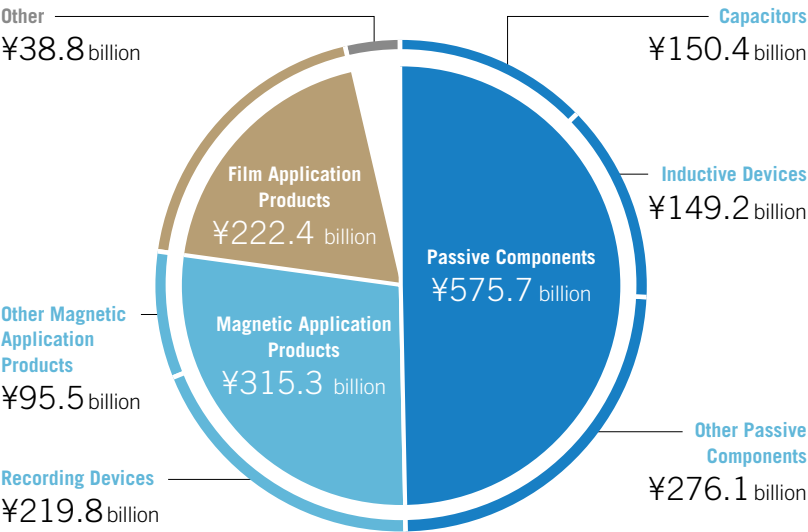


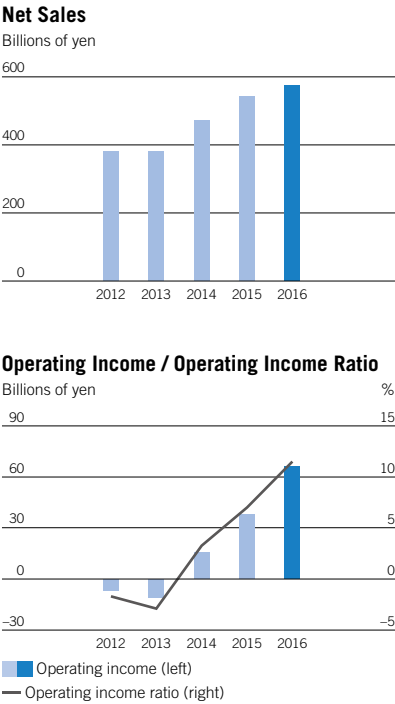
Segments at a Glance

Sales by Segment (Fiscal 2016)

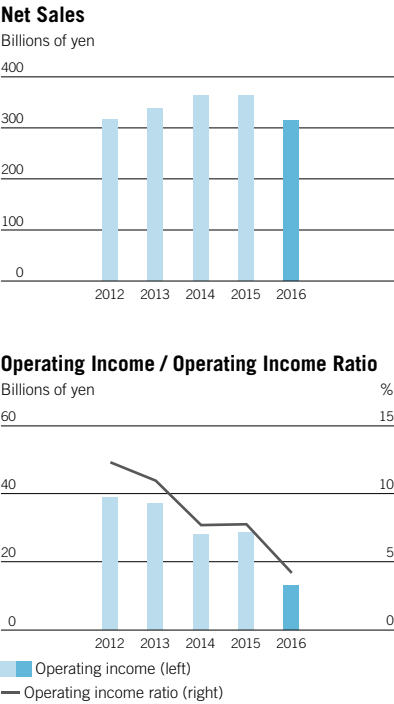


Note: In accordance with the reorganization in the first quarter of fiscal 2016, certain products under Inductive Devices, Other Passive Components, and Other Magnetic Application Products were reclassified into "Other" that was not a part of these three reportable segments. The previous year's sales were also reclassified to conform to the new segmentation.

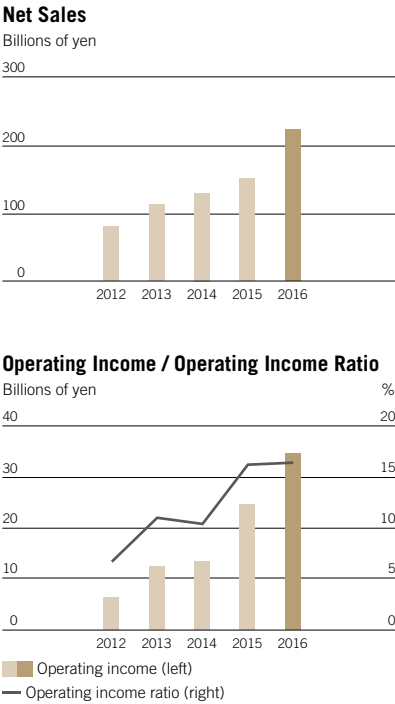
Passive Components



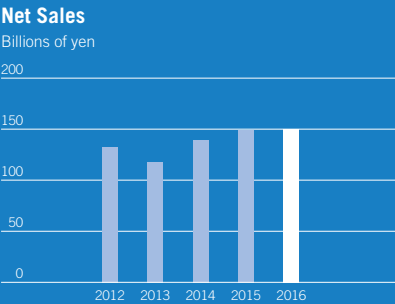
Magnetic Application Products



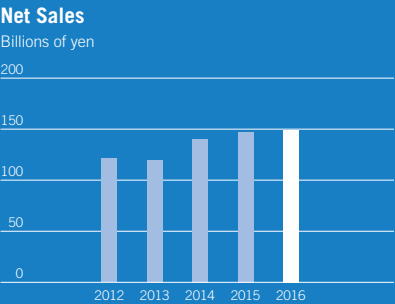
Film Application Products



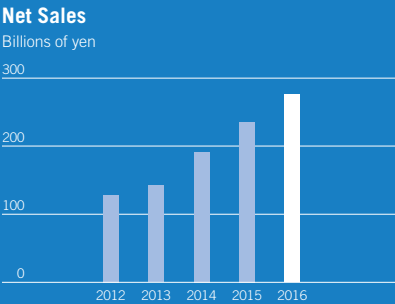
Capacitors



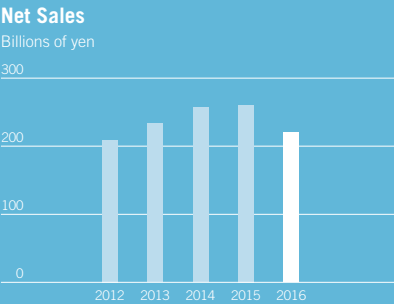
Inductive Devices



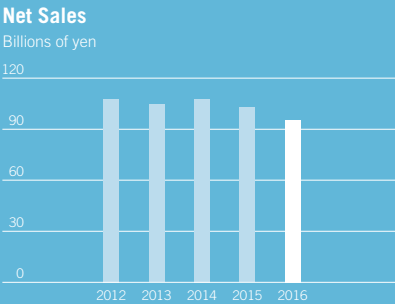
Other Passive Components



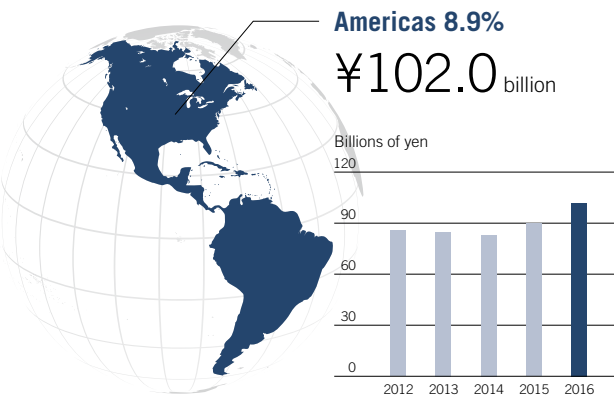
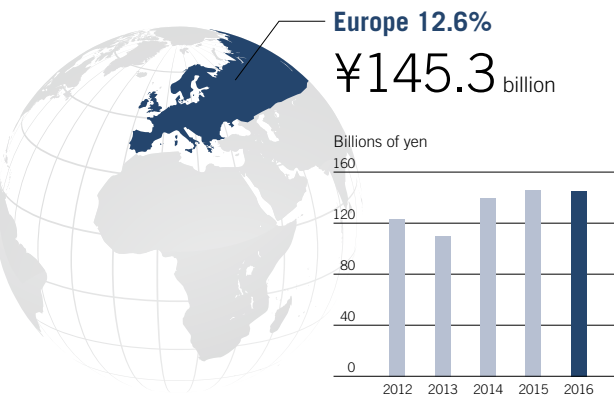
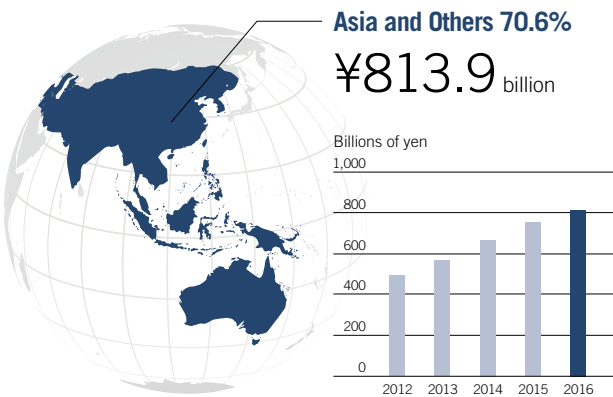
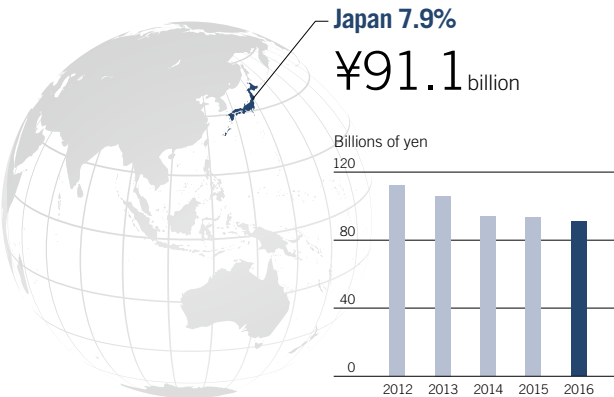
Recording Devices



Other Magnetic Application Products



Sales by Region (Fiscal 2016)



Business Environment of TDK

Market environment and opportunities

For Automotive

- Trend toward lighter weight and electrification of in-vehicle equipment, driven by customers' increased fuel economy awareness
- Development of new technologies such as ADAS and autonomous driving

For ICT

- Increased demand in the Chinese and Indian market and other emerging economies
- Market entry of new terminals
- Mobile terminals with lower profile, more functions, higher performance

For Industrial Equipment and Energy Applications

- Emergence of smart cities in various locations with smart grid (next-generation power distribution network) as energy infrastructure
- Increased demand for renewable energy systems such as wind power and solar power installations

Factors affecting the market

- New environment-related legislation in various countries
- Intensified measures by various governments aimed at saving energy and costs
- Strong pressure on prices due to commoditization of existing products leading to price wars
- Development of new technologies and products by competitors
- Higher prices for source materials due to increased demand
- Fluctuations in sales figures and raw material procurement costs due to exchange rate fluctuations
- General consumer trends in electronics products


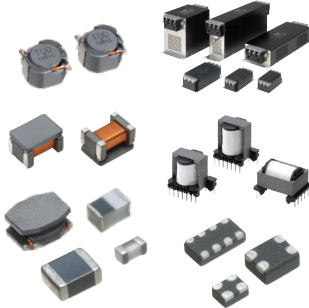
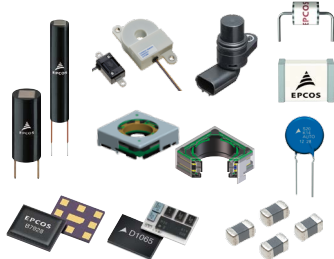
Passive Components

Overview of fiscal 2016

Sales of ceramic capacitors, aluminum electrolytic capacitors, and film capacitors increased, and profits rose as well, due to a firmer automotive market. The same was true for inductive devices, with products for automotive applications performing well. Sales of high-frequency components for the ICT market increased significantly, and profit margins were strongly boosted by improved productivity and a better product mix. In the area of piezoelectric material components and circuit protection devices, sales of products for camera modules

increased, and sensors for the automotive and industrial equipment markets also showed an increase.

Net sales in the passive components segment rose by 8.2% year on year to ¥575.7 billion, and operating income rose by 81.4% to ¥66.4 billion. The fact that sales for the automotive and ICT markets in the United States and China remained strong greatly contributed to improved net sales and profit margins.

	Capacitors	Inductive Devices	Other Passive Components
Main Products	<div>For Automotive Multilayer ceramic chip capacitors with soft conductive resin terminal electrodes Aluminum electrolytic capacitors</div> <div>For ICT 3-terminal feed-through capacitors</div> <div>For Industrial Equipment and Energy Film capacitors Aluminum electrolytic capacitors</div> <div></div>	<div>For Automotive SMD inductors with guaranteed high temperature ratings Common mode filters for automotive use LAN</div> <div>For ICT SMD inductors Thin-film common mode filters</div> <div>For Industrial Equipment and Energy Transformers EMC filters</div> <div></div>	<div>For Automotive Piezo actuators Various sensors (Gear tooth, Pressure, Current, Temperature)</div> <div>For ICT SAW/BAW filters High-frequency modules VCMs/OISs Multilayer chip varistors</div> <div>For Industrial Equipment and Energy Varistors Arresters</div> <div></div>
Important Requirements for Future Products	<ul style="list-style-type: none">• Smaller form factor, higher capacitance• Lower profile for embedding• Lower ESL to enable decoupling applications• Higher temperature resistance for automotive use, higher structural reliability with soft conductive resin terminal electrodes	<ul style="list-style-type: none">• Smaller dimensions, lower height, higher current rating, higher efficiency, lower losses• Develop product lineup according to usage environment• Strengthen EMC control products for reception sensitivity of smartphones with support for more bands• Develop filters for automotive networks	<ul style="list-style-type: none">• Enlarge product mix to cover all RF bands• Increase production of camera module actuators• Adapt angle sensors to automotive applications
Customers	Car manufacturers, communication equipment manufacturers, industrial equipment manufacturers, infrastructure manufacturers, electrical home appliance manufacturers, precision instrument manufacturers, etc.		
Competitors	Domestic	Murata Manufacturing, TAIYO YUDEN, etc.	Murata Manufacturing, TAIYO YUDEN, SUMIDA CORPORATION, etc.
	Overseas	SEMCO (Korea), Yageo (Taiwan), KEMET (USA), AVX (USA), etc.	SEMCO (Korea), Cynotec (Taiwan), etc.
World Market Share of Representative Products (TDK Data)	Ceramic capacitor for automobiles 40%–45%	Inductors 20%–25%	SAW/BAW filters 20%–25% Varistors 30%–35% Gas arresters 75%–80%

Medium- to long-term growth strategy

In the passive components segment, we will be targeting new IoT-related business opportunities via the automotive, ICT, and industrial equipment and energy sectors, which are our priority markets.

In the area of automobiles, manufacturers are looking toward further heightened levels of fuel economy, safety, comfort, and sustainability. To these customers, we are offering comprehensive solutions made possible by our expertise in materials technology, process technology, evaluation and simulation technology, and packaging technology. Furthermore, in the ICT market the advent of large-capacity, high-speed communications with increasing data volumes means that support for higher frequency bands along with higher performance and multifunctionality are more important than ever. The TDK product portfolio is characterized by its wide scope, including not only the widely used conventional SAW filters but also BAW filters suitable for high-frequency bands. The demand for such products as thin-film common mode filters for smartphones is expected to grow further, which will allow us to demonstrate our strengths in this area. We are also continuing to develop strategic products for new markets in the industrial equipment and energy sector, including electronic components for wireless power transfer systems.

Outlook for fiscal 2017

In fiscal 2017, we expect net sales to grow by 3%–6%. Among inductive devices, the share of thin-film products and multilayer products for the ICT and automotive markets is expected to increase. Regarding high-frequency components, we are aiming to expand sales of compact, high-performance discrete products as well as modular products. As for piezoelectric material components, the business volume of actuator type optical image stabilizers (OIS) used in smartphone camera modules to prevent blurry photos is expected to expand, and we plan on further increasing sales in this area.

Initiatives based on growth strategy


Strategic alliance and joint venture with Qualcomm

In January 2016, we announced an agreement with U.S.-based Qualcomm Inc., a leader in next-generation wireless, technology, to establish RF360 Holdings Singapore Pte. Ltd. This joint venture company will be supplying high-frequency front-end modules, high-frequency filters, and similar products for various market segments, including mobile device systems, drones, robots, and automotive applications.

The mobile communications market is one of the most dynamic and fast-changing markets in the world, generating enormous demands for suitable products. In addition to offering multiband capability for 3G, 4G, and LTE, smartphones also need to support connectivity for many different wireless environments. With 5G expected to bring further complexity, end products nevertheless must be small and highly integrated while realizing sophisticated multi-functionality.

Qualcomm has an excellent track record in advanced high-frequency technology and products. Combining these with TDK's unique capabilities in micro-acoustic high-frequency filtering, packaging, and module integration technologies will make it possible to offer cutting-edge high-frequency solutions to customers.

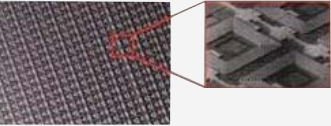
Going beyond high-frequency solutions, both companies also have agreed on business and technological cooperation in other key areas, including passive components, batteries, wireless power transfer systems, sensors, and micro-electro-mechanical systems (MEMS). In addition to strengthening TDK's capabilities to achieve breakthrough solutions to technical problems that we may face in the future, this will bring new technological know-how to various markets and blaze a path toward the next generation of applications. By enhancing product power in key sectors and enabling technological development in new sectors, the alliance will expand our business opportunities.



TDK's Keyword

Toward smaller sizes and thin-film implementations

In the world of IoT, numerous electronic components will be embedded in all sorts of things, including wearable devices, automobiles, and robots. This means that the components need to be made as small as possible and must be able to fit in various installation locations in order to avoid performance degradation in such aspects as fuel economy and functionality. TDK is harnessing materials technology, process technology, and thin-film shaping and fine processing technology acquired during the development of HDD magnetic heads to achieve further reductions in component size and create thin-film versions. We are also integrating semiconductors, electronic components, and software into modules that offer high added value.




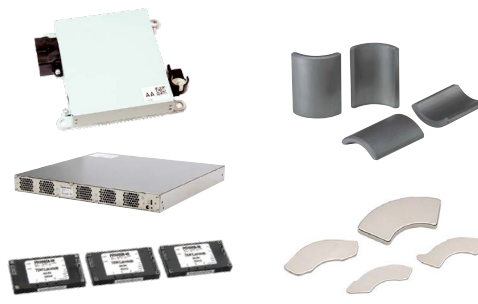
Thin-film common mode filter formed on wafer (left), and enlarged image (right)

Magnetic Application Products

Overview of fiscal 2016

Net sales in fiscal 2016 dropped by 13.2% year on year to ¥315.3 billion, and operating income dropped by 55.5% to ¥13.2 billion. Sales of HDD magnetic heads were affected by the drop in HDD production volumes, which in turn was caused by the shift from HDD to SSD as storage media inside personal computers. This resulted in sluggish market

performance and the above-stated decline. Sales of power supplies for industrial equipment rose, but sales of magnets both for the automotive and the ICT markets decreased. In order to strengthen our HDD suspension business and our position in the HDD magnetic head business overall, we acquired Hutchinson Technology Inc. in October 2016.

Recording Devices		Other Magnetic Application Products	
Main Products	For ICT (including for data center) HDD magnetic heads HDD suspensions, etc.	For Automotive DC-DC converters Battery chargers Magnets for motors (Cooling fan, Door lock) Batteries for xEV For ICT (base station) High current digital POL converter HDD magnets For Industrial Equipment and Energy Bidirectional DC-DC converters High-efficiency AC-DC power supplies Magnets for industrial equipment	
			
Important Requirements for Future Products		<ul style="list-style-type: none">• Further increase in storage capacity and miniaturization• Development of high-spec and high-reliability products• New technologies such as thermal assisted magnetic recording heads	
Customers		<ul style="list-style-type: none">• Supply magnets that reduce use of rare resources to a minimum• Supply magnets with high magnetic properties (high magnetic force and high heat resistance) that contribute to miniaturization and higher efficiency of electric motors• Development of high-efficiency power supplies	
Competitors	Domestic	None	
	Overseas	Power supplies: Cosel Magnet: Shin-Etsu Chemical, Hitachi Metals, etc.	
World Market Share of Representative Products (TDK Data)	HDD magnetic heads: 20%–25% HDD suspensions: 40%–45%		Power supplies for industrial equipment: 15%–20% Ferrite magnets: 20%–25%

Note: TDK is the only manufacturer in the world specializing in HDD magnetic heads. Currently, the production of such heads is concentrated in three companies: TDK, Seagate Technology, and Western Digital Technologies.

Medium- to long-term growth strategy

The scale of the HDD market is expected to shrink further due to reduced demand for personal computers and the shift to SSD storage. We are therefore facing a difficult business environment in this area. On the other hand, demand for HDDs in nearline and external storage applications and for surveillance camera systems is expected to remain solid. The demand for heads used in the internal HDDs of PCs will probably continue to contract, but the number of heads used per HDD unit is expected to increase, especially in nearline-type installations. TDK will continue to optimize the scale of production and utilize advanced technology to deliver superior products and services.

The magnet business also faces a severe business climate, but our advanced technological development continues. High-performance rare-earth-type magnets and next-generation ferrite magnets will be reaching the product stage, and we are also working on special magnets for hybrid and electric vehicles. We intend to improve profitability through the development of market-leading products.

The power supply business is expected to experience growth in demand for industrial equipment products. We will continue to develop high-efficiency power supplies that contribute to savings in energy consumption by industrial equipment overall.

Outlook for fiscal 2017

In fiscal 2017, the magnetic sensor business for the automotive market is projected to expand, and we expect the acquisition of Micronas Semiconductor Holding AG in fiscal 2016 to contribute to business performance. By contrast, shipping volume of HDDs, which was in the order of 444 million in fiscal 2016, is predicted to drop to around 400 million in fiscal 2017, which means that sales of HDD magnetic heads will decrease. Due to the above factors, we expect net sales in fiscal 2017 to fall by about 11% to 14%, as compared with fiscal 2016.

Initiatives based on growth strategy

■ Dealing with the shrinking HDD market


With regard to the HDD magnetic heads business, TDK is implementing three major initiatives.

The first is right-sizing of our own operations. Front-end processing, which used to be split between two locations in Japan and North America, has now been consolidated to America only. Furthermore, we optimized back-end processing in China in terms of personnel and facilities and have started to manufacture passive components in the Philippines. At our bases in Japan, production lines were switched to magnetic sensors (TMR sensors), which are one of TDK's strategic growth products. We effectively take advantage of existing assets and accumulated technology.

The second initiative is contributing to the right-sizing of the industry. This involves going beyond earlier frameworks in strengthening vertical collaboration in development and manufacturing, as well as promoting a horizontal division of labor to avoid overlapping investments and cost increases. We are also supporting research into state-of-the-art technology in order to shorten the time to market for new products.

Finally, the third initiative is the introduction of products and services based on advanced technology. We are currently focusing on the development of thermal assisted magnetic recording heads, which use a laser integrated in the head to heat up a narrow spot on the magnetic medium, thereby temporarily weakening the coercive force. This enables the realization of another drastic jump in recording density. In addition, we are working on cutting-edge developments, such as two-dimensional magnetic recording, where bits are layered in two dimensions, and micro DSA (Dual Stage Actuator) technology.

Through these efforts, we are aiming to remain the go-to supplier in the shrinking market for HDD magnetic heads.




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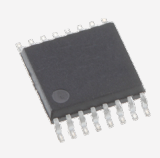
TDK's Keyword

Magnetic sensors

Harnessing TDK's expertise in manetism, the field where our company has its roots, we will be developing magnetic sensors into a key pillar of earnings. In the automotive field, the utilization of sensors for acceleration, braking, and steering applications is envisioned, facilitating the transition from mechanical to electrical and electronic control. TDK products are already in use in industrial linear scales and in autofocus encoders for cameras, and we will be expanding the product mix to cover many other types of applications as well. By building a solid reputation and track record, we aim to become the go-to company for magnetic sensors.



Gear tooth sensor




TMR sensor

Film Application Products

Overview of fiscal 2016

In the film application products segment, we were able to expand our market share in energy devices (rechargeable batteries) for major customers in the ICT market, and we also expanded our customer portfolio. Furthermore, rising demand

from new application areas, such as drones, boosted our net sales by 47.0% year on year to ¥222.4 billion, and operating income rose by 48.0% to ¥36.4 billion.

		Energy Devices
Main Products		<div><div><div>For ICT</div><div>Lithium polymer batteries for smartphones</div></div><div><div>For Automotive</div><div>Lithium ion batteries for automobiles</div></div><div><div>For Industry Equipment and Energy</div><div>High-capacity lithium ion batteries for power storage systems</div></div></div> <div></div>
Important Requirements for Future Products		<ul style="list-style-type: none">• Provide comprehensive solutions from battery cells to packaging design for batteries• Maintain pricing competitiveness• Minimize malfunction risks
Customers		Car manufacturers, communication equipment manufacturers, industrial equipment manufacturers, infrastructure manufacturers, electrical home appliance manufacturers, precision instrument manufacturers, etc.
Competitors	Domestic	Panasonic, Hitachi Maxell, etc.
	Overseas	Samsung SDI (Korea), LG Chemical (Korea), BYD (China), etc.
World Market Share of Representative Products (TDK Data)		Lithium ion polymer batteries 25%–30%

Medium- to long-term growth strategy

In the film application products segment, the TDK subsidiary Amperex Technology Ltd. (ATL) in Hong Kong plays a central role in our business operations. With regard to energy devices for the ICT sector, the trend toward thinner mobile devices suggests that the demand for lithium polymer batteries will continue to rise. Taking advantage of this changeover, we intend to broaden our customer portfolio and thereby further increase our market share. An additional manufacturing line at the Hong Kong subsidiary will boost production capacity for rechargeable batteries, and we are also intensifying various other facility investments with similar aims.

Unlike passive components, batteries are the final form of the integrated product, requiring mastery not only of battery

technology but also of design and packaging aspects. In order to strengthen our capabilities in packaging technology, we acquired the Chinese company Navitasys Technology in 2012, giving us an advantage in the lithium ion battery package business. We are strengthening our R&D power in the entire field, from development of new materials to manufacturing methods and design, which will enable us to offer comprehensive solutions to customers.

Going beyond batteries for mobile devices, we will also be focusing on demand for drones, AGVs, robots, and other types of industrial equipment, and even cars in the long term, to open up opportunities for further growth.

Outlook for fiscal 2017

We expect net sales of applied film products to grow by 12%–15% in comparison with fiscal 2016. Driven by the trend toward thinner mobile devices, sales of lithium polymer batteries are set to grow, not only for delivery to major North American customers but also to customers in China and South Korea. Demand in new application fields, such as drones, is also projected to rise. The move toward a broader spectrum of customers will result in a more balanced customer portfolio and further contribute to the stabilization of our operations.

Initiatives based on growth strategy

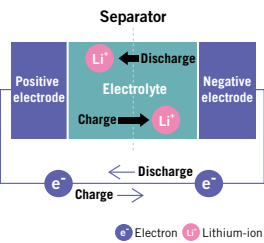
■ Development and production aimed at new applications

The demand for rechargeable batteries is spreading from smartphones to notebook computers, robots, drones, and various other application fields. Because computers need more power than smartphones, the battery capacity per unit has to be larger, which will translate into rising demand in the future. In addition, the demand for Energy Storage Systems (ESS) for solar power and wind power installations is also expected to expand.

TDK is considering making continuous investments directed toward increased lithium ion battery production by fiscal 2018. Especially in China, where high demand is expected, we are planning to expand facilities at production sites to establish a solid mass production framework. In addition to expanding and adding new equipment, we will also be updating existing equipment and boosting production efficiency.

Besides the production aspect, the development framework is also being strengthened. In the autumn of 2015, we opened a new research center in China where gifted engineers from all over the world are coming together. Development of composite parts for a management system to enhance the safety of batteries is progressing, with the aim of further enhancing our competitiveness.

TDK is also investing aggressively in the development of special and unique battery products, such as quick charging types and batteries with a 3-D structure.



Principle of lithium-ion battery

Other

Regarding areas other than the three segments reported previously, we are also active in mechatronics (production equipment) and various other fields. Net sales for fiscal 2016 rose by 8.0% over the previous term to ¥38.8 billion. Operating income for fiscal 2016 was ¥1.9 billion, a 229.4% year-on-year increase.

Main Products	
<p>Mechatronics (production equipment) TDK has gained expertise in mecha- tronics through such production equipment as flip chip mounting machines. In this way, we are supply- ing the market with the most advanced factory automation equipment.</p>	
<p>Radio wave anechoic chamber High-performance antennas and automated measurement systems with dedicated software improve the efficiency of EMC measurements. TDK offers EMC solutions comprising highly accurate EMC measurement services to support effective noise countermeasures in electronic devices.</p>	 
<p>Flash memory application devices TDK supplies solid state drives (SSDs) with proprietary memory control chips and CompactFlash cards for industrial use.</p>	