

R&D Activities and Intellectual Property

Basic R&D Policy

As a technology-centered company, we realize that strengthening R&D capabilities is one of our most important management strategies for achieving sustainable growth. Two approaches help us to create both products that resolve our customers' technological issues and products that are unprecedented, innovative, and lead the market: the developing functional materials and related processing technologies that leverage our proprietary technological capabilities, and a market-dialog style of research that emphasizes user needs. Going forward, we will further strengthen our R&D systems to accelerate the speed of product development and create new technologies.

R&D Achievements

In the fiscal year under review, the R&D expenses incurred by the Group amounted to a total of ¥6.8 billion. The following is an overview of the principal R&D activities conducted by each operational segment.

Printing and Industrial Materials Products

Printing and variable information products

We developed VENTI-LABEL as an adhesive film that suppresses the blisters and bubbling of the label due to gas generated from the plastic molding. By making both the base film and the adhesive gas permeable, we retained the design properties of the film and overcame the problem of bubbling formed by the release of the gas.

In printing equipment-related products, our research centers on the development of printing machines optimized to the special characteristics of our label materials. In the fiscal year under review, we developed the LPM-400, for which we employed a next-generation sheet transport system. Also featuring automatic preset, the LPM-400 is compatible with wide-width printing and has realized both shorter setup changeover times and a reduction in paper wastage.

Industrial and material products

We have developed laminate materials that follow the contours of uneven surfaces and are thus optimized for the adhesive sheet used on road surfaces. Sold throughout Japan as Floor Marking OXZ, the product can be used for a long period of time on asphalt and concrete road surfaces in combination with conventional media (output sheet).

In industrial-machinery related products, our development activities are focused on labeling systems for the automated application of the adhesive labels that are our core products. In the fiscal year under review, we developed high-speed labeling machines for the food and pharmaceutical industries as well as the logistics and mail order industries.



VENTI-LABEL

Electronic and Optical Products

Semiconductor-related materials

We have newly developed the RAD-3810F/12 vacuum laminator that enables compatibility with the surface unevenness of the wafers of power devices and the through-silicon via (TSV) process. We have also made major advances in the development of the main mechanism units for mounters, laminators, and UV irradiation equipment that are compatible with the next-generation 450mm wafers.

Optical functional materials

We have developed high-barrier films with extremely high gas barrier characteristics and superior transparency and bend resistance. We have expectations that these materials will be useful in reducing the weight and increasing the flexibility of, for example, electronic paper and organic electroluminescence displays.

Paper and Converted Products

In specialty papers, we have developed a total heat exchanger base paper that improved productivity and performance. The new paper can be used in injection, corrugated, and metal molds. We have also developed high-quality base papers for release papers that significantly improve printability and enhance internal strength.

In release materials, in addition to existing process films, which provide a smooth release surface, we launched a new process film that provides a mat tone release surface. This product is suitable for controlling the gloss value and applying the mat to the cast film surface. In addition, we launched a type of product with improved antistatic performance onto the market, a process film for electronic devices production. The new film eliminates defects caused by static electricity that can arise during the manufacturing processes of electronic devices, such as the static charge caused by release.

Intellectual Property Activities

The LINTEC Group aims to increase corporate value by developing original products that meet customer needs. We therefore rank intellectual property, such as patents, trademarks, and design rights, as important management resources. While placing the utmost emphasis on respecting the rights of other companies, the Intellectual Property Department, Research & Development Division promotes strategic Companywide intellectual property activities. These activities include seeking to uncover new invention candidates at R&D sites for the purpose of expanding intellectual property rights, which are the lifeline to a technology-centered company.

Accordingly, while planning the linkage of things such as patent portfolio building for our foundation and growth business domains, and support for M&A activities, with our business strategy, we aim to improve profitability based on intellectual property.



Patent Applications and Approvals (Japan)

