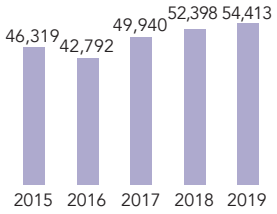
Segment Information

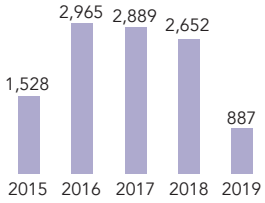
Industrial Materials

In the Industrial Materials segment, we conduct the production and sale of such products as optical components, molding dies and plastic molding, electroforming and precision parts, adhesive tapes, functional materials, RFID systems, IC cards, and industrial rubber products.

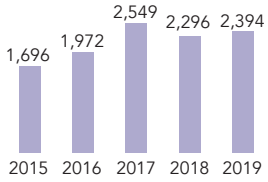
Net Sales
(¥ million)



Operating Income
(¥ million)



R&D Expenses
(¥ million)



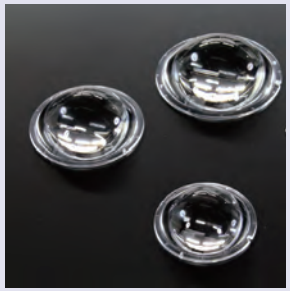
Overview of Main Products

Category	Main Products
Optical components	In-car camera lens units
	LED headlamp lenses
	Lenses, etc. (lenses for smartphones, camera lens barrels, etc.)
Molding dies, plastic molding	Ultra-precision molds
	Plastic molding
Precision components	Semiconductor-related embedded systems
	Image recognition systems
	Electronics manufacturing services
Adhesive tapes	Adhesive tapes
Functional materials	Inks
	Films
	Electromagnetic wave absorbers
	Coated separators
Electroforming	EF²*
RFID, IC cards	RFID systems
	Contactless IC cards, IC card readers/writers
Industrial rubber products	Rubber sheets
	Wear protection materials
	Precision and special parts, etc.

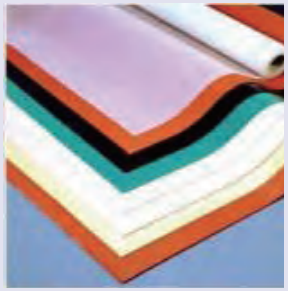
* Electro Fine Forming


In-car camera lens units (for viewing)

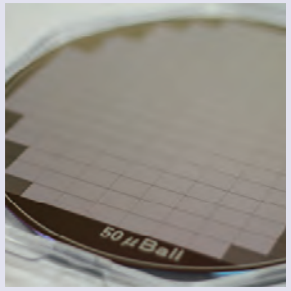

In-car camera lens units (for sensing)


LED headlamp lenses


Coated separators


Rubber sheets


Adhesive tapes



EF²


Semiconductor-related embedded systems

Contactless IC cards, IC card readers/writers

Segment Information

Industrial Materials

Fiscal 2019 Business Results

Despite a decline in sales of embedded systems due to the impact of a downturn in the semiconductor market and in-car camera lens units and other products, growth in sales of coated separators and industrial rubber products brought overall net sales in the Industrial Materials Segment increase 3.8%, or ¥2,015 million, to ¥54,413 million. Operating income declined 66.6%, or ¥1,765 million, to ¥887 million, reflecting decreases in sales of optical components for the automotive market, such as in-car camera lens units and LED headlamp lenses, and semiconductor-related embedded systems.

Direction of the Industrial Materials Segment

In the Automotive area, we will continue to boost production of in-car camera lens units for the advanced driving assistance system (ADAS) market, which continues to grow. We will also strive to acquire new customers in the sensing market, which is likely to expand further in the years ahead, by offering high-performance, highly functional sensing lens units, aiming to capture a market share of 20% worldwide.

Furthermore, as the percentage of cars equipped with LED headlamps is expected to continue to rise, we will tap into this growing demand by strengthening the cost-competitiveness of our LED headlamp lenses. In addition, we will enhance the overall competitiveness of these lenses by improving compatibility with a more diverse range of designs and creating added value by providing assembly. We will also work to cultivate new customers in the growing markets of China, India, the ASEAN countries, and other nations and regions, while responding to the evolution of headlamps, such as adaptive driving beam technology.

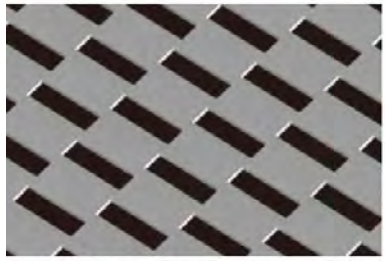
At Ube Maxell Kyoto Co., Ltd. we will supply high-performance, highly stable coated separators for automotive lithium ion batteries, aiming to strengthen our capabilities in step with the growth of the electric vehicle (EV) and hybrid vehicle (HV) markets, while maintaining a strong position as a leading manufacturer by developing highly functional separators.

In the Home Life & Infrastructure area, we will step up efforts to enhance sales of construction tapes in Southeast Asia's waterproofing market. At the same time, in tapes used in the semiconductor manufacturing process we will proceed to capture semiconductor demand in Japan and overseas driven by continuous growth of the NAND flash memory market, and look to open up new markets as well. We will also accelerate the development of markets using electro fine forming (EF²), speeding up our capture of projects where automakers include electromagnetic wave absorbers for millimeter waves in their designs.

TOPICS

Start of Mass Production of High-Precision Hybrid Masks for Vapor Deposition of OLED Display Panels

Hybrid masks for vapor deposition (vapor deposition masks) are used to separate out the red, green, and blue (RGB) organic materials used in the process of manufacturing organic light-emitting diode (OLED) display panels. Vapor deposition masks are a key part of the OLED manufacturing process, and there is a demand for higher-precision masks in terms of positioning and fineness. Maxell uses high-precision EF² technology to form patterns that can disperse the RGB colors with higher precision than current mainstream etching masks. EF² technology will also contribute to reducing electricity consumption and increasing viewing angles.



高精細パターン部
High resolution pattern

World's First IoT Power Supply System Compliant with Four Types of LPWA, Including ELTRES™ and ZETA

Maxell has developed an IoT power supply system for disaster prevention and infrastructure monitoring that is being introduced with low-power wide-area (LPWA) power-saving telecommunication systems. The power supply system was developed using Maxell Frontier Co., Ltd.'s power-saving microcomputer control technology. We provide low-power, low-cost IoT monitoring systems and devices that contribute to disaster prevention monitoring that protects human life and to the prevention of harm by wildlife. Going forward, we will provide energy-saving power supply systems for IoT sensors that are being rolled out nationwide, such as water level gauges for monitoring reservoir levels, disaster readiness devices, and infrastructure monitoring devices, thereby contributing to a safer and more secure society.