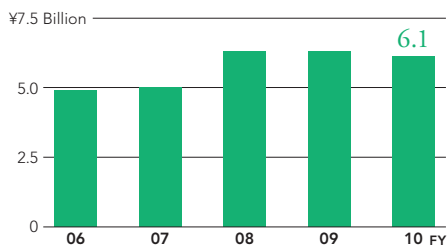


## R&D Activities

As a technology-centered company, we realize that strengthening R&D capabilities is one of our most important strategies for achieving sustainable growth. Through original technological capabilities and research based on dialogues with markets, we are developing innovative products that generate demand, providing solutions, and accelerating the resolution of customers' technological issues.

### R&D EXPENSES



### ORGANIZATIONAL STRUCTURE

#### Research & Development Div.

##### Research Center

##### Product Research Dept.

- Electronic & Optical Materials Lab.
- LCD Materials Lab.
- Adhesive Materials Lab.
- Release Materials Lab.
- Processing Technology Section

##### New Materials Research Dept.

- Material Design Lab.
- Device Materials Lab.
- Healthcare Lab.

##### Production System Technology Dept.

##### Intellectual Property Dept.

##### R&D Strategy Dept.

##### Ina Technology Center

### OUR FOUR CORE TECHNOLOGIES

#### Pressure-sensitive adhesive applications

Through the development of adhesives and substrates and the combination of related technologies, we are expanding the range of fields in which the basic functions of adhesive products are utilized.

#### Material quality and functionality enhancement

Through the chemical and physical processing of paper, film, and adhesives, we are enhancing their characteristics and adding new functionality.

#### Specialty paper and composite material production

We use original papermaking technologies and coating, impregnation, and laminating technologies to develop specialty papers and high-value-added materials that transcend traditional concepts of paper.

#### System development

Through systematizing machinery and equipment and building high-level systems that draw on the distinctive characteristics of materials, we are providing advanced solutions.

## Basic Policy

As a technology-centered company, developing innovative products that generate demand and offering solutions based on these products drives our growth. We have built our preeminent market position by advancing and linking individual technologies for pressure-sensitive adhesives and other areas to add further value to our sheet materials and increase their application.

In the year ended March 31, 2010, continuing from the previous fiscal year, we developed technologies and new products based on our medium-to-long-term R&D plan. We pursued research that emphasizes customer needs and dialogues with markets, concentrating particularly on developing functional materials and related processing technologies. As a result, the LINTEC Group invested a total of ¥6.1 billion in R&D, practically unchanged year on year.

## R&D System

LINTEC's R&D function is focused in the Research Center within the Research & Development Division, which has approximately 200 research personnel. With a complete array of the very latest research equipment, pilot coaters, and clean-room facilities, the research center collaborates closely with production engineering divisions to develop a range of coating agents and other products. In April 2008, all of the laboratories were reorganized into the Product Research Department and the New Materials Research Department to strengthen our systems toward achieving the goals of timely R&D that meets the needs of the age and R&D for new products that will support LINTEC's growth in the future.

Developing and producing a variety of equipment, our Ina Technology Center is working particularly hard to develop and strengthen semiconductor-related equipment and production systems. Moreover, the Group also has an R&D base in Boston, in the United States, which conducts research and development in such areas as industrial-use multilayer materials and coating technology.

## Technological Foundations

We will combine our four core technologies of pressure-sensitive adhesive applications, material quality and functionality enhancement, specialty paper and composite material production, and system development to develop and supply highly distinctive products unlike anything else available in the market.

Supported by data that we have accumulated over many years of research, we develop and supply industry-leading adhesive-use technology and products. We also develop many types of devices for the application and removal of our products. This ability to provide total solutions is LINTEC's major strength.

In order to further develop and expand our technological foundations, we are not only conducting in-house R&D but also proactively initiating technological alliances with industry, government, and academia. Our goal is to develop new technologies and products by integrating different technological areas. Through initiatives to develop materials and equipment, we intend to add further value to our sheet products and extend their range of application.



### Research Center

Researching and developing pressure-sensitive adhesive agents, release agents, precision coatings, etc.



### Ina Technology Center

Developing and producing semiconductor-related equipment and adhesive related equipment

## Successful R&D Initiatives in the Fiscal Year under Review

### Pressure-sensitive Adhesive-related Products

- **Electronic and optical devices products**

We developed a DBG + LE system that combines a DBG (dicing before grinding) system, which supports the production of thinner LSI chips, with LE Tape, which functions as both dicing tape and die bonding tape. By making possible multi-layer LSI chips, this system contributes to the realization of higher-density LSI packages. In this way, the system supports the creation of higher-capacity memory cards.

In electronic equipment related products, our development activities are centered on application equipment that facilitates the efficient use of semiconductor production tape. In the fiscal year under review, we focused on the development of equipment and processes suitable for ultra thin silicon wafers and the development of environmentally friendly devices.

- **Optical-related products**

We made further progress with the adhesives used in laminating optical functional films. This progress includes adding antistatic properties to an innovative adhesive that offers both outstanding durability and reworkability, and developing this adhesive for use in a diverse range of production processes. In addition, by leveraging the application of original technologies, such as an antiglare coating that offers both low gloss and high transparency, we continue to focus on the development of optical-related products that are utilized in the field of flat panel displays.

- **Healthcare-related products**

We made progress with the basic technology for film pharmaceutical products that are easy to swallow without water because they become a jelly on contact with small amounts of saliva. Through an operational and technological tie-up with ASKA Pharmaceutical Co., Ltd., we have been jointly developing next-generation oral film formulations. We continue to move forward with research into the use of this technology as a new drug delivery system that contributes to improving the quality of life of patients.

- **Printing- and information-related products**

Our environmentally friendly label materials have substrates that are made of the same materials as those used in molded plastic. Consequently, these materials enable plastic to be

recycled without removing the labels. In the year under review, we created a lineup of removable labels that facilitate the reuse or recycling of parts from OA equipment and consumer electronics products. In addition, we developed a glossy lamination film made with a new material that possesses the structural color function. The color of the printed surface changes with viewing angle, and the surface has a metallic finish.

Moreover, in printing equipment related products, our development activities are centered on printing machines that are optimally suited to the special characteristics of the Company's label materials. In the year under review, we developed an improved version of the LPM-300, an intermittent letterpress, as well as a printing machine for the China market. We also worked to develop equipment that combines roll-to-roll web handling technologies and processing technologies.

- **Commercial- and industrial-related products**

We launched a new, highly moisture-proof type of PV backsheet that utilizes special vapor deposition film. With this aluminum-free product, we realized the lowest level of moisture vapor transmission in the industry. As a result, this PV backsheet will contribute to increasing the reliability of PV modules. In addition, we developed a new decorative glass film for household use that offers superior adhesive performance. This product's special design enables anyone to achieve beautiful results with simple application, and it has a soft curtain effect.

In industrial equipment related products, meanwhile, our development activities are centered on labeling systems for the automated application of adhesive labels. In the fiscal year under review, we focused on the development of equipment for the automotive-related, distribution, and mail-order industries.

### Paper-related Products

In fine and specialty paper products, we launched a number of new colors in our lineup of color papers for envelopes.

In release materials, we developed a release agent processing method for light release that is resistant to silicone transfer and is intended for non-carrier adhesive sheets with no base film.

Furthermore, by reevaluating the product structure, we were able to complete the development of pseudo-adhesive label base material with stable quality. We market this product for use in labels for various mail order and package delivery documents.

# Intellectual Property

We aim to increase corporate value by supplying original products developed through our continuous R&D efforts. These products constitute our intellectual property and are important management resources.

To protect these resources, we have established the Intellectual Property Department within the Research & Development Division. The department's fundamental functions are to support operational activities through patent applications and to build barriers to protect intellectual property.

The department works to increase the freedom of operational activities, minimize the risks accompanying operations, and enhance motivation among technical staff. In addition to preparing and submitting patent applications, it monitors for infringement of rights and consults with researchers in the early stages of product development and also in the discovery stage at our R&D locations. In other words, the department is engaged in comprehensive and strategic activities to protect our intellectual property.

As well as increasing the number and quality of patent applications and rights acquisitions, we are working to supplement and rebuild our portfolio of patents for growth businesses and foundation businesses, to provide intellectual property support for operations shifting to overseas locations, and to train more employees with a view to advancing and accelerating development processes. Through those efforts, we aim to increase profitability based on our intellectual property.

