

# REVIEW OF OPERATIONS

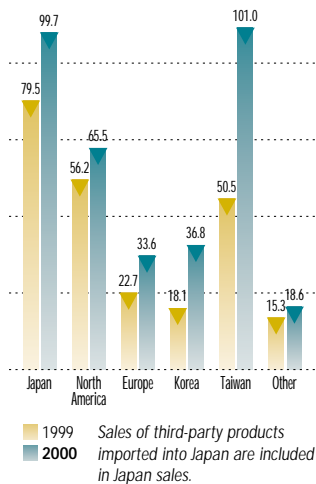
## SEMICONDUCTOR PRODUCTION EQUIPMENT

During 1999, the semiconductor production equipment industry experienced a strong turnaround from the previous year's severe recession, especially in the latter half of the year. Chipmakers began to invest aggressively in capital equipment to meet resurgent demand, in what is believed to be the early stages of a multi-year upturn.

With its global reach and broad lineup of leading-edge products, Tokyo Electron was well positioned to benefit from this recovery. Consolidated net sales of the Semiconductor Production Equipment (SPE) division increased 46.6 percent year-on-year to ¥355.1 billion. Moreover, orders for semiconductor production equipment increased steadily in each quarter, particularly in the second half of the fiscal year.

### SPE Sales by Geographic Region (¥ Billions)

Sales increased in every region in the past fiscal year. Taiwan accounted for the largest proportion of net sales, signifying Tokyo Electron's progress in globalizing its operations.



### Review by Geographic Region

SPE division sales expanded in every region in which Tokyo Electron operates. In Japan, chipmakers began investing in equipment for new SOC and flash memory fabs, while continuing to invest in equipment for upgrading existing lines. As a result, sales in Japan increased 25 percent to ¥99.7 billion. In North America, sales rose 17 percent to ¥65.5 billion as Tokyo Electron continued to make large inroads into the market. In Europe, investment in equipment for manufacturing communications-related devices increased, leading to a 48 percent gain in sales to ¥33.6 billion. In Taiwan, despite suffering a devastating earthquake, chipmakers were able to recover quickly. Sales jumped 100 percent to ¥101.0 billion as U.S. and Japanese chipmakers steadily increased outsourcing to Taiwanese foundries. Of note, sales in Taiwan were the highest among the regions in which Tokyo Electron operates. This was the first time in Company history that a region other than Japan accounted for the largest proportion of total net sales, highlighting the progress that Tokyo Electron has made in globalizing its operations. In Korea, chipmakers started to invest heavily in new equipment due to a strong recovery in DRAM and LCD demand, resulting in a 103 percent increase in sales to ¥36.8 billion.

### Review by Product

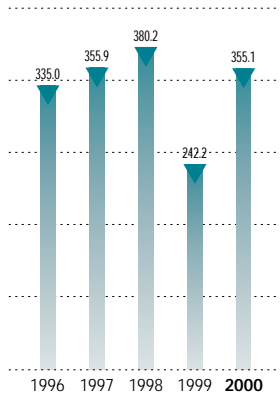
Sales in all product categories increased year-on-year, with ACT<sup>®</sup> 8 series coater/developer systems and UNITY<sup>®</sup> series etching systems generating particularly strong sales gains. In addition, sales of furnaces/LP-CVD systems equipped with a Fast Thermal Processing System (FTPS) also showed solid growth as chipmakers brought new lines onstream. Sales of TFT-LCD production equipment more than doubled as LCD manufacturers in Taiwan, Korea and Japan raced to add new capacity to meet soaring demand for TFT-LCDs. Sales in Taiwan were especially strong as several new fabs were

Note: Years in all graphs refer to fiscal years ended March 31.

## SPE Sales

(¥ Billions)

Renewed investment among chipmakers and LCD manufacturers created brisk demand for Tokyo Electron's advanced semiconductor and TFT-LCD production equipment.



brought online.

Tokyo Electron is currently putting its efforts into moving several new products to volume production, including the *CLEAN TRACK ACT® 8 SOD* system, the *WX-8* wafer-level burn-in & test system and the *UW200Z* and *PR200Z* cleaning systems. Growth prospects are excellent for the *CLEAN TRACK ACT® 8 SOD* system, which uses the same platform as the Company's best-selling coater/developer system, as the industry moves toward spin-on technology to apply new low-k materials as insulators. The *WX-8* is a revolutionary new product that enables burn-in and testing at the wafer level. Hereto considered technologically infeasible, this system is designed to contribute to substantial cost savings compared with conventional burn-in testing at the chip level after packaging. The *UW200Z* has reduced bath volume, footprint and chemical and D1 water consumption, thus representing a new standard for Front-End-of-Line cleaning applications. The *PR200Z* incorporates unique cleaning technology for Back-End-of-Line processes, particularly for cleaning in high aspect ratio via holes. Shipments of all of these systems have commenced, and evaluations from R&D institutions and customers alike have been extremely favorable. Shipments of 300mm tools have also started, which will contribute to even further growth in the future.

## COMPUTER SYSTEMS AND ELECTRONIC COMPONENTS

### Computer Systems

In the past fiscal year, consolidated net sales decreased 4.0 percent to ¥12.4 billion, due to continued weakness in domestic corporate demand.

In the second half, however, IT-related investment by Japanese corporations began to pick up, fueling an increase in sales of servers and high-speed networking systems that form the backbone of Internet-related business.

Sales of networking equipment, including Extreme Networks' Gigabit Ethernet switch, increased 1.5 times year-on-year. In addition, sales of Fibre Channel products for Storage Area Networks (SANs) more than doubled. The market for SANs is expected to grow further, and the division will continue to strengthen its product lineup in the Fibre Channel area as a core segment. Also in the past fiscal year, the division began handling Pathlight Technology router products.

Expansion in the e-commerce market has resulted in growing demand for security systems. Beginning in the past fiscal year, the division began handling



Brocade Communications Systems, Inc.  
Fibre Channel Fabric Switch



Emulex Corp.  
Fibre Channel PCI Host Adapter

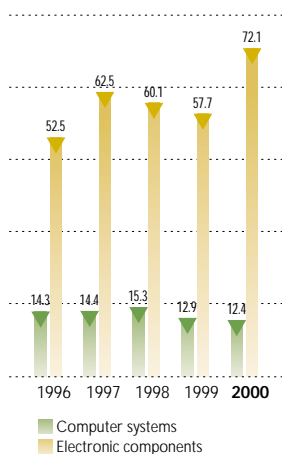


GenRad, Inc.  
Combination Test System

## CS & EC Sales

(¥ Billions)

While computer systems sales remained essentially unchanged, sales of electronic components rose to a record high.



the products of nCipher, a leader in SSL accelerator products. The division also entered the market for Internet traffic administration products by adding equipment from F5 Networks to its product lineup.

In addition to distributing hardware, the division is also developing consulting and outsourcing services that enable customers to use their information systems in an optimal environment. For example, the TEL Engineering Office™ provides a pleasant engineering environment for Hewlett-Packard users, and the DigiGuard™ data center gives users the option of outsourcing their IT administration functions. The division also entered a new field by initiating distribution of Cycomm environment-resistant computers.

### Electronic Components

The first full year since electronic components operations were transferred to wholly owned subsidiary Tokyo Electron Device Limited (TED) in July 1998 has passed.

In the past fiscal year, consolidated net sales of the Electronic Components division increased 24.8 percent to a record ¥72.1 billion. Sales of devices related to communications, networking and personal computers showed remarkable growth, and sales of digital consumer electronics were solid. This is a result of increasing our ratio of high-value-added products by focusing on these high-growth areas over the past few years. In particular, sales generated by the products of four companies that we recently started dealing with more than doubled year-on-year, and have already come to account for nearly 5 percent of division sales. The division will continue to actively introduce new products in high-potential fields.

The division distributes the products of nearly 40 leading companies from around the world, and also provides its own originally designed and developed products.

The latter include the *TE4000* series

of flash memory controllers, which have high growth prospects as devices that support multimedia applications. In addition, the division deploys its extensive development skills and top-notch facilities to create more than 100 custom LSIs for customers each year. Recently, the scale of the design work the division takes in for ASIC devices has been getting larger.

Strengthening and expanding electronic transactions is another objective. In the past fiscal year, the volume of shipments handled via electronic data interchange (EDI) grew to approximately 80 percent of all shipments, which has contributed significantly to greater operating efficiency.



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