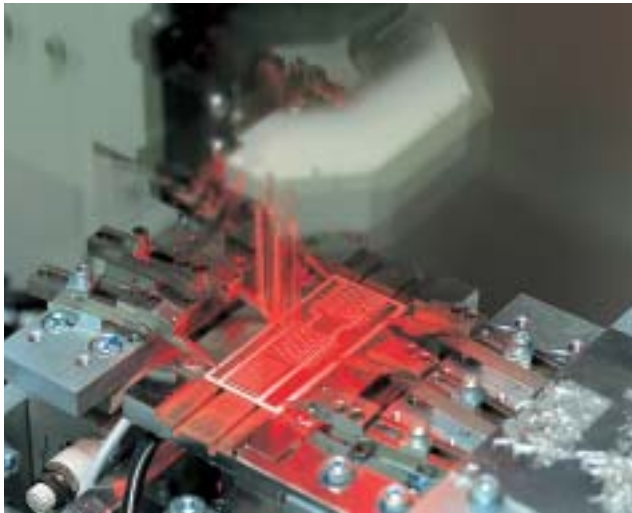


Electronics Business — A Key to Future Growth



Toyota Industries is confident that its Electronics Business has significant growth potential, and we anticipate further market expansion in the long term. We intend to allocate the necessary capital and management resources to turn this potential into reality.

LCD Business

In October 1997, Toyota Industries and Sony Corporation (“Sony”) established ST Liquid Crystal Display Corp. (“ST-LCD”) as a 50-50 joint venture. ST-LCD manufactures low-temperature polysilicon TFT-LCD panels. ST-LCD benefits from Sony’s advanced LCD development technologies and Toyota Industries’ superior quality control and manufacturing technologies.

Since our investment in ST-LCD is not a majority stake, we do not include it as a subsidiary but account for it as an affiliate by the equity method. Nevertheless, we consider ST-LCD as the core of our Electronics Business. Since it began mass production in April 1999, ST-LCD has expanded production to meet rising market demand. A unique production line that incorporates the Toyota Production System ensures that quality keeps pace with output.

Toyota Industries believes that the outstanding features of the low-temperature poly-Si TFT-LCD panel give it significant potential to spur greater demand in the medium to long term.

ST-LCD is now producing the LCD panel for mainly mobile phones digital still and video cameras, and personal digital assistants (PDAs). The panels are supplied to customers through Sony.

The low-temperature poly-Si TFT-LCD panels are energy-efficient, and offer high resolution as well as high numerical aperture. They also facilitate the integration of the display device and its driver circuits into a single TFT glass base plate. The resultant reduction in cost and miniaturization of the display unit allow the LCD panel to be used in a wide range of applications, including in-car monitors.

They are also suitable for wide-band mobile phones, where they allow easy exchange of large volumes of data for video and still images. We expect that demand for low-temperature poly-Si TFT-LCD panels will increase further as their application in high-definition displays extends to ever smaller, lighter mobile phones and PDAs.

Anticipating a sharp increase in demand for the panels over the medium to long term, in the fall of 2001 ST-LCD invested ¥75 billion to establish a second production line, and increased the capacity of its first production line. In total, ST-LCD now has a monthly capacity of 32,000 base plates (600mm x 720mm). To help fund this investment, Sony and Toyota Industries each injected ¥10 billion into ST-LCD, increasing its capital to ¥50 billion. Looking closely and flexibly at the pattern of demand, ST-LCD has gradually increased the production volume of the second line since the summer of 2002. In anticipation of an increase in demand for mobile phone and digital camera applications, it plans to start full-fledged operation within 2003. Sony, Toyota Industries and ST-LCD regard the low-temperature poly-Si TFT-LCD as a key device in the field of compact displays, and are collaborating to develop and manufacture superior products for further expansion of the business.

Semiconductor Package Substrate Business

Toyota Industries entered the semiconductor package substrate business through its subsidiary, TIBC Corporation (“TIBC”), a joint venture with Ibiden Co., Ltd. (“Ibiden”).

Established in 1998, TIBC manufactures ball grid array (BGA) plastic package substrates and flexible printed circuit (FPC) substrates. Although TIBC experienced difficulties due to the worldwide IT slump, it will commit itself to improving its production efficiency, manufacturing cutting-edge products that accurately reflect customer needs such as high-performance package substrates, and strengthening its competitive edge. TIBC's BGA plastic package substrates are supplied through Ibiden to major semiconductor manufacturers worldwide and Integrated Device Manufacturers (IDMs) in South Korea and Taiwan for use in PCs, mobile phones and others. Similarly, TIBC's FPC substrates are marketed by Ibiden to IDMs in Europe and China for incorporation in credit cards, telephone cards and others.

Corporate Technical Center

Toyota Industries' Corporate Technical Center develops and manufactures power electronics parts for automobiles, and engages in basic R&D in the materials field as well as research in the latest technologies, such as electronics for commercial use. The Center also serves as Toyota Industries' R&D facility and its production base for a vast array of electronics parts, so accumulating know-how in product manufacture. Products include a DC-DC converter that fully employs the Center's long-cultivated power electronics technology and expertise.

Fitted in Toyota Motor Corporation's Prius hybrid car as a main component, the converter is a switching power supply that down-converts the high-voltage current of the main battery to a lower DC current to supply power for headlights, air conditioners and electric control units via the auxiliary battery. The Center aims to establish a position as a manufacturer of power sources for hybrid cars.

Joint Development through Business Collaboration

We have been developing an ultra-compact radio tuner for AM/FM/teletext broadcasts jointly with Niigata Seimitsu Co., Ltd. ("Niigata") as part of a business collaboration agreement.

This is the world's first radio tuner to incorporate both analog and digital circuits by utilizing total CMOS RF IC technology. In addition to facilitating the design of ultra-compact car radio systems, this product will enable mobile phones and PDAs to receive radio and teletext broadcasts, opening the way for application in a wide range of information devices. Toyota Industries and Niigata are working closely on the feasibility of mass production for this unit.



Radio tuner module

