actuarial gain or loss	15 years (straight-	line method)
Amortization period of net retirement benefit obligation at transition	Expensed as i	ncurred

# 12. Amounts per Share

Amounts per share of net income and net assets, as presented below, are based on the weighted average number of shares of common stock outstanding during each year and the number of shares outstanding at each balance sheet date, respectively.

	Mill	ions of yen	Thousands of U.S. dollars
Year ended March 31	2002	2001	2002
Net income	¥ 11.77	¥ 60.62	\$0.09
Net assets	765.32	667.93	5.74

Per share amounts assuming full dilution have not been presented because no common stock equivalents remained outstanding as of March 31, 2002 and 2001.

# 13. Supplementary Cash Flow Information

The following table represents a reconciliation of cash and cash equivalents as of March 31, 2002 and 2001:

		Millions of yen	Thousands of U.S. dollars
Year ended March 31	2002	2001	2002
Cash and bank deposits	¥12,253	¥12,141	\$ 91,955
Time deposits with a maturity of more than three months	(458)	(368)	(3,437)
Securities	12,513	14,179	93,906
Equity and debt securities with a maturity of more than three months	(1,819)	(1,557)	(13,651)
Cash and cash equivalents	¥22,489	¥24,395	\$168,773

# 14. Segment Information

The business and geographical segment information and overseas sales for the Company and its subsidiaries for the years ended March 31, 2002 and 2001 are outlined as follows:

# **Business segments**

					Millions of yen
Year ended March 31, 2002	Light source application products	Machinery for industrial uses and other business	Total	Eliminations or unallocated amounts	Consolidated
I. Sales and operating income					
Sales to external customers	¥ 77,701	¥3,600	¥ 81,301	¥ —	¥ 81,301
Intersegment sales or transfers	6	12	18	(18)	
Total sales	77,707	3,612	81,319	(18)	81,301
Operating expenses	67,884	3,660	71,544	(18)	71,526
Operating income (loss)	¥ 9,823	¥ (48)	¥ 9,775	¥ (—)	¥ 9,775
II. Total assets, depreciation and capital expenditures					
Total assets	¥101,658	¥7,214	¥108,872	¥40,797	¥149,669
Depreciation	2,750	66	2,816	_	2,816
Capital expenditures	4,640	197	4,837		4,837
				Thou	sands of U.S. dollars
I. Sales and operating income					
Sales to external customers	\$583,122	\$27,017	\$610,139	<b>\$</b> —	\$ 610,139
Intersegment sales or transfers	45	90	135	(135)	
Total sales	583,167	27,107	610,274	(135)	610,139
Operating expenses	509,449	27,467	536,916	(135)	536,781
Operating income (loss)	\$ 73,718	\$ (360)	\$ 73,358	\$ (—)	\$ 73,358
II. Total assets, depreciation and capital expenditures					
Total assets	\$762,912	\$54,139	\$817,051	\$306,169	\$1,123,220
Depreciation	20,638	495	21,133	_	21,133
Capital expenditures	34,822	1,478	36,300	_	36,300

					Millions of yen
Year ended March 31, 2001	Light source industrial uses application and other unallocat		Eliminations or unallocated amounts	or ated	
I. Sales and operating income	·				
Sales to external customers	¥85,416	¥3,722	¥ 89,138	¥ —	¥ 89,138
Intersegment sales or transfers	8	25	33	(33)	_
Total sales	85,424	3,747	89,171	(33)	89,138
Operating expenses	70,185	3,648	73,833	(33)	73,800
Operating income	¥15,239	¥ 99	¥ 15,338	¥ —	¥ 15,338
II. Total assets, depreciation and					
capital expenditures					
Total assets	¥95,282	¥9,740	¥105,022	¥32,736	¥137,758
Depreciation	2,543	60	2,603	_	2,603
Capital expenditures	4,873	87	4,960	_	4,960

Notes: a) Basis of segmentation
(1) Business segments are divided into categories based on the usage of each product in the market.
(2) Major products in each business segment:
Light source application products—
halogen lamps, xenon lamps, high pressure mercuric lamps, projection lamps for movie theaters and peripheral equipment, UV curing systems, and various other exposure systems
Machinery for industrial uses and other types of business—
injection molding machinery, food packaging systems, and automatic controls
b) Included in eliminations or unallocated amounts of the total assets were unallocated amounts totaling ¥44,109 million (\$331,024 thousand) and
¥35,328 million as of March 31, 2002 and 2001, respectively, which consisted primarily of surplus funds (cash and marketable securities) and long-term investments (investment securities, etc.) of the Company.
c) Included in depreciation and capital expenditures are amortization and additions to long-term prepaid expenses.

# Geographical segments

							Millions of yen
Year ended March 31, 2002	Japan	North America	Europe	Asia	Total	Eliminations or unallocated amounts	Consolidated
I. Sales and operating income	е						
Sales to external							
customers	¥45,695	¥21,011	¥5,620	¥ 8,975	¥ 81,301	¥ —	¥ 81,301
Intersegment sales							
or transfers	10,373	418	477	1,034	12,302	(12,302)	_
Total sales	56,068	21,429	6,097	10,009	93,603	(12,302)	81,301
Operating expenses	47,274	21,671	5,767	8,776	83,488	(11,962)	71,526
Operating income (loss)	¥ 8,794	¥ (242)	¥ 330	¥ 1,233	¥ 10,115	¥ (340)	¥ 9,775
II. Total assets	¥85,609	¥19,652	¥8,880	¥ 9,729	¥123,870	¥25,799	¥149,669
						Thousa	ands of U.S. dollars
I. Sales and operating income	e						
Sales to external							
customers	\$342,927	\$157,681	\$42,176	\$67,355	\$610,139	\$ —	\$ 610,139
Intersegment sales							
or transfers	77,846	3,137	3,580	7,760	92,323	\$ (92,323)	
Total sales	420,773	160,818	45,756	75,115	702,462	(92,323)	610,139
Operating expenses	354,777	162,634	43,280	65,861	626,552	(89,771)	536,781
Operating income (loss)	\$ 65,996	\$ (1,816)	\$ 2,476	\$ 9,254	\$ 75,910	\$ (2,552)	\$ 73,358
II. Total assets	\$642,469	\$147,482	\$66,642	\$73,013	\$929,606	\$193,614	\$1,123,220
			/	,			. //

							Millions of yen
						Eliminations	
		North	_			or unallocated	
Year ended March 31, 2001	Japan	America	Europe	Asia	Total	amounts	Consolidated
I. Sales and operating income	<b>!</b>						
Sales to external							
customers	¥55,055	¥21,245	¥4,840	¥7,998	¥ 89,138	¥ —	¥ 89,138
Intersegment sales							
or transfers	10,959	375	654	1,122	13,110	(13,110)	_
Total sales	66,014	21,620	5,494	9,120	102,248	(13,110)	89,138
Operating expenses	51,930	21,691	5,102	7,732	86,455	(12,655)	73,800
Operating income	¥14,084	¥ (71)	¥ 392	¥1,388	¥ 15,793	¥ (455)	¥ 15,338
II. Total assets	¥84,092	¥18,045	¥8,026	¥9,086	¥119,249	¥18,509	¥137,758

Notes: a) Geographical segments are divided into categories based on their geographical proximity.
b) Major nations or regions included in each geographical segment:
(1) North America—U.S.A., Canada
(2) Europe—Netherlands, Germany, England, France
(3) Asia—Hong Kong, Taiwan, Korea, Philippines, Singapore
c) Included in eliminations or the unallocated amounts of total assets were unallocated amounts totaling ¥44,109 million (\$331,024 thousand) and
¥35,328 million as of March 31, 2002 and 2001, respectively, which consisted primarily of surplus funds (cash and marketable securities) and long-term investments (investment securities, etc.) of the Company.

# Overseas sales

					Millions of yen
Year ended March 31, 2002	North America	Europe	Asia	Other areas	Total
III. Overseas sales					
Overseas sales	¥16,148	¥6,894	¥11,676	¥2,045	¥36,763
Consolidated net sales					¥81,301
Overseas sales as a percentage of consolidated					
net sales	19.9%	8.5%	14.4%	2.5%	45.2%
				Thousa	ands of U.S. dollars
III.Overseas sales					
Overseas sales	\$121,186	\$51,737	\$87,625	\$15,347	\$275,895
Consolidated net sales					\$610,139
Overseas sales as a percentage of consolidated					
net sales	19.9%	8.5%	14.4%	2.5%	45.2%
					Millions of yen
	North			Other	
Year ended March 31, 2001	America	Europe	Asia	areas	Total
III.Overseas sales					
Overseas sales	¥16,921	¥6,308	¥12,308	¥1,706	¥37,243

Notes: a) Geographical areas are divided into categories based on their geographical proximity.

Consolidated net sales .....

Overseas sales as a percentage of consolidated

: a) Geographical areas are univided into categories based on their geographical proximb) Major nations or regions included in each geographical area:
(1) North America—U.S.A., Canada
(2) Europe—Netherlands, Germany, England, France
(3) Asia—Hong Kong, Taiwan, Korea, Philippines, Singapore
(4) Other areas—Argentina, Brazil
c) Overseas sales are sales of the Company and its subsidiaries in foreign countries.

# 15. Subsequent Event

The following appropriations of retained earnings of the Company, which have not been reflected in the consolidated financial statements for the year ended March 31, 2002, were approved at a shareholders' meeting held on June 27, 2002:

7.1%

13.8%

	Millions of yen	Thousands of U.S. dollars
Cash dividends (¥13 = U.S.\$0.098 per share)	¥1,814	\$13,614
Bonuses to directors and corporate auditors		300
	¥1,854	\$13,914

¥89,138

41.8%

1.9%

# REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

The Board of Directors USHIO INC.



Certified Public Accountants Hibbya Koloscii Birlg. 2-2-1, Uchhairusi-cho, Chipoda-lu, Talopo 180-8011 C.BCI. Box 1196, Talopo 180-8641

Phone:03:3503-1100 Fac: 03:3503-1107

We have examined the accompanying consolidated balance sheets of USHIO INC. and consolidated subsidiaries as of March 31, 2002 and 2001, and the related consolidated statements of income, shareholders equity, and cash flows for the years then ended, all expressed in yen. Our examinations were made in accordance with auditing standards, procedures and practices generally accepted and applied in Japan and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying consolidated financial statements, expressed in yen, present fairly the consolidated financial position of USHIO INC. and consolidated subsidiaries at March 31, 2002 and 2001, and the consolidated results of their operations and their cash flows for the years then ended in conformity with accounting principles and practices generally accepted in Japan applied on a consistent basis.

As described in Note 1, USHIO INC. and consolidated subsidiaries have adopted new accounting standards for employees retirement benefits, financial instruments and foreign currency translation for the year ended March 31, 2001 in the preparation of their consolidated financial statements.

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2002 are presented solely for convenience. Our examination also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 2.

Shin rihon & (o.

June 27, 2002

See Note 1 which explains the basis of preparation of the consolidated financial statements of USHIO INC. and consolidated subsidiaries under Japanese accounting principles and practices.

# DOMESTIC GROUP COMPANIES

USHIO INC. AND SUBSIDIARIES As of June 27, 2002

# **Domestic Group Companies**

## **USHIO LIGHTING, INC.**

Business activities: Manufacture of halogen lamps, metal-halide lamps, metal-halide lamp units, light units for fiber lights, and infrared lamps (for monitor cameras)

860-22, Saiji, Fukusaki-cho, Kanzaki-gun, Hyogo 679-2215 TEL: (0790) 22-6371 FAX: (0790) 22-6502

# Gigaphoton, INC.

Business activities: Development, manufacture, and sale of excimer laser products for semiconductor photolithography Asahi Tokai Bldg. 2-6-1 Otemachi, Chiyoda-ku, Tokyo 100-0004

TEL: (03) 3516-7600 FAX: (03) 3516-7610

# USHIO U-TEC, INC.

Business activities: Sale of image processing systems, lighting systems, fish-luring lamps, lights for marine craft, factory automation systems, food wrapping systems, and other products lzumikan Sanban-cho Bldg., 3-8, Sanban-cho, Chiyoda-ku, Tokyo 102-0075

TEL: (03) 3288-8411 FAX: (03) 3288-8400

## XEBEX, INC.

Business activities: Sale of movie theater projection and sound systems, peripheral equipment, and other products Izumikan Sanban-cho Bldg., 3-8, Sanban-cho, Chiyoda-ku, Tokyo 102-0075

TEL: (03) 3234-9100 FAX: (03) 3234-9700

## TSUKUBA USHIO ELECTRIC, INC.

Business activities: Manufacture and sale of xenon flash lamps

5-2-1, Tokodai, Tsukuba, Ibaraki 300-2635 TEL: (0298) 47-5111 FAX: (0298) 47-5051

# **GUNMA USHIO ELECTRIC, INC.**

Business activities: Manufacture and sale of office equipment, medical equipment, and fitness industry equipment

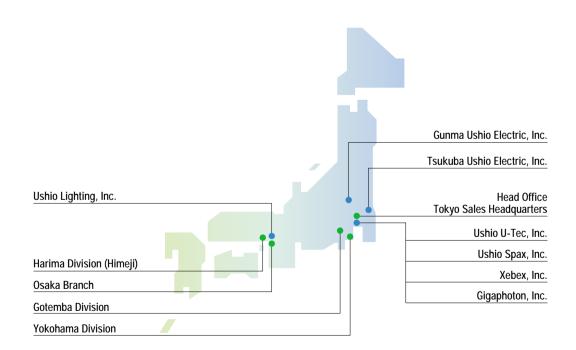
262 Kondo-cho, Tatebayashi, Gunma 374-8521 TEL: (0276) 73-4611 FAX: (0276) 74-7471

## USHIO SPAX, INC.

Business activities: Manufacture and sale of lighting equipment and optical equipment, and room lighting design

1-20-19 Horikiri Katsushika-ku,

Tokyo 124-0006 TEL: (03) 5672-7711 FAX: (03) 5672-7734



# **OVERSEAS NETWORK**

USHIO INC. AND SUBSIDIARIES As of June 27, 2002

# **Overseas Sales Bases**

#### NORTH AMERICA

## USHIO AMERICA, INC.

Business activities: Sale of halogen lamps and superhigh-pressure mercury lamps; manufacture and sale of metal-halide lamps 5440 Cerritos Avenue, Cypress, CA 90630, U.S.A. TEL: (714) 236-8600 FAX: (714) 229-3180

• SOUTHWESTERN REGIONAL OFFICE 6839 North Trailway Circle, Parker, CO 80134, U.S.A. TEL: (303) 805-8535

FAX: (800) 776-3641

## • CENTRAL REGIONAL OFFICE 14795 West 101st Avenue, Suite B Dver. IN 46311, U.S.A

TEL: (708) 849-4200 FAX: (708) 849-4269

# • EASTERN DIVISION BRANCH OFFICE

16-00 Route 208 South Fair Lown, NJ 07410, U.S.A TEL: (201) 703-3920 FAX: (201) 703-3924

# SOUTHEASTERN REGIONAL OFFICE

3530 Ashford Dunwoody Road, Suite 211, Atlanta, GA 30319, U.S.A.

TEL: (404) 252-2600 FAX: (404) 256-1333

# CHRISTIE DIGITAL SYSTEMS USA, INC.

Business activities: Manufacture and sale of movie theater projection systems and light source related equipment

10550 Camden Drive, Cypress, CA 90630, U.S.A.

TEL: (714) 236-8610 FAX: (714) 503-3385

# ASIA OFFICE

102F Pasir Panjang Road, #07-07 Citilink Warehouse Complex, Singapore 118530

TEL: 270-4188 FAX: 270-4388

#### FUROPE

## **USHIO EUROPE B.V.**

FAX: (020) 446 03 60

Business activities: Sale of halogen lamps, superhighpressure mercury lamps, xenon short-arc lamps, and systems and other products Sky Park, Breguetlaan 16-18, 1438BC Oude Meer, The Netherlands TEL: (020) 446 93 33

# **USHIO DEUTSCHLAND GmbH**

Business activities: Sale of halogen lamps, superhighpressure mercury lamps, xenon short-arc lamps, and other products Lonchhamer Straße 13,

Lonchhamer Straße 13, 82152 Martinsried, Germany TEL: (089) 89 96 04 0 FAX: (089) 89 96 04 19

## USHIO U.K., LTD.

Business activities: Sale of halogen lamps, superhighpressure mercury lamps, xenon short-arc lamps, and other products Rowan House, Quarrywood Court, West Lothian,

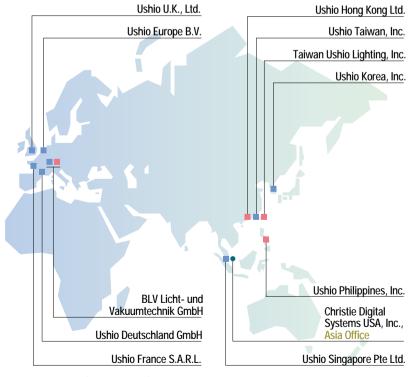
Livingston EH54 6AX TEL: 01506 (432) 686 FAX: 01506 (434) 038

## **USHIO FRANCE S.A.R.L.**

Business activities: Sale of halogen lamps, superhighpressure mercury lamps, xenon short-arc lamps, and other products

Z.I. du Vert Galant-Allée St. Simon B.P. 7043-St. Ouen L'Aumone 95051, Cergy Pontoise Cedex, France

TEL: (1) 34 64 94 94 FAX: (1) 34 64 44 97



- Production Base (Local Subsidiary)
- Sales Base (Local Subsidiary)
- Sales Base (Local Subsidiary/Representative Office)

# **USHIO SINGAPORE PTE LTD.**

Business activities: Sale of halogen lamps, superhighpressure mercury lamps, xenon short-arc lamps, and other products

Dynasty Industrial Bild... No. 1 Jalan Kilang #05-01, Singapore 159402 TEL: 274-5311 FAX: 274-5300

## USHIO TAIWAN, INC.

Business activities: Sale of halogen lamps, superhighpressure mercury lamps, xenon short-arc lamps, and other products

No. 31 Sec. 1 Chung-Shiaw E. Road,

Taipei, Taiwan, R.O.C. TEL: (2) 2322-4103 FAX: (2) 2394-4140

# USHIO KOREA, INC.

Business activities: Sale of halogen lamps, superhighpressure mercury lamps, xenon short-arc lamps, and other products

15F Dukheung Bldg., 1328-10, Seocho-Dong, Seocho-ku, Seoul, Korea

TEL: 02 587 1115 FAX: 02 587 1118

# **Overseas Production Bases**

# CHRISTIE DIGITAL SYSTEMS CANADA, INC.

Business activities: Sale of projectors and other products 809 Wellington Street, North Kitchener, Ontario, N2G 4Y7, Canada TEL: (519) 744-8005 FAX: (519) 744-3136

## USHIO OREGON, INC.

Business activities: Manufacture of halogen lamps and lamp units for OA equipment 2050 East Mountainview Drive, Newberg, OR 97132, U.S.A. TEL: (503) 538-6515 FAX: (503) 538-8450

FAX: (080) 94 90 61 64

# **BLV LICHT- UND VAKUUMTECHNIK GmbH**

Business activities: Manufacture and sale of halogen lamps, metal-halide lamps, and other products Münchner Straße 10D 85643 Steinhöring, Germany TEL: (080) 94 90 60

# **USHIO PHILIPPINES, INC.**

Business activities: Manufacture of halogen lamps for illumination and OA equipment, and other products First Cavite Industrial Estate, Barangay Langkaan, Dasmarinas, Cavite, Philippines TEL: (046) 402-1422 FAX: (046) 402-1421

# USHIO HONG KONG LTD.

Business activities: Manufacture of halogen lamps and lamp units for OA equipment Suites 2209-11, 22/F, Tower6, The Gateway, 9 Canton Road, Tsim Sha Tsui, Kowloon, Hong Kong TEL: 2756-7880 FAX: 2798-9861

# YUEN LONG PLANT

29-31, Wang Lok Street, Yuen Long Industrial Estate, Yuen Long, New Territories, Hong Kong SAR TEL: 2478-0090 FAX: 2476-6701

#### PAN YU PLANT

Kou Shui Heng, Pan Yu District, Guangdong, The People's Republic of China 511450 TEL: 20-84855158

FAX: 20-84858826

#### TAIWAN USHIO LIGHTING, INC.

Business activities: Manufacture of halogen lamps for illumination, and other products No. 82, Taiho Road, Taiho-Li, Chupei, Taiwan, R.O.C. TEL: (35) 51-3207 FAX: (35) 51-4523

# Ushio Canada, Inc.



Southeastern Regional Office

Ushio America, Inc.

**Eastern Division Branch Office** 

# **HISTORY**

	November	4047	
Established as Himeji Light Bulb Co.	110101111111111111111111111111111111111	1916 1932 ———	December
	November	1952	Name changed to Japan Light Bulb Co.
Name changed to Ushio Industry, Ltd.		1964	March
	May	1967	Ushio Inc. established with capital of ¥12.5 million
Established sales base in the U.S.A.		1968 ——	September
(USHIO AMERICA, INC.)			Yokohama R&D Division opened
	May	1970	
Listed on the Second Section of the Tokyo Stock			
Exchange (TSE); capital increased to ¥400 million	Mov		
Established Harima Plant (Harima Division)	May		August
ESTADIISTICU HATIITA PIATIL (HATIITIA DIVISIOTI)	April	1971 —	August  Moved head office to Asahi Tokai Building in Tokyo's Otemachi
Listed on the Second Section of the Osaka Securities	Аргіі	1974	business district
Exchange (OSE); capital increased to ¥902 million			September
Exchange (00E), capital increased to 4702 million	April	1980 ———	Listed on the first sections of the TSE and OSE;
Established engineering division with sales functions	7	1981	capital increased to ¥1,540 million
(USHIO U-TECH, INC.)			June
(	September	1983	Established new halogen lamp manufacturing plant (HYOGO
Established equipment assembly plant		1984	USHIO ELECTRIC, INČ.)
(GUNMA USHIO, INC.)		1985 —	February
,		1900	Established Southeast Asian sales base
			(Singapore Liaison Office)
			April
	September	1986	Established sales base in Europe
Established equipment assembly base in Hong Kong			(USHIO EUROPE B.V.)
(USHIO HONG KONG LTD.)		1987 —	April
			Established lamp production plant in the U.S.A.
	0 1 1		(USHIO OREGON, INC.)
Established fleeh lown and rare goodischarge lown	September	1988	July Established lamp production plant in Taiwan
Established flash lamp and rare-gas discharge lamp plant in Japan (TSUKUBA USHIO, INC.)			
piant in Japan (TSUKUBA USHIO, IIVC.)	Dogombor		(USHIO TAIWAN, INC.) September
Established sales base in France	December		Established lamp production plant in Europe
(USHIO FRANCE S.A.R.L.)			(USHIO EUROPE B.V.'s TILBURG PLANT)
Established Systems Division II (Gotemba)			June
zotaznonoù o jotorno zimolori ii (ootornza)		1989 ——	Singapore Liaison Office upgraded to subsidiary
	July		(USHIO SINGAPORE PTE LTD.)
Marine division spun off as separate company		1990	April
(USHIO MARINE, INC.)		1991 ———	Reestablished Tilburg Plant as subsidiary
	October		(USHIO EUROPE (TILBURG) B.V.)
Acquired BLV LICHT- UND VACUUMTECHNIK GmbH			December
of Germany			Established lamp production plant in Hong Kong
	April	1992	(USHIO HONG KONG LTD., Yuen Long Plant)
Established xenon lamp production			
and sales base in the U.S.A. (CHRISTIE, INC.)		1996 ——	February
Filablish dada kan in Oama	June		Established lamp production plant in the Philippines
Established sales base in Germany			(USHIO PHILIPPINES, INC.)
(USHIO DEUTSCHLAND GmbH)	0-4-6		March Established sales base in the Depublic of Korea
Established general lighting production company	October		Established sales base in the Republic of Korea
Established general lighting production company (USHIO LIGHTING, INC.)			(USHIO KOREA, INC.)
(USTIIO LIGITTING, INC.)	April		
Established sales base in the U.K. (USHIO U.K., LTD.)	Аргіі	1997	November
Established sales base in the o.k. (oshilo o.k., Elb.)	July	1999 —	Established CHRISTIE DIGITAL SYSTEMS, INC.,
Established comprehensive Group R&D center in Japan	ou.j		after the acquisition of the Visual Equipment Division of
(USHIO RESEARCH INSTITUTE OF TECHNOLOGY INC.)			ELECTROHOME LTD. of Canada
(			
	August		
Established a joint venture for excimer-laser business	<del>-</del>	2000	
with Komatsú Ltd. (Gigaphoton, Inc.)			
•			

# INVESTOR INFORMATION

As of March 31, 2002

(As of June 27, 2002)

Chairman and **Ushio Group Representative** 

Jiro Ushio

President and **Chief Executive Officer** 

Akihiro Tanaka

**Directors and Corporate Executive Vice Presidents** 

Tadashi Shibuichi Katsunori Kakimi

**Directors and Corporate** Senior Vice Presidents

Tomio Nakanishi Manabu Goto Masayoshi Murakami Shiro Sugata Hiromitsu Matsuno

#### **Corporate Auditors**

Takahisa Mimura Masashi Hayakawa Ken Ouchi Toshihisa Saito

March 1964

¥19,556,326,316

Authorized: 300,000,000 shares Issued: 139,628,721 shares

13,627

Tokyo Stock Exchange, First Section

Shin Nihon & Co.

The Chuo-Mitsui Trust & Banking Co., Ltd.

(As of June 27, 2002)

## **Head Office**

Asahi Tokai Building. 6-1, Otemachi 2-chome, Chiyoda-ku, Tokyo 100-0004 TEL: (03) 3242-1811 FAX: (03) 3245-0589

# Harima Division

1194, Sazuchi, Bessho-cho, Himeji, Hyogo 671-0224 TEL: (0792) 52-4381 FAX: (0792) 53-6262

## Yokohama Division

6409, Moto-Ishikawa-cho, Aoba-ku, Yokohama, Kanagawa 225-0004 TEL: (045) 901-2571 FAX: (045) 901-1004

# Gotemba Division

1-90, Komakado, Gotemba, Shizuoka 412-0038 TEL: (0550) 87-3000 FAX: (0550) 87-3200

# Tokyo Sales Headquarters

Asahi Tokai Building, 6-1. Otemachi 2-chome. Chiyoda-ku, Tokyo 100-0004 TEL: (03) 3242-5611 FAX: (03) 3242-2700

## **System Sales Division**

Hazuki Building, 14-6, Utsukushigaoka 5-chome, Aoba-ku, Yokohama, Kanagawa 225-0002 TEL: (045) 901-2572 FAX: (045) 901-0883

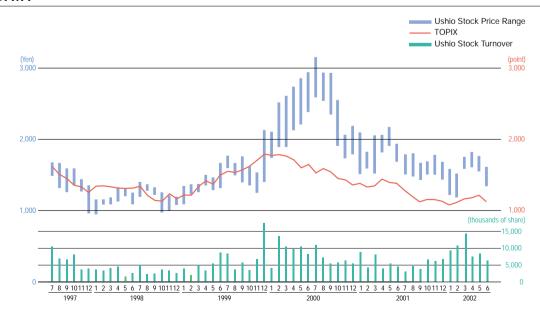
#### Osaka Branch

Shin-Osaka Mori Building, 13-9, Nishi-Nakajima 5-chome, Yodogawa-ku, Osaka 532-0011 TEL: (06) 6306-5711 FAX: (06) 6306-5718

Further information may be obtained by contacting the Corporate Communications Department:

TEL: +81-3-3242-1815 FAX: +81-3-3242-0695

# STOCK DATA



Lighting-Edge Technologies



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Light—more indispensable than ever.
Ushio the light creation company—more promising than ever.

Lighting the Way to the Future: USHIO.

For further information on Ushio or our products, please contact the Company's head office or visit our Web site:

http://www.ushio.co.jp

Corporate Communications Department Office of the President USHIO INC.

Asahi Tokai Building, 6-1, Otemachi 2-chome, Chiyoda-ku, Tokyo 100-0004, Japan TEL: +81-3-3242-1815 FAX: +81-3-3242-0695