

A large background image showing the Ferro Tec logo on the left and various industrial machinery components, including what appears to be a large cylindrical motor or pump, on the right.

Ferrotec Holdings Corporation

Results for the fiscal year ended March 31, 2017

May 25, 2017

(JASDAQ 6890)

<http://www.ferrotec.co.jp/>

- 1.The following periods are included in the consolidation accounting. Admap Co., Ltd. (subsidiary): from April 1, 2016 to March 31, 2017 (due to a change in the accounting period).Asahi Seisakusho Co., Ltd.: from July 1, 2016 to March 31, 2017.Other consolidated subsidiaries/equity-method affiliates: from January 1, 2016 through December 31, 2016.Ferrotec parent company: from April 1, 2016 to March 31, 2017
- 2.This presentation was prepared for the purpose of providing information regarding the company's results of operations for the fiscal year ended March 31, 2017 and is not a solicitation to purchase securities issued by the Company. Please ensure that the decision on whether to make an investment in our Company is made at your own risk.
- 3.These materials were prepared based on information available as of May 25, 2017. All opinions, forecasts and other forward-looking statements are based on management's judgments in accordance with materials available at that time and may be changed without prior notice.



FY March 2017 Financial Results

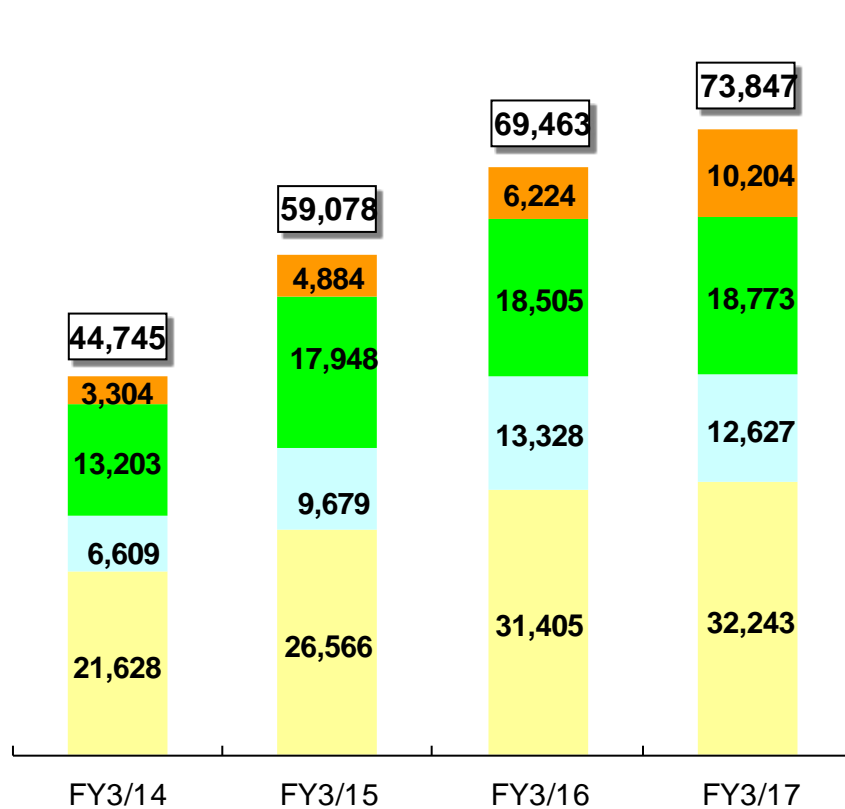
Sales and Operating income Trend



Sales Trend

(¥ in millions)

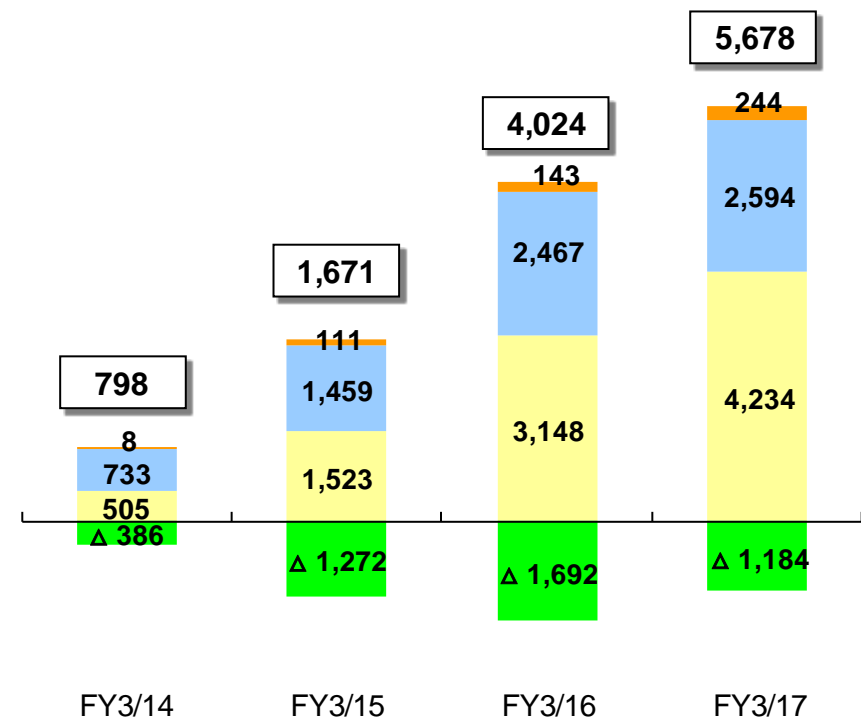
Equipment related Electronic device PV Others



Operating income Trend

(¥ in millions)

Equipment related Electronic device PV Others



Financial highlights



¥ in millions	FY3/16		FY3/17		YoY	
	Amount	Pct. of sales(%)	Amount	Pct. of sales(%)	Amount	Pct. Change(%)
Net sales	69,463	100.0	73,847	100.0	4,384	6.3
Cost of sales	52,149	75.1	54,139	73.3	1,990	3.8
Gross income	17,313	24.9	19,708	26.7	2,395	13.8
SG&A expenses	13,289	19.1	14,030	19.0	741	5.6
Operating income	4,024	5.8	5,678	7.7	1,654	41.1
Non-operating income	664	1.0	862	1.2	198	29.8
Non-operating expense	867	1.2	864	1.2	△ 3	△ 0.3
Ordinary income	3,822	5.5	5,675	7.7	1,853	48.5
Extraordinary income	33	0.0	170	0.2	137	415.2
Extraordinary loss	499	0.7	731	1.0	232	46.5
Net income attributable to owners of parent	2,162	3.1	3,256	4.4	1,094	50.6
Capital Investment	3,440	-	7,322	-	3,882	112.8
Depreciation	4,303	-	3,593	-	△ 710	△ 16.5

Financial highlights



¥ in millions	FY3/17	
	Amount	Pct. of sales(%)
Net sales	73,847	100.0
Cost of sales	54,139	73.3
Gross income	19,708	26.7
SG&A expenses	14,030	19.0
Operating income	5,678	7.7
Non-operating income	862	1.2
Non-operating expense	864	1.2
Ordinary income	5,675	7.7
Extraordinary income	170	0.2
Extraordinary loss	731	1.0
Income before income tax	5,114	6.9
Corporate tax, etc.	1,886	2.6
Net income attributable to owners of parent	3,256	4.4

Overall cost of sales ratio improved by 1.8 points thanks to increase in sales of equipment-related business and improvement in cost of sales ratio of other business despite the flat sales.

Increased due to the influence of a newly acquired company, but sales ratio decreased slightly

Equity-accounted investment income :
¥ 238 million
Exchange gain : ¥213 million

Impairment losses mainly in photovoltaic-related business
Loss on disposal of fixed assets
: ¥573 million

Segment Sales and Operating income



Net sales (¥ in millions)	FY3/16		FY3/17		YOY	
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. change(%)
Equipment-related	31,405	45.2	32,243	43.7	838	2.7
Electronic device	13,328	19.2	12,627	17.1	△ 701	△ 5.3
Photovoltaic-related	18,505	26.6	18,773	25.4	268	1.4
Others	6,224	9.0	10,204	13.8	3,980	63.9
Total	69,463	100.0	73,847	100.0	4,384	6.3

Operating income (¥ in millions)	FY3/16		FY3/17		YOY	
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. change(%)
Equipment-related	3,148	10.0	4,234	13.1	1,086	34.5
Electronic device	2,467	18.5	2,594	20.5	127	5.1
Photovoltaic-related	△ 1,692	-	△ 1,184	-	508	-
Others	143	2.3	244	2.4	101	70.6
Corporate & elimination	△ 42	-	△ 210	-	△ 168	-
Total	4,024	5.8	5,678	7.7	1,654	41.1

Consolidated Balance Sheet ~Assets~



¥ in millions	FY3/16	FY3/17	Difference
Current assets	45,284	51,245	5,961
Cash & deposits	10,038	14,778	4,740
Note & accounts receivable	17,745	17,656	△ 89
Inventory	14,442	13,882	△ 560
Fixed assets	33,484	40,855	7,371
Tangible fixed assets	26,044	34,294	8,250
Building	6,695	8,583	1,888
Equipment & machinery	9,575	8,454	△ 1,121
Tools, furniture, and fixture	6,103	5,908	△ 195
Land	631	1,280	649
Intangible fixed assets	2,062	2,060	△ 2
Goodwill	668	769	101
Investments & other assets	5,377	4,499	△ 878
Total assets	78,769	92,100	13,331

[Major factors for increase in current assets]
 The increase in current assets is mainly due to an increase in cash and deposits.
 Due to increase in borrowings.

[Major factors for increase in tangible fixed assets]
 The increase in tangible fixed assets is mainly due to an increase in construction in progress (7,142 million yen). Equipment mainly for 8- inch wafers.

[Intangible fixed assets]
 Goodwill on acquisition of Asahi Seisakusho Co., Ltd :
 ¥ 331 million
 Amortization of goodwill : ¥197 million

Consolidated Balance Sheet

~Liabilities and
Net assets~



¥ in millions	FY3/16	FY3/17	Difference
Current liabilities	29,351	32,108	2,757
Notes and accounts payable	10,996	13,926	2,930
Short-term debt	6,922	5,002	△ 1,920
Current portion of long-term borrowings	3,386	4,538	1,152
Fixed liabilities	9,929	20,290	10,361
Long-term debt	6,399	12,625	6,226
Total liabilities	39,280	52,399	13,119
Net Assets	39,488	39,701	213
Shareholder's equity	30,199	33,208	3,009
Total adjustment	8,484	6,015	△ 2,469
Non-controlling interests	780	453	△ 327
Total liabilities & shareholder's equity	78,769	92,100	13,331

[Major factors for increase in current liabilities]

The increase in current liabilities was mainly due to the increase in notes payable and accounts payable resulting from the impact of the newly acquired Asahi Seisakusho Co., Ltd.

[Interest-bearing debt]

Short-term debt + Current portion of long-term borrowings ¥ 9,541 million (10,308)

Long-term debt + bond etc. ¥ 12,625 million (6,399)

Total ¥ 22,166 million (16,707)

[Net interest-bearing debt ¥ 7,388 million (6,669)]

*Parentheses represent the figures as of end-FY3/16

[Net assets]

Major factors :

Net income : ¥3,256 million

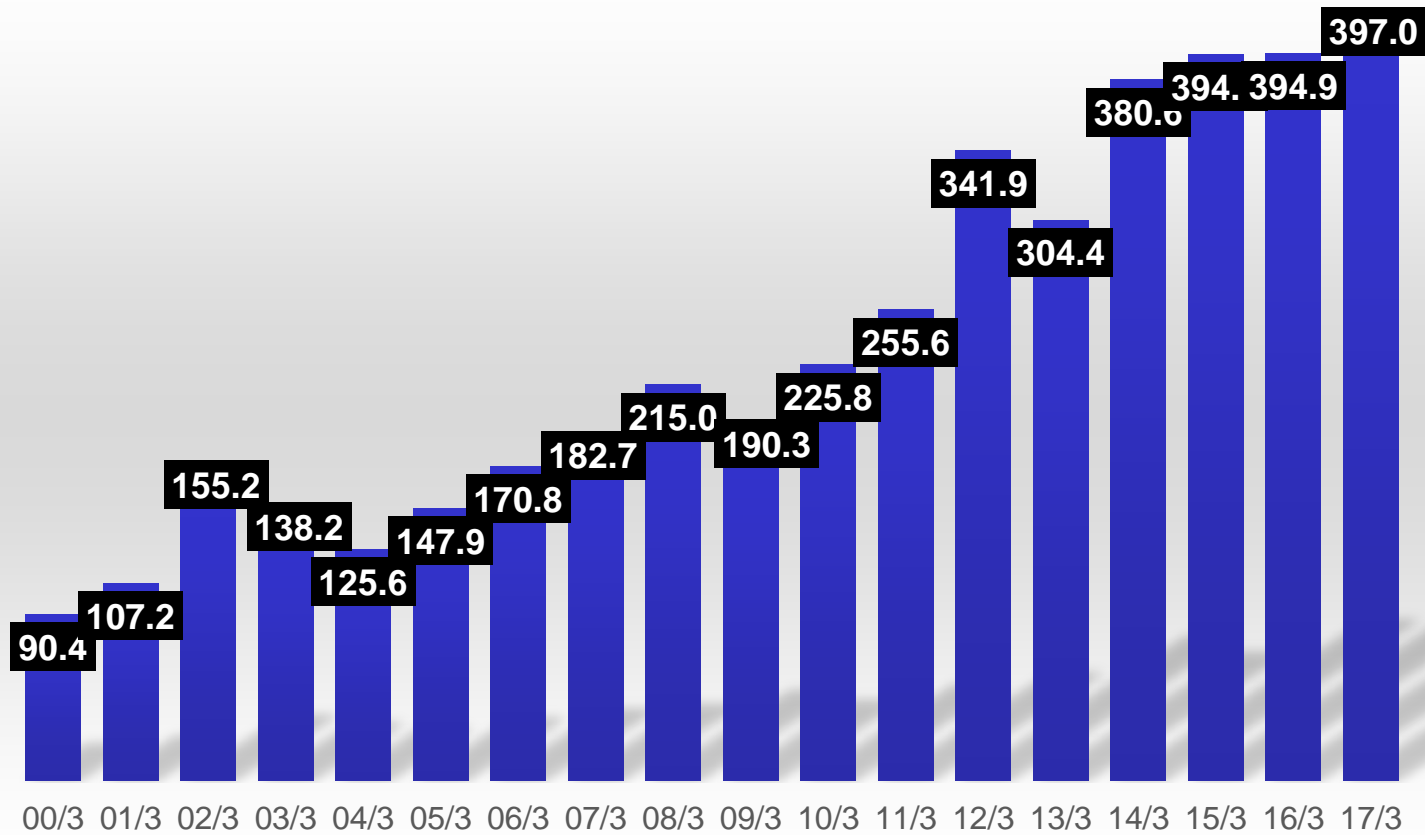
Dividends : △ ¥492 million

Foreign currency translation adjustments
: △¥2,456 million

※Net income=Net income attributable to owners of parent

Transition of consolidated net assets

¥ in 100 millions



Consolidated Cash Flow



¥ in millions	FY3/16	FY3/17
Cash flow from operating activities	4,642	8,218
Income before income taxes	3,356	5,114
Depreciation	4,303	3,593
Exchange gain & loss (Δ : gain)	239	401
Changes in notes & accounts receivable (Δ : increase)	Δ 1,042	Δ 1,025
Changes in inventories (Δ : increase)	Δ 478	666
Changes in accounts payable (Δ : decrease)	Δ 2,340	2,603
Others	604	Δ 3,134
Cash flow from investing activities	Δ 4,023	Δ 7,070
Payments for purchase of tangible fixed assets	Δ 3,440	Δ 7,322
Proceeds from sales of tangible fixed assets	204	69
Payments for purchase of marketable securities	Δ 21	Δ 1
Payments for purchase of shares of subsidiaries accompanying changes in the scope of consolidation	Δ 221	387
Others	Δ 545	Δ 203
Cash flow from financing activities	Δ 520	3,897
Changes in short-term borrowing	Δ 1,398	Δ 1,616
Proceeds from long-term debt	4,989	9,933
Payments of long-term debt	Δ 3,755	Δ 3,813
Payments for dividend	Δ 248	Δ 492
Others	Δ 108	Δ 115
Changes in cash & cash equivalents	Δ 479	4,739
Cash and cash equivalents, beginning of year	10,517	10,038
Cash and cash equivalents, end of year	10,038	14,778

[Operating cash flow]
Income before income tax + Depreciation
¥8,707 million
Decrease in operating CF due to increase in notes & accounts receivable
Δ¥1,025 million
Increase in operating CF due to decrease in in accounts payable
Δ¥2,603 million

[Investing cash flow]
Main contents of payments for tangible fixed assets acquired
<ul style="list-style-type: none"> • Shanghai subsidiary : ¥2,637 million • Hangzhou subsidiary : ¥1,470 million • Yinchuan subsidiary : ¥1,979 million

¥ in millions	FY3/17	FY3/18(Est.)	YoY(%)
Net sales	73,847	83,000	12.4
Operating income	5,678	7,200	26.8
Ordinary income	5,659	6,400	13.1
Net income attributable to owners of parent	3,270	4,000	22.3
Capital investment	7,322	10,000	36.5
Depreciation	3,593	4,000	11.3

Note: Exchange rate FY3/17⇒FY3/18(assumed rate) : ¥ 109.44 → ¥ 110/ US dollar ¥ 16.41 → 16.00 /RMB (Avg. during period)

Capital investment is based on cash flow considering unprojected large-scale capital investment and accounts payable facilities at the end of previous fiscal year.

¥ in millions	FY3/18 Est.
Net sales	83,000
Operating income	7,200
Ordinary income	6,400
Net income attributable to owners of parent	4,000

Demand for each product in the equipment-related segment is strong, and sales are rising because of the phased-in installation of equipment to boost production capacity. Electronic device segment also performs well.

Both gross profit and operating income are expected to increase due to both improvements in the cost of sales ratio due to mass production effects and improvement in manufacturing efficiency thanks to automation and other factors.

The dollar-yen foreign exchange sensitivity is 1 yen per year: the effect on the sales amount is estimated to be about 970 million yen, on operating income around 60 million yen, and on interest rates 550 million yen

The effective tax rate is expected to be around 36%.

Business forecast (sales by segment)



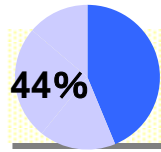
¥ in millions	FY3/17	FY3/18(Est.)	YoY(%)
Equipment-related	32,243	41,250	27.9
Vacuum Feedthroughs	8,160	9,300	14.0
Quartz	8,242	11,450	38.9
Ceramics	6,266	8,050	28.5
CVD-SiC	1,905	3,300	73.2
EB-Gun, LED	3,817	4,750	24.4
Semiconductor wafer	3,854	4,400	14.2
Electronic device	12,627	13,450	6.5
Thermo-electric module	11,747	12,450	6.0
Ferrofluid, others	879	1,000	13.8
Photovoltaic-related	18,773	15,000	△ 20.1
Quartz crucibles	2,041	1,950	△ 4.5
Solar silicon	10,599	8,500	△ 19.8
PV manufacturing Equip.	967	50	△ 94.8
Solar cell, Others	5,166	4,500	△ 12.9
Others	10,204	13,300	30.3
Total	73,847	83,000	12.4



FY March 2017 Financial Results

Status by Segment and Outlook

Segment



Equipment-related

Vacuum feedthroughs



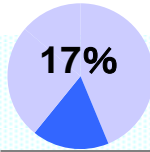
Quartz



Ceramics

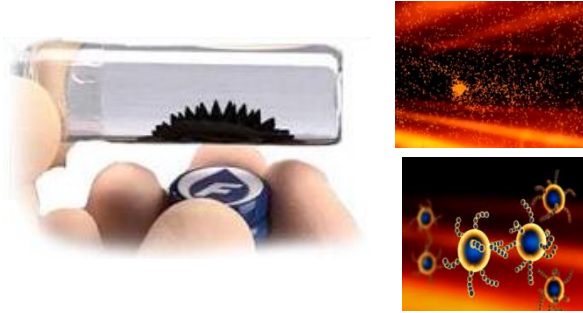


CVD-SiC



Electronic device

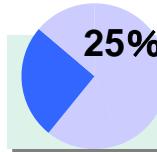
Ferrofluid



Thermo-electric module



Substrates for power semiconductor



Photovoltaic-related

PV silicon (Ingot) [OEM]

Mono-crystal ingot



Multi-crystal ingot



PV wafer



Solar cell



125 R150



125...R165



156 R200+

Consumable

Quartz crucible



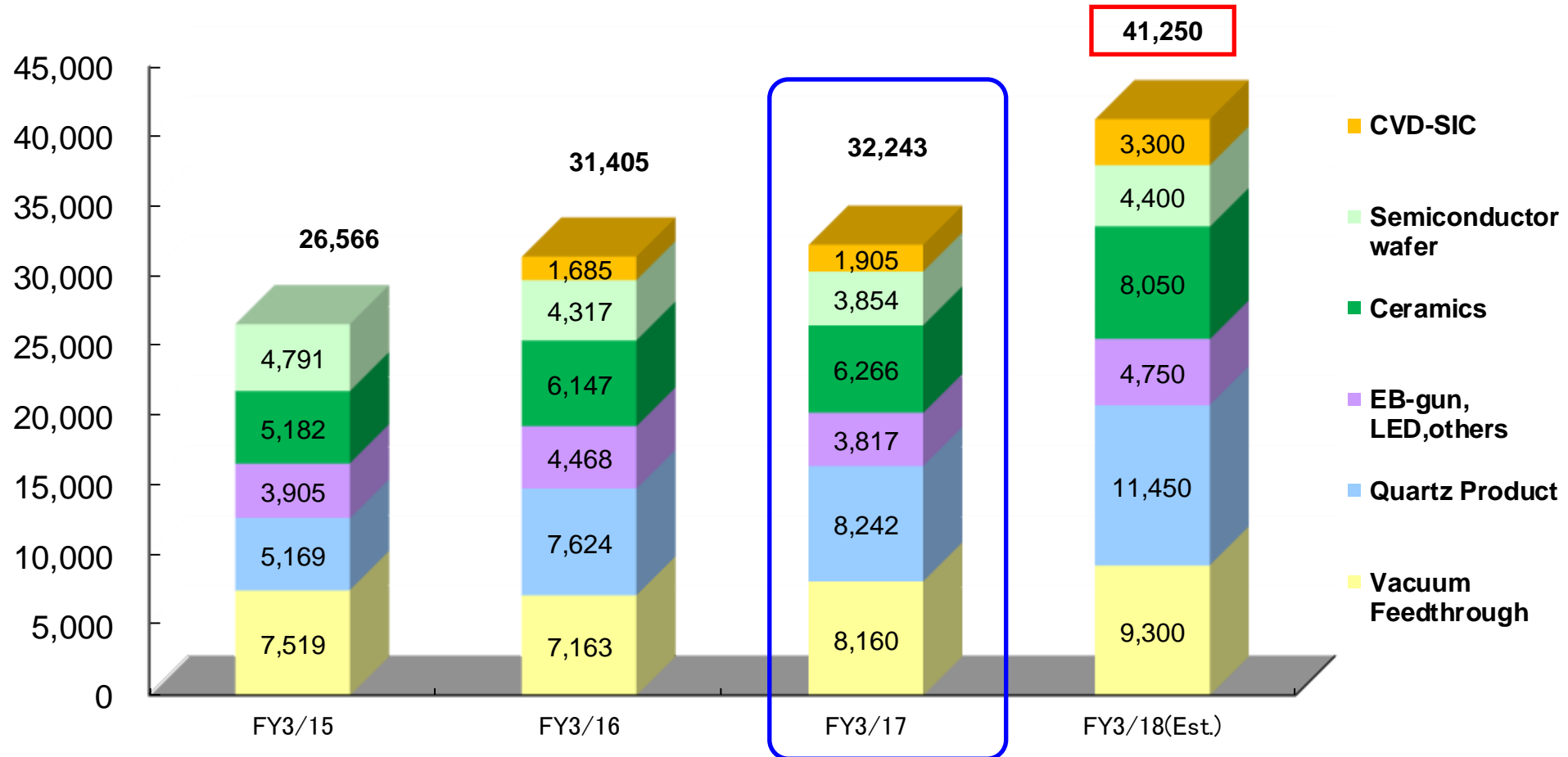
Vessel



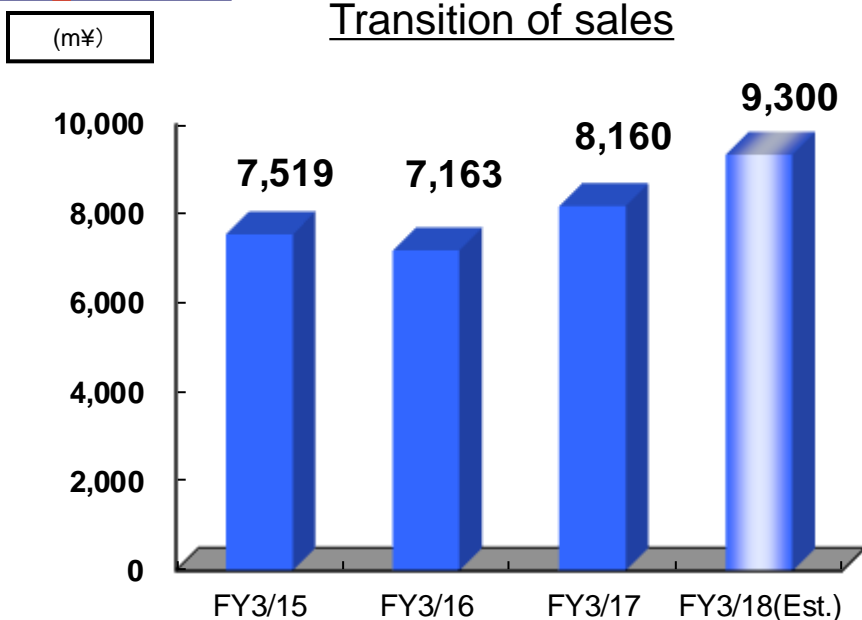
Equipment-related Segment



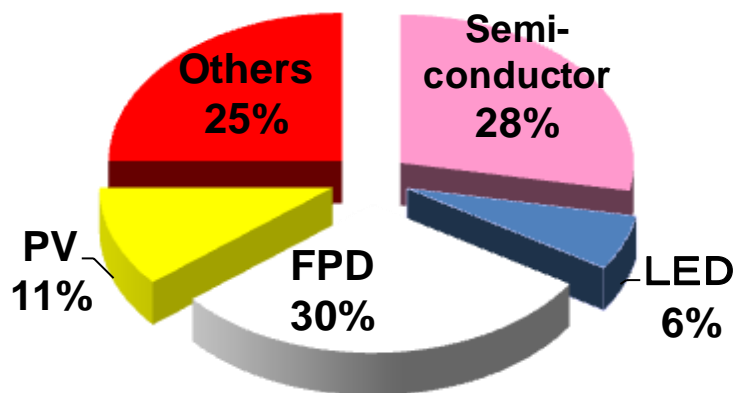
Sales
(¥ in million)



Transition of sales



Sales by category



Note) Other: Vacuum feedthrough equipment for industrial use, aviation, medical care, science, etc.

1. Status for FY3/17

- In semiconductor market, investments in miniaturization and 3D-NAND were firm, and a strong undertone to vacuum feedthroughs
- Investment in FPD equipment for large-scale liquid crystals is continuing, organic EL investment is expanding in both Korea and China, and vacuum feedthroughs are also recording growth
- Contract processing proceeded as planned, with both orders and sales solid

2. Outlook for FY3/18

- In the semiconductor market, we anticipate that investment in the 3D-NAND used in data centers will show increasingly brisk growth. Vacuum feedthroughs are also expected to be solid
- In the FPD market, levels of investment in organic EL in Korea, China, and Japan are expected to rise yet further. Growth is also anticipated for the Company's vacuum feedthroughs used in the vacuum process, and also that expansion can be expected in the dustproof seals used in robots
- Contract processing is expected to increase slightly due to solid orders from China's domestic market

<Measures>

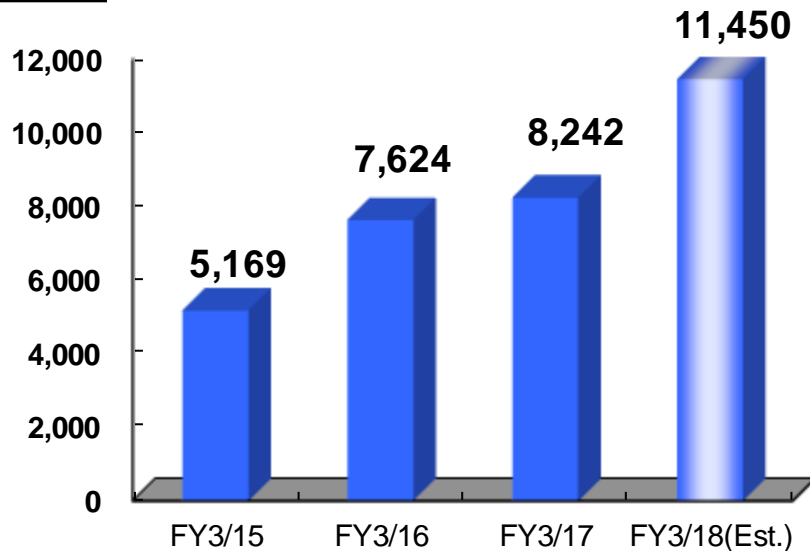
- Continue joint development projects with manufacturers of semiconductor production equipment
- Undertake capital investment in large processing machines
- Strengthen relationship between the Group and obtain synergies
- Strengthen sales in the Asian region

Status and Outlook for Quartz Products

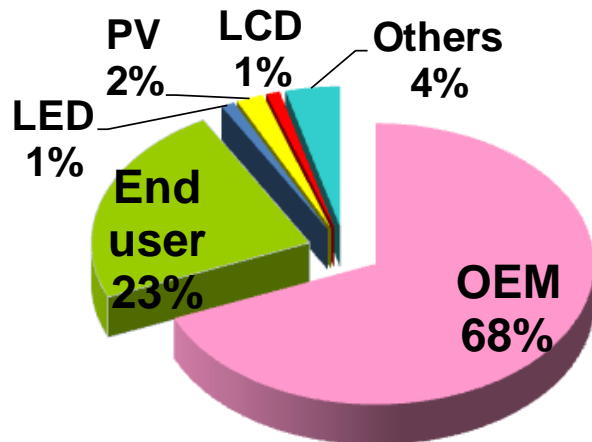


(m¥)

Transition of sales



Sales by category



1. Status for FY3/17

- The semiconductor industry was strong and demand from OEM manufacturers increased sharply
- Memory-related investment was especially strong, and OEM quartz products for the US and Japan were showing a firm tone
- Orders placed for next generation compatible products by domestic OEM clients also increased sharply
- Sales to semiconductor end users were also strong, and demand from customers in Taiwan and China increased sharply

2. Outlook for FY3/18

- Demand from major OEM manufacturers is strong. Quartz demand from US and Japan OEM is expected to expand still further
- Major domestic OEM companies are expected to increase production of next-generation equipment
- The levels of investment in memory for 3D-NAND will continue to expand, with all manufacturers expected to continue investing for the time being
- Continue to increase production level at the Hangzhou plant to respond to growth in demand for semiconductor manufacturing equipment
- Start to supply Si etcher parts to major domestic OEM manufacturers

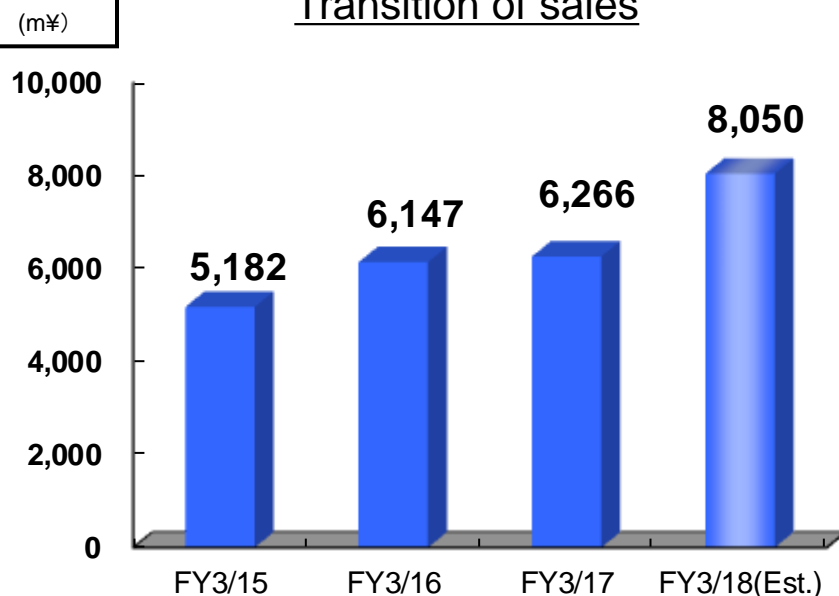
<Measures>

- Implement improvement of production system capable of responding to rapid increase in demand from major OEM manufacturers
- Continue to reinforce our ability to respond to development product projects

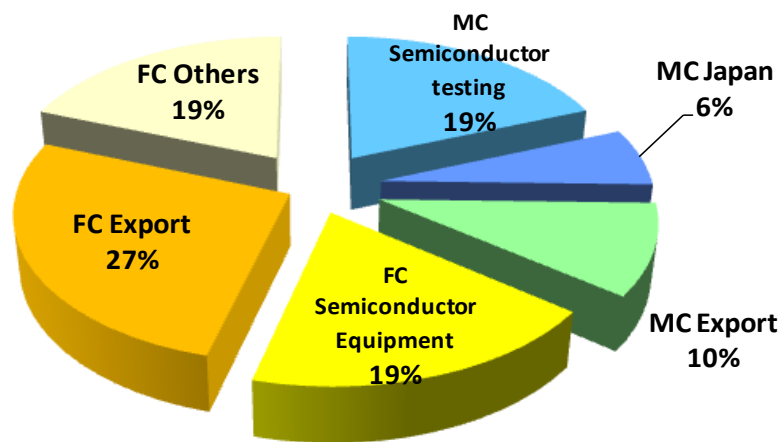
Status and Outlook for Ceramics Products



Transition of sales



Sales by category



FC (Fine Ceramics), MC (Machinable Ceramics)

1. Status for FY3/17 (Jan. - Dec.)

Machinable ceramics "Photoveel"

- In Japan, semiconductor memory inspection jigs increased in the second half
- Test fixtures for automotive logic were solid
- Overseas, inspection jigs for memory applications performed well

Fine ceramics

- In Japan, parts for film forming equipment were strong in the first half
- Overseas, parts for semiconductor manufacturing equipment compatible with miniaturization were firm
- Other
- Sales of exported goods were sluggish due to exchange rate fluctuations

2. Outlook for FY3/18 (Jan. -Dec.)

Machinable ceramics "Photoveel"

- In Japan, inspection jigs for automotive-use logic applications will continue to grow
- Projection jigs for memory applications are expected to expand in the second half due to '3Dization'-related demand
- New types of inspection jigs are expected to increase due to miniaturization overseas

Fine ceramics

- Domestic orders are expected to increase due to rapid increase in demand for semiconductor manufacturing equipment components.
- Parts for FPD-related manufacturing equipment will also perform well
- Rapidly increase in orders taken overseas for etching equipment parts

3. Continued sales policy

< Machinable ceramics >

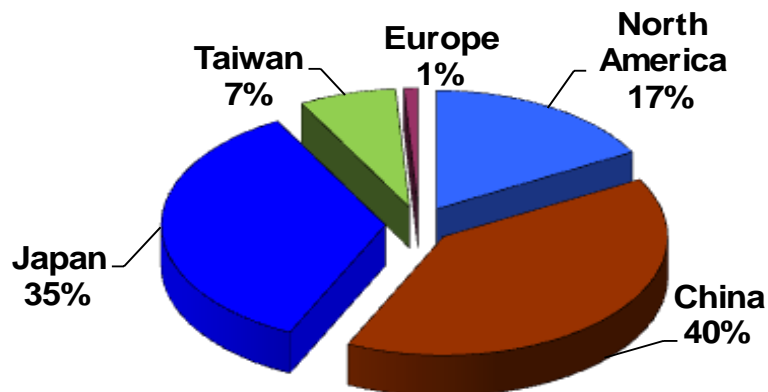
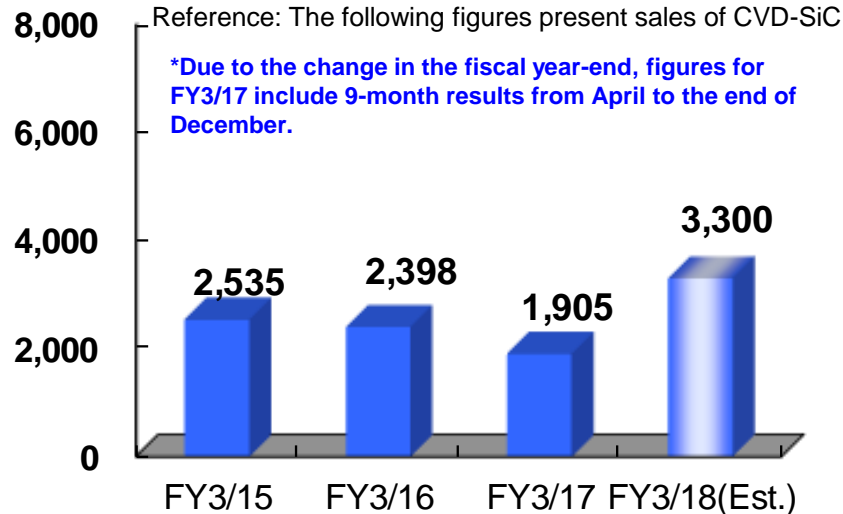
- Wafer circuit inspection needs continue to shift towards changing to new types of jigs, and this trend is expected to lead to the capture of demand for high precision products, and thereafter to sales expansion in response to the construction of a manufacturing system

< Fine ceramics >

- There are requests to increase parts production due to rapid growth in production volumes for domestic and overseas semiconductor manufacturing equipment applications. We aim to expand sales by establishing a production increase system by reinforcing plant facilities and thereby being able to respond to customers' requests

Transition of sales

(m¥)



Sales by region (FY3/17)

1. Status for FY3/17

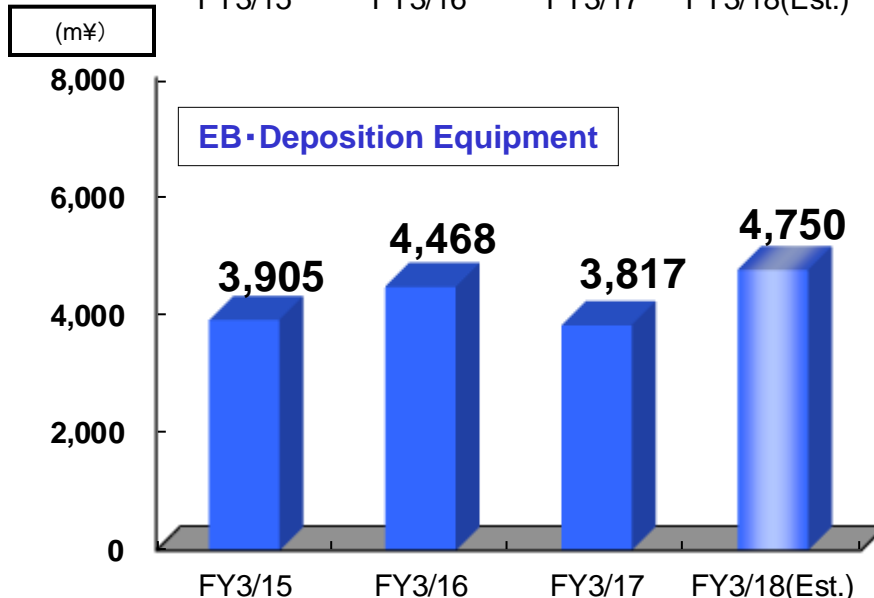
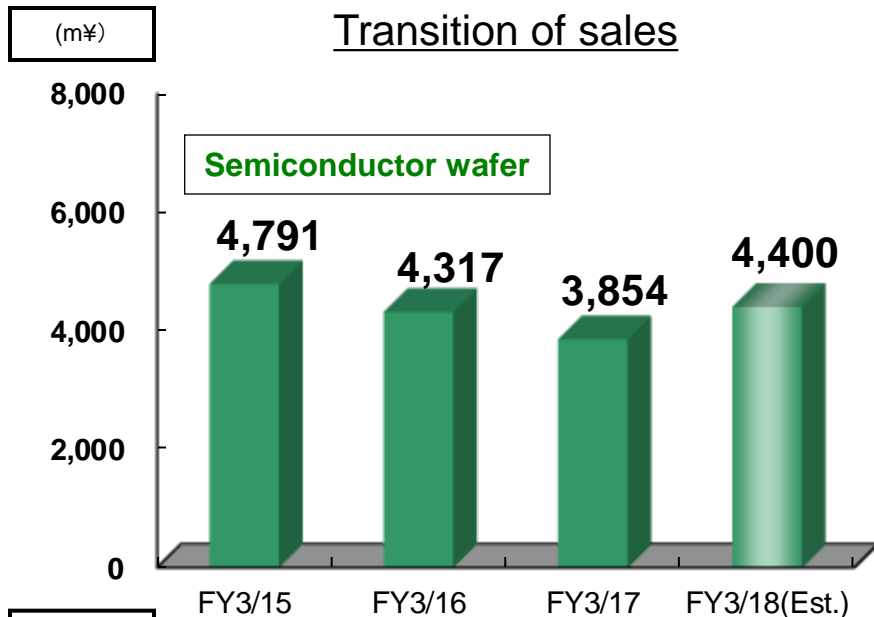
- Domestic and overseas semiconductor manufacturing equipment maker results were all solid due to the China semiconductor factory investment. Demand for SiC parts was also steady
- Production of memory, including 3D-NAND, was firm, and demand for SiC consumables was also steady
- Mass production of new equipment parts for domestic major equipment manufacturers
- Increase in non-semiconductor field sales

2. Outlook for FY3/18

- Sustained steady sales of semiconductor manufacturing equipment parts both in the Japanese domestic market and overseas
- Start-up of mass production of new equipment parts, will contribute to increase in sales
- Mass production of CVD coating on new large-scale components
- Entry into non-semiconductor fields

<Measures>

- Improving production system to render it capable of responding to rapidly increasing demand for equipment parts from domestic and international major semiconductor manufacturing equipment manufacturers
- Establishment of semiconductor manufacturing equipment parts production company in Korea, shift to mass production
- Continue to aggressively enter the non-semiconductor field
- Strengthen development and prototype structure



Semiconductor wafers:

1. Status of FY3/17

- Demand for 6-inch and smaller items was stable and almost in line with the initial planning level
- Proceeded with the construction of 8-inch factory and preparing for mass production in FY3/18

2. Outlook for FY3/18

- Market conditions for 6-inch and smaller items have been firm since the beginning of the year and its price is increasing. There is also a trend towards increased production volumes
- Mass production at the 8-inch factory is expected to be fully operational from Q3

<Measures>

- Establishing 8-inch mass production at a 100-thousand unit level in FY3/18

EB gun and deposition equipment:

1. Status of FY3/17

- Applications involving compound semiconductor were steady
- Communications chip applications were also solid, and roughly in line with plan estimates

2. Outlook for 3/18

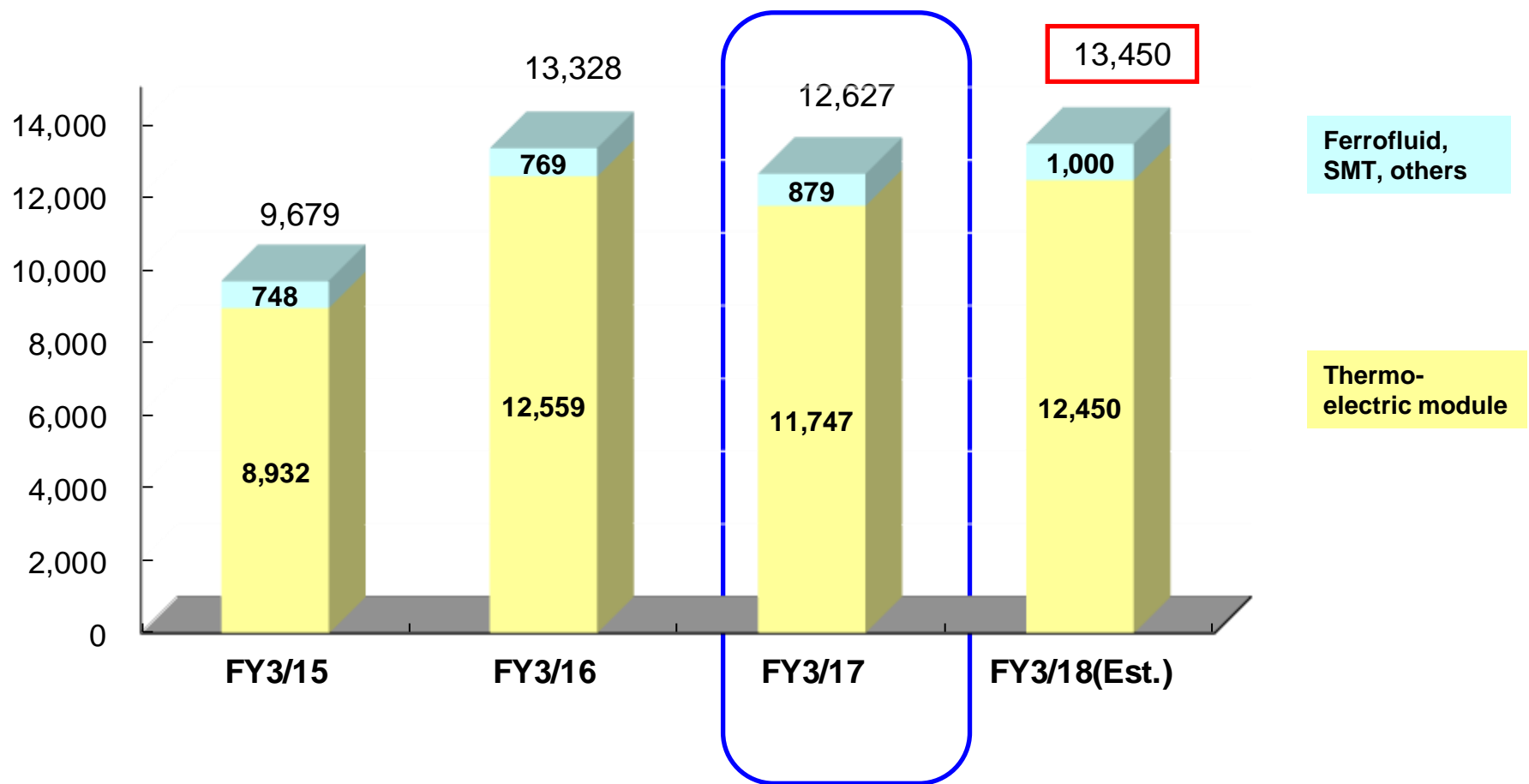
- Orders for semiconductor applications are expected to be firm. Outlook for sales to exceed the level achieved in the previous year

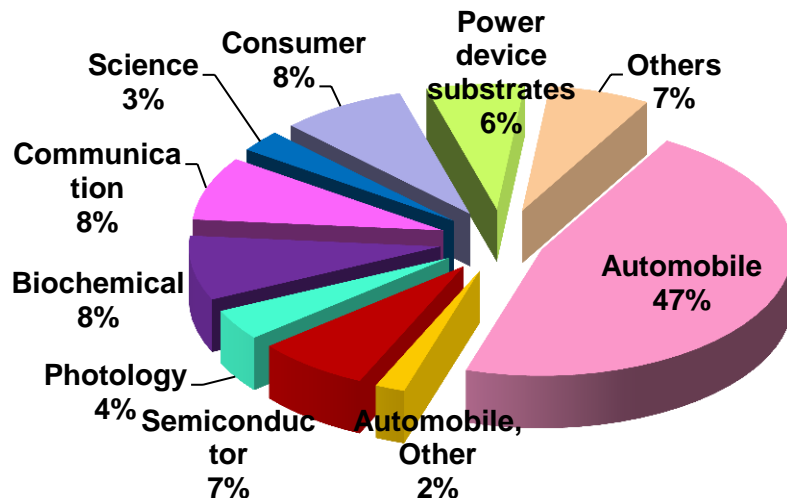
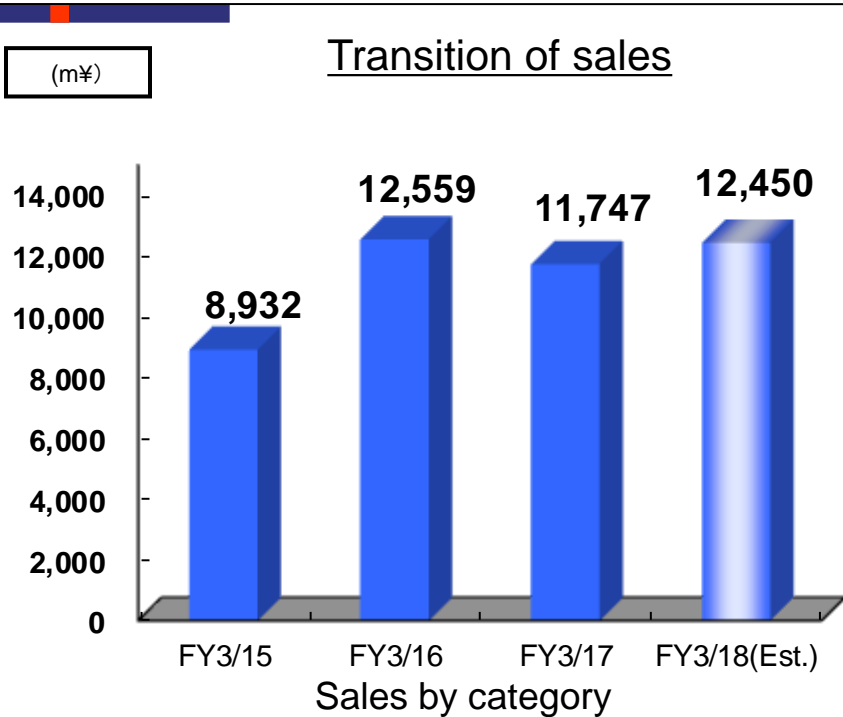
<Measures>

- Strengthening sales activities with particular focus on wireless communications, power devices and deposition equipment

Electronic Device Segment

Sales
(¥ in million)





1. Status of FY3/17

Automobile Seat Application

- The performance is in line with the plan thanks to the growth in the Chinese market, although there was the effects of the appreciation in the yen in the first half of the year

Other Applications

- Strong consumer products and sustained firmness in semiconductor-related demand
- Biotechnology/medical devices and general industrial applications also maintained a good performance overall
- Expanding markets for mobile communications applications, especially in China
- Wider range of power semiconductor device substrates in Europe and Japan

2. Outlook for 3/18

Automobile Seat Application

- Temperature control sheets are expected to achieve growth in the Chinese market in the future, but are basically flat
- Sub-air conditioners, and head-up displays etc. are expected to grow

Other Applications

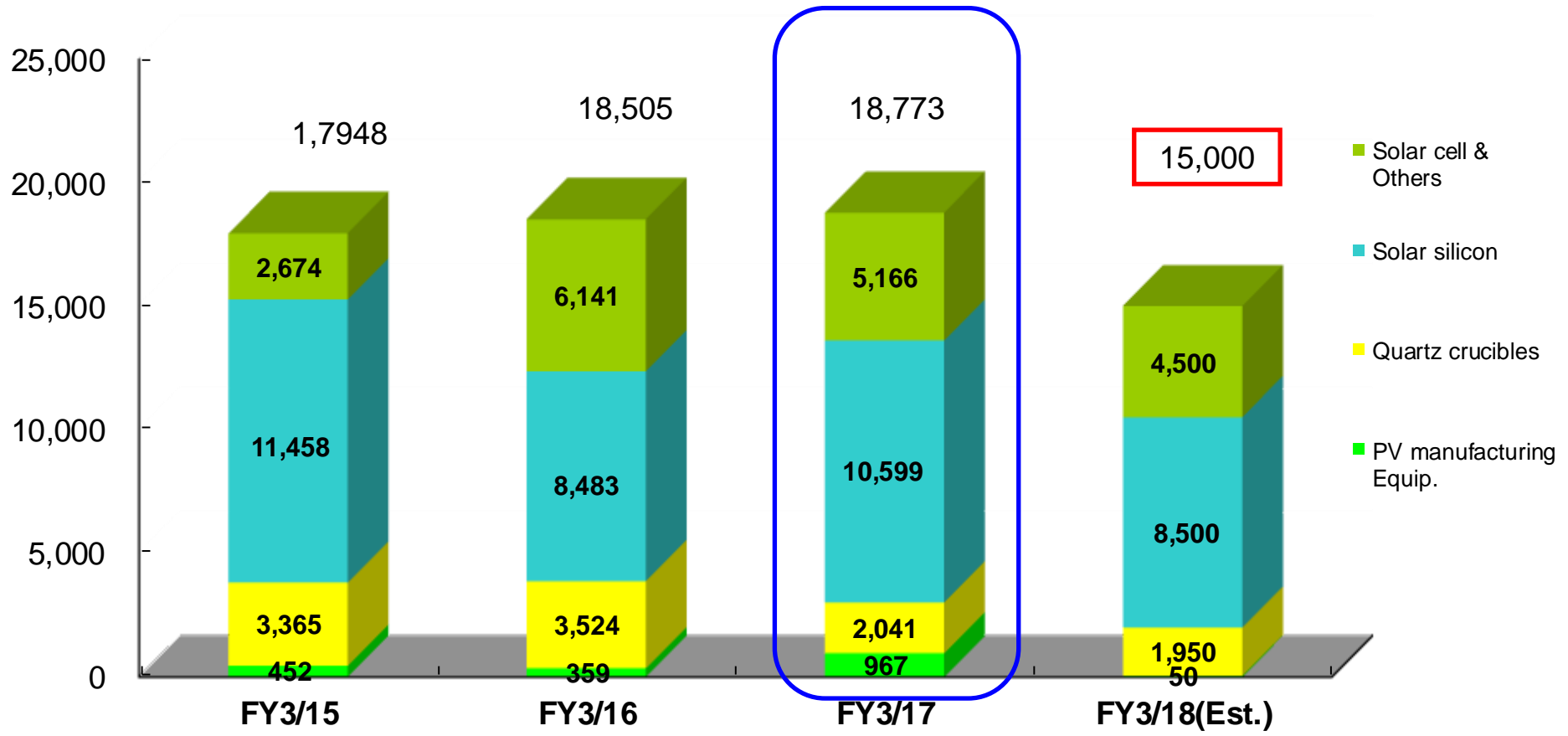
- Communications equipment applications for mobile communications systems are expanding
- Temperature management applications for semiconductor manufacturing equipment are expected to grow
- Prospects for growth in power semiconductor substrates in Europe and Japan

[Measures]

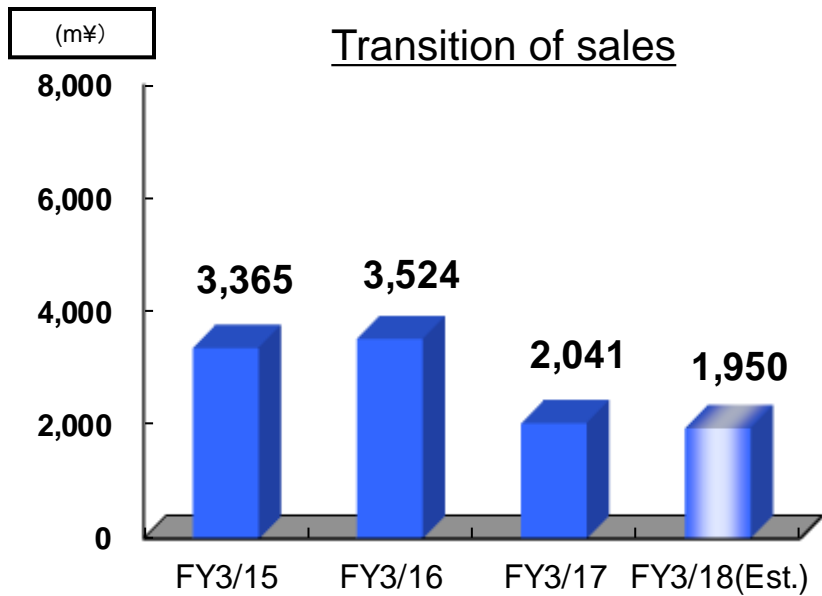
- Enlarge the lineup of sub-assembly products and reinforcing sales activities (semiconductors, medical products)
- Introduce new types of modules and increase the lineup of embedded products
- Continue to make capital investments for increasing output and using automation
- Continue to make investments for increasing output of power semiconductor device substrates

Photovoltaic-related Segment

Sales
(¥ in million)



Status and Outlook for Quartz Crucibles

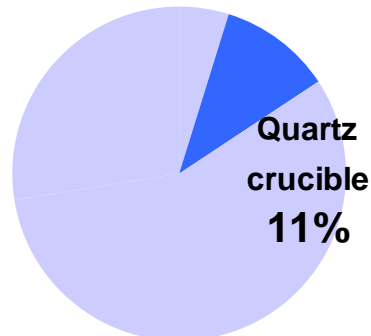


Mono-crystal quartz crucible



Multi-crystal vessel

**Pct. Of sales
In the PV segment
FY3/17**



1. Status for FY3/17

- Decline in demand for mono-crystal crucibles for solar cell
- Decrease due to slump in demand for multi-crystal vessels
- In the area of crucible for semiconductor applications, steady progress was made in mass production and development

2. Outlook for FY3/18

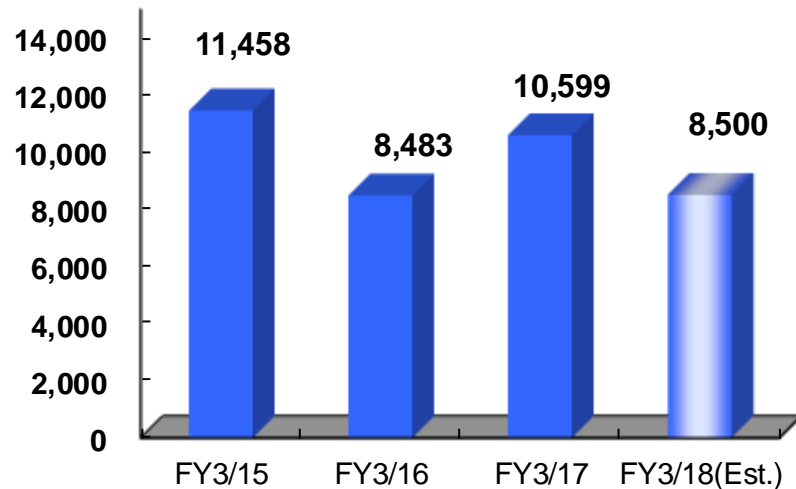
- Demand for crucibles continued sluggish, but it continues to be firm, especially for the semiconductor applications
- Rising demand for semiconductor wafers and demand from Chinese manufacturers to likely result in increased demand for small and medium diameter products
- Multi-crystal vessels are undergoing structural reform due to declining demand

<Measures>

- Expansion of sales of semiconductor crucibles by focusing on semiconductor applications
- Expansion in the production levels for semiconductor crucibles with medium-diameter of 22 to 24in (200mm)
- Aiming at development of 32in crucibles in the future

(m¥)

Transition of sales



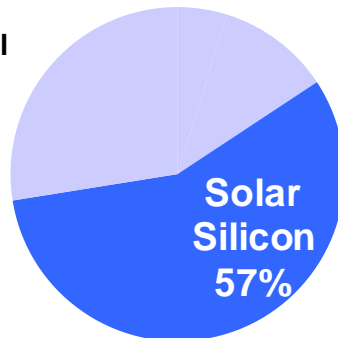
Mono-crystal ingot



Multi-crystal ingot



PV wafer



1. Status for FY3/17

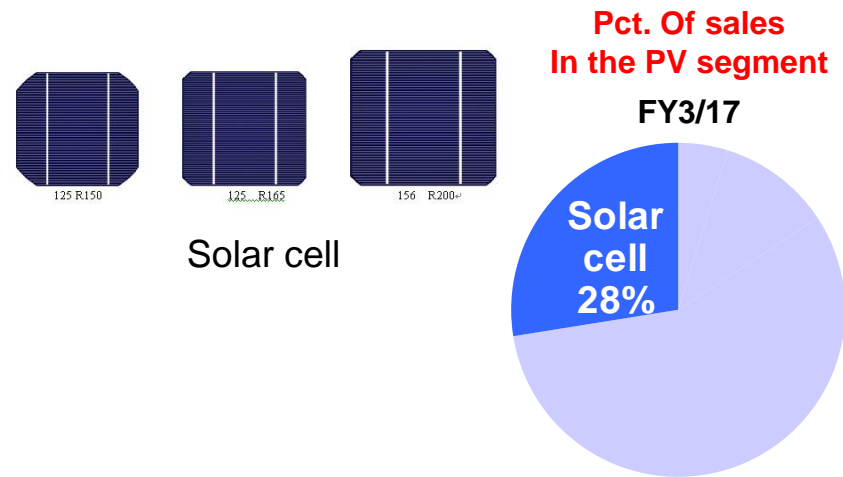
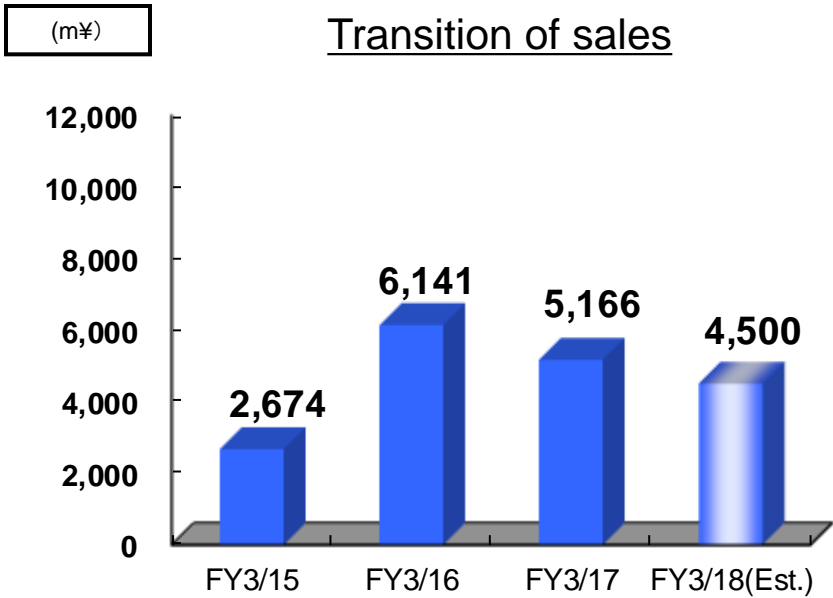
- Started selling mono-crystal wafers to new OEM clients
- Adjustment in the Chinese market in the second half of the year due to a reactionary downturn following previous rush demand from the Chinese FIT
- Continue to expand government and private projects in emerging countries such as India and Southeast Asia (boosting COP 22 vote)
- Market prices, mainly for multi-crystal vessel, declined sharply affecting earnings

2. Outlook for FY3/18

- Secure profits by responding to increased production of high added value mono-crystal wafer OEM
- China, the United States, and emerging countries such as India, Chile and Turkey have contributed to worldwide introductions, and this expansion trend continues
- Prices declined after the China FIT deadline · sluggish outlook

<Measures>

- Further pursue process of thinner wire technology with fixed abrasive grains
- Responding to customer demands with improved performance of N-type mono-crystals
- Focus on high-value-added products



1. Status for FY3/17

- Focus on India and other emerging countries in reaction to China's FIT reduction
- The volume of worldwide introductions continued to increase and prices maintained low
- Cells also failed to secure profits due to market price declines

2. Outlook for FY3/18

- Secure profits with high conversion efficiency monocrystal cells utilizing PERC technology
- Continue to focus on securing orders particularly in emerging countries including China and India







<Measures>

- Enhance earnings by improving conversion efficiency with the introduction of PERC technology
- Concentration on high conversion efficiency · value-added products
- Increase competitiveness by means of both cell technology and wafer quality
- Cost reduction by means of automation

Company profile

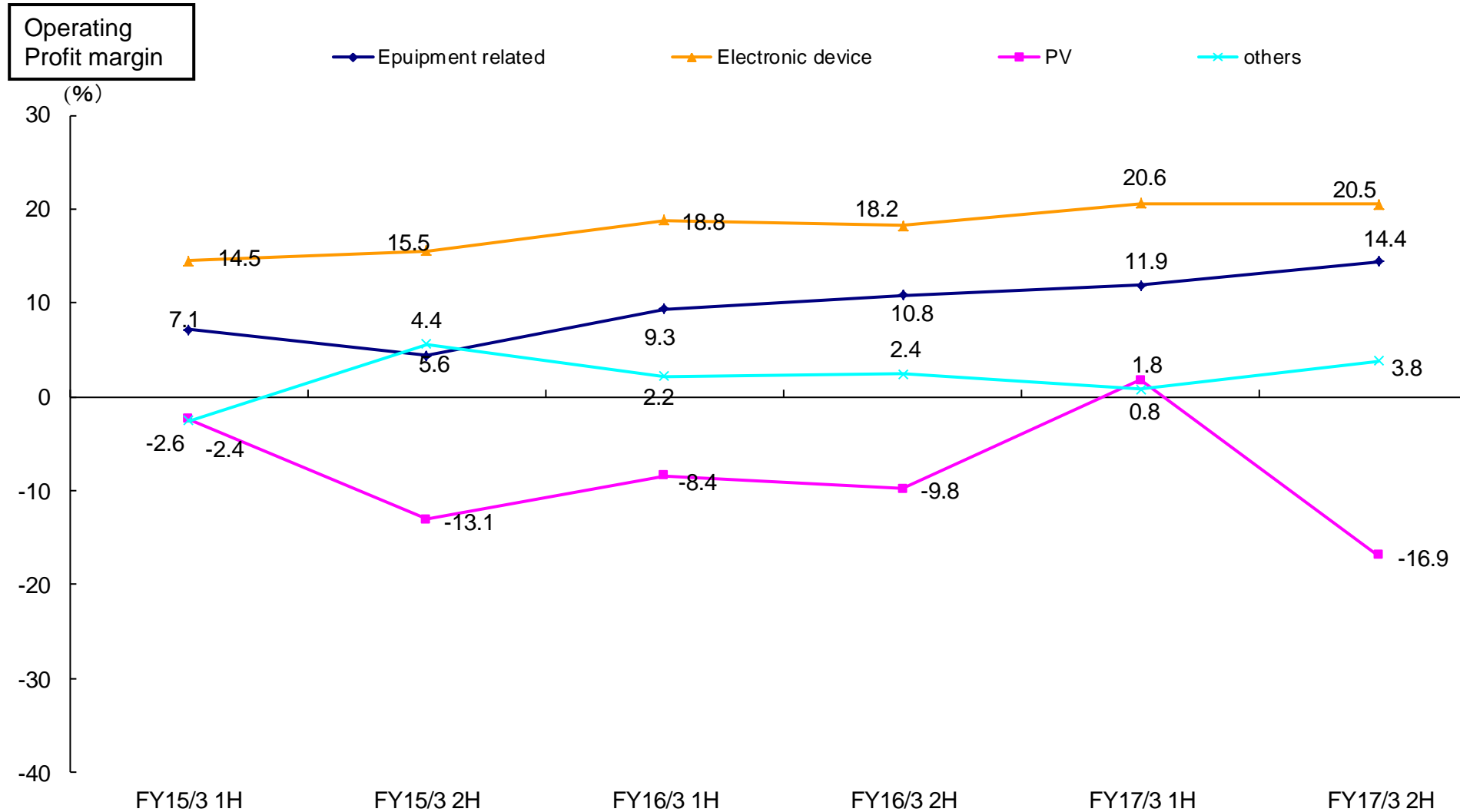


Corporate Name	Ferrotec Holdings Corporation
Date of Foundation	September 27, 1980
Address	Nihonbashi Plaza Building, 2-3-4, Nihonbashi, Chuo-ku, Tokyo Japan
Listed	JASDAQ (Listed Code: 6890)
President	Akira Yamamura
Business Segment	Business management, R&D operations of group companies
Capital	13,215,000,000 JPY
Issued Stock	30,903,702 shares
Related Company	[33 Consolidated Subsidiary] [6 Companies Accounted for by the Equity Method]
Employees	[Consolidated] 5,692 [Non-consolidated]68

1980~	1990~	2000~
<p>Started manufacturing and selling products using ferrofluids (computer seals, vacuum feedthroughs)</p> <p>Vacuum Feedthroughs</p> 	<p>92 – Started manufacturing and selling thermo-modules and modules in China 98 – Started manufacturing and selling quartz products for the semiconductor industry</p> <p>Thermo-electric module</p>  <p>Quartz</p> 	<p>02 – Started contract manufacturing service business for silicon wafer processing, machine tool production and other activities (Shanghai factory) 05 – Started photovoltaic products business; started manufacturing and selling machinery and crucibles for manufacturing silicon ingots and crystals 08 – Started manufacturing and selling ceramic products</p> <p>Ingot</p>  <p>Single crystal silicon growing furnaces</p>  <p>Machinable Ceramics</p> 

With a core of ferrofluid expertise	Establishing operations in other countries	Building a new profit structure
<p>~ Ferrotec's core Technology ~</p>	<p>91: Established subsidiary in Massachusetts, USA 92: Established subsidiary in Hangzhou, China 95: Established subsidiary in Shanghai, China 97: Established subsidiary in Singapore 99: Started operations in North America and Europe by acquiring Ferrofluidics</p>	<p>02: Started contract manufacturing service (CMS) business at the Shanghai factory, including silicon wafer processing, machine tool production and other activities Expertise in production technologies extending from component processing to final assembly allowed Ferrotec to start the CMS business</p> <p>05 : Increased manufacturing and sales activities for photovoltaic products in Hangzhou, China</p>

Operating Margin by Business Segment



Strategies for M&A and Alliances



Time	Company acquired/Alliance partner	Description
April. 2017	Transition to a holding company structure, change of company name	Changed company name to Ferrotec Holdings Co., Ltd.
July 2016	Acquired Asahi Seisakusho Co., Ltd.	Acquired a major business-use laundry equipment manufacturer
July 2015	Acquired ADMAP Inc.	Acquired ADMAP which manufactures and sells CVD-SiC products
Oct. 2011	Merged with a subsidiary	Merged with Ferrotec silicon which manufactures and sells single crystal silicon products
Sep. 2010	Established a joint venture manufacturing and sales company	Ferrotec, a local subsidiary and Covalent Materials agreed to establish a joint venture "Hangzhou Solartech Co., Ltd." to manufacture and sell vessels and related products.
Jul. 2010	Acquired shares of IMI in the US	Began sales of pure silicon products
April. 2010	Merged with a subsidiary	Merged with Ferrotec Quartz which manufactures and sells quartz products
Jan. 2010	Acquired the Temescal Division of Edwards Vacuum	Acquired the Temescal Division of Edwards Vacuum which is the leading manufacturer and distributor of electron beam-based evaporative coating systems.
July. 2008	Acquired of Sumikin Ceramics. Changed the name of the company.	Acquired 90% of the surviving company Sumikin Ceramics & Quartz Co., Ltd. after spinning of its business except the ceramics business, converted it into a subsidiary, became "Ferrotec Ceramics" and made it a wholly owned subsidiary in 2013
Dec. 2007	Jointly established an assembly sales company in Korea.	Established "CMC Ferrotec" with the local company for the manufacture of solar cell manufacturing equipment.
April. 2007	Established a joint venture Manufacturing Corporation in Korea	Established joint venture corporation Ferrotec Korea Co.Ltd with Korean Company(KSMC Corp) for manufacturing Vacuum Feedthrough.
Nov. 2006	Merger and liquidation	Merged with Ferrotec Precision, which produces Vacuum feedthrough. Liquidated two subsidiaries(Dec.).
Sep. 2006	Established a joint venture in Taiwan	Established Ferrotec Taiwan jointly with a local partner to sell vacuum feedthroughs and offer maintenance services
Dec. 2005	Established a joint venture with LTD Ceramics Inc. (USA)	Established joint venture in China to manufacture ceramics
July 2005	Acquired NORD Co., Ltd.(Russia)	Acquired company that manufactures and sells Peltier (thermoelectric) devices in order to increase share of global market
May 2005	Business alliance with KSM Inc.(Korea)	Alliance for mutual sales of vacuum feedthroughs and products associated with semiconductor manufacturing equipment
July 2004	Exclusive contract with Applied Films(Germany)	Gave this company exclusive rights to purchase Ferrotec vacuum feedthroughs
Oct. 2003	Business and financial alliance with Aliontek	Technology alliance with ALIONTEK CORPORATION, which has technology for the grinding of quartz products, strengthened manufacturing technology for quartz products in China
Feb. 2002	Business alliance with Toshiba Ceramics and Mitsui Co. for wafer production by commissioning	Ferrotec silicon wafer production equipment moved to China factory to conduct a CMS business, and manufacturing is outsourced to this factory

Business performance (FY3/17 revised plan vs. results)



¥ in millions	FY3/17 revised plan		FY3/17 Results			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. change(%)
Equipment-related	34,112	45.5	32,243	43.7	△ 1,869	△ 5.5
Vacuum Feedthroughs	8,043	10.7	8,160	11.0	117	1.5
Quartz	8,650	11.5	8,242	11.2	△ 408	△ 4.7
Ceramics	6,269	8.4	6,266	8.5	△ 3	△ 0.0
CVD-SiC	2,650	3.5	1,905	2.6	△ 745	△ 28.1
EB-Gun, LED	4,550	6.1	3,817	5.2	△ 733	△ 16.1
Semiconductor Wafer	3,950	5.3	3,854	5.2	△ 96	△ 2.4
Electronic device	12,650	16.9	12,627	17.1	△ 23	△ 0.2
Thermo-electric module	11,801	15.7	11,747	15.9	△ 54	△ 0.5
Ferrofluid, others	849	1.1	879	1.2	30	3.5
Photovoltaic-related	17,696	23.6	18,773	25.4	1,077	6.1
Quartz crucibles	2,200	2.9	2,041	2.8	△ 159	△ 7.2
Solar silicon	9,847	13.1	10,599	14.4	752	7.6
PV manufacturing Epuip.	599	0.8	967	1.3	368	61.4
Solar cell, Others	5,050	6.7	5,166	7.0	116	2.3
Others	10,542	14.1	10,204	13.8	△ 338	△ 3.2
Total	75,000	100.0	73,847	100.0	△ 1,153	△ 1.5
Gross income	19,814	26.4	19,709	26.7	△ 105	△ 0.5
SG&A expenses	14,014	18.7	14,031	19.0	17	0.1
Operating income	5,800	7.7	5,678	7.7	△ 122	△ 2.1
Ordinary income	4,700	6.3	5,675	7.7	975	20.7
Net income	2,900	3.9	3,256	4.4	356	12.3

※Net income=Net income attributable to owners of parent

Business performance (FY3/17 1st half vs. 2nd half)



¥ in millions	FY3/17 1 st half		FY3/17 2 nd half			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. change(%)
Equipment-related	16,049	42.6	16,194	44.7	145	0.9
Vacuum Feedthroughs	3,966	10.5	4,194	11.6	228	5.7
Quartz	4,105	10.9	4,137	11.4	32	0.8
Ceramics	2,993	7.9	3,273	9.0	280	9.4
CVD-SiC	1,212	3.2	693	1.9	△ 519	△ 42.9
EB-Gun, LED	1,868	5.0	1,949	5.4	81	4.3
Semiconductor Wafer	1,906	5.1	1,948	5.4	42	2.2
Electronic device	6,130	16.3	6,497	17.9	367	6.0
Thermo-electric module	5,737	15.2	6,010	16.6	273	4.8
Ferrofluid, others	393	1.0	486	1.3	93	23.7
Photovoltaic-related	10,644	28.3	8,129	22.5	△ 2,516	△ 23.6
Quartz crucibles	1,331	3.5	710	2.0	△ 621	△ 46.7
Solar silicon	5,482	14.6	5,117	14.1	△ 365	△ 6.7
PV manufacturing Epuip.	494	1.3	473	1.3	△ 21	△ 4.3
Solar cell, Others	3,337	8.9	1,829	5.1	△ 1,508	△ 45.2
Others	4,826	12.8	5,378	14.9	552	11.4
Total	37,650	100.0	36,197	100.0	△ 1,453	△ 3.9

Gross income	10,094	26.8	9,615	26.6	△ 479	△ 4.7
SG&A expenses	6,717	17.8	7,314	20.2	597	8.9
Operating income	3,376	9.0	2,302	6.4	△ 1,074	△ 31.8
Ordinary income	2,107	5.6	3,568	9.9	1,461	69.3
Net income	1,033	2.7	2,223	6.1	1,190	115.2

*Some figures are rounded.

Business performance (FY3/16 vs. FY3/17)



¥ in millions	FY3/15 Results		FY3/16 Results			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. change(%)
Equipment-related	31,405	45.2	32,243	43.7	838	2.7
Vacuum Feedthroughs	7,163	10.3	8,160	11.0	997	13.9
Quartz	7,624	11.0	8,242	11.2	618	8.1
Ceramics	6,147	8.8	6,266	8.5	119	1.9
CVD-SiC	1,685	2.4	1,905	2.6	220	13.1
EB-Gun, LED	4,468	6.4	3,817	5.2	△ 651	△ 14.6
Semiconductor wafer	4,317	6.2	3,854	5.2	△ 463	△ 10.7
Electronic device	13,328	19.2	12,627	17.1	△ 701	△ 5.3
Thermo-electric module	12,559	18.1	11,747	15.9	△ 812	△ 6.5
Ferrofluid, others	769	1.1	879	1.2	110	14.3
Photovoltaic-related	18,505	26.6	18,773	25.4	268	1.4
Quartz crucibles	3,524	5.1	2,041	2.8	△ 1,483	△ 42.1
Solar silicon	8,483	12.2	10,599	14.4	2,116	24.9
PV manufacturing Epuip.	359	0.5	967	1.3	608	169.4
Solar cell, Others	6,141	8.8	5,166	7.0	△ 975	△ 15.9
Others	6,224	9.0	10,204	13.8	3,980	63.9
Total	69,463	100.0	73,847	100.0	4,384	6.3

Gross income	17,313	24.9	19,709	26.7	2,396	13.8
SG&A expenses	13,289	19.1	14,031	19.0	742	5.6
Operating income	4,024	5.8	5,678	7.7	1,654	41.1
Ordinary income	3,822	5.5	5,675	7.7	1,853	48.5
Net income	2,162	3.1	3,256	4.4	1,094	50.6
Capital Investment	3,440	-	7,322	-	3,882	112.8
Depreciation	4,303	-	3,593	-	△ 710	△ 16.5

*Some figures are rounded.

Business performance (FY3/17 vs. FY3/18 Plan)



¥ in millions	FY3/17 Results		FY3/18 Plan			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. change(%)
Equipment-related	32,243	43.7	41,250	49.7	9,007	27.9
Vacuum Feedthroughs	8,160	11.0	9,300	11.2	1,140	14.0
Quartz	8,242	11.2	11,450	13.8	3,208	38.9
Ceramics	6,266	8.5	8,050	9.7	1,784	28.5
CVD-SiC	1,905	2.6	3,300	4.0	1,395	73.2
EB-Gun, LED	3,817	5.2	4,750	5.7	933	24.4
Semiconductor wafer	3,854	5.2	4,400	5.3	546	14.2
Electronic device	12,627	17.1	13,450	16.2	823	6.5
Thermo-electric module	11,747	15.9	12,450	15.0	703	6.0
Ferrofluid, others	879	1.2	1000	1.2	121	13.8
Photovoltaic-related	18,773	25.4	15,000	18.1	△ 3,773	△ 20.1
Quartz crucibles	2,041	2.8	1,950	2.3	△ 91	△ 4.5
Solar silicon	10,599	14.4	8,500	10.2	△ 2,099	△ 19.8
PV manufacturing Equip.	967	1.3	50	0.1	△ 917	△ 94.8
Solar cell, Others	5,166	7.0	4,500	5.4	△ 666	△ 12.9
Others	10,204	13.8	13,300	16.0	3,096	30.3
Total	73,847	100.0	83,000	100.0	9,153	12.4

Gross income	19,709	26.7	21,671	26.1	1,962	10.0
SG&A expenses	14,031	19.0	14,471	17.4	440	3.1
Operating income	5,678	7.7	7,200	8.7	1,522	26.8
Ordinary income	5,675	7.7	6,400	7.7	725	12.8
Net income	3,256	4.4	4,000	4.8	744	22.9
Capital Investment	7,322	-	10,000	-	2,678	36.5
Depreciation	3,593	-	4,000	-	407	11.1

*Some figures are rounded.

Business performance (FY3/18 1st half vs. 2nd half)



¥ in millions	FY3/18 1 st half		FY3/18 2 nd half			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. change(%)
Equipment-related	20,350	48.5	20,900	51.0	550	2.7
Vacuum Feedthroughs	4,900	11.7	4,400	10.7	△ 500	△ 10.2
Quartz	5,450	13.0	6,000	14.6	550	10.1
Ceramics	4,100	9.8	3,950	9.6	△ 150	△ 3.7
CVD-SiC	1,550	3.7	1,750	4.3	200	12.9
EB-Gun, LED	2,150	5.1	2,600	6.3	450	20.9
Semiconductor wafer	2,200	5.2	2,200	5.4	0	0.0
Electronic device	6,900	16.4	6,550	16.0	△ 350	△ 5.1
Thermo-electric module	6,400	15.2	6,050	14.8	△ 350	△ 5.5
Ferrofluid, others	500	1.2	500	1.2	0	0.0
Photovoltaic-related	7,700	18.3	7,300	17.8	△ 400	△ 5.2
Quartz crucibles	850	2.0	1,100	2.7	250	29.4
Solar silicon	4,500	10.7	4,000	9.8	△ 500	△ 11.1
PV manufacturing Equip.	50	0.1	0	-	△ 50	-
Solar cell, Others	2,300	5.5	2,200	5.4	△ 100	△ 4.3
Others	7,050	16.8	6,250	15.2	△ 800	△ 11.3
Total	42,000	100.0	41,000	100.0	△ 1,000	△ 2.4

Gross income	10,875	25.9	10,796	26.3	△ 79	△ 0.7
SG&A expenses	7,275	17.3	7,196	17.6	△ 79	△ 1.1
Operating income	3,600	8.6	3,600	8.8	0	0.0
Ordinary income	3,200	7.6	3,200	7.8	0	0.0
Net income	2,000	4.8	2,000	4.9	0	0.0

*Some figures are rounded.