

A large background image on the left side of the slide. It features a collage of industrial components, including what looks like a turbine or engine part, and the FerroTec logo in a light blue, semi-transparent font. Below the logo, there is some small, illegible text.

FerroTec Corporation

Results for the 1st half of the fiscal year ended March 31, 2013

November 22, 2012

(JASDAQ 6890)

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

1. This 1st half results cover six months period from April to September of Ferrotec, and six months period from Jan. to June of consolidated subsidiaries and affiliated companies included in investment profit loss in equity method.
2. These materials were prepared for the purpose of providing information regarding the company's results of operations for the 1st half of the fiscal year ending March 31, 2013. These materials were prepared based on information available as of Nov. 22, 2012. 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.



First Half of FY March 2013 Financial Results

Consolidated Financial Summary



	FY March 2012 1 st half		FY March 2013 1 st half		YoY change	
	Amount	Pct. of sales(%)	Amount	Pct. of sales(%)	Difference	Pct. change
Net sales	35,737	100.0	20,048	100.0	△15,689	△43.9
cost of sales	25,688	71.9	16,413	81.9	△9,275	△36.1
Gross profit	10,049	28.1	3,635	18.1	△6,414	△63.8
SG&A expenses	6,484	18.1	5,788	28.9	△696	△10.7
Operating profit	3,564	10.0	△2,153	-	△5,717	-
Non-operating income	190	0.5	86	0.4	△104	△54.7
Non-operating expense	616	1.7	644	3.2	28	4.5
Ordinary profit	3,138	8.8	△2,711	-	△5,849	-
Extraordinary income	79	0.2	79	0.4	0	0
Extraordinary loss	402	1.1	2,909	14.5	2,507	623.6
Net profit	1,968	5.5	△6,157	-	△8,125	-
Capital investment	4,298	-	1,820	-	△2,478	△57.7
Depreciation	1,371	-	1,573	-	202	14.7

Consolidated Financial Summary



¥ in millions	FY March 2013 1 st half	
	Amount	Pct. of sales(%)
Net sales	20,048	100.0
Cost of sales	16,413	81.9
Gross profit	3,635	18.1
SG&A expenses	5,788	28.9
Operating profit	△2,153	-
Non-operating income	86	0.4
Non-operating expense	644	3.2
Ordinary profit	△2,711	-
Extraordinary income	79	0.4
Extraordinary loss	2,909	14.5
Income before income tax	△5,541	-
Income taxes	805	4.0
Net profit	△6,157	-

LC 438

Inventory written down 827

Allowance for doubtful debts 681

Exchange loss 184

Restructuring expense 2,684

Loss on valuation of investments in securities 167

Reversal of deferred tax assets 586

Net Sales and Operating Profits by Segment



Net sales (¥ in millions)	FY March 2012 1 st half		FY March 2013 1 st half		YoY change	
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Difference	Pct. change
Equipment-related	14,695	41.1	9,509	47.4	△5,186	△35.3
Electronic device	3,220	9.0	2,195	10.9	△1,025	△31.8
Photovoltaic-related	16,659	46.6	7,022	35.0	△9,637	△57.8
Others	1,163	3.3	1,320	6.6	157	13.5
T o t a l	35,737	100.0	20,048	100.0	△15,689	△43.9

Operating income (¥ in millions)	FY March 2012 1 st half		FY March 2013 1 st half		YoY change	
	Amount	Margin	Amount	Margin	Difference	Pct. change
Equipment-related	1,878	12.8	140	1.5	△1,738	△92.5
Electronic device	526	16.3	115	5.2	△411	△78.1
Photovoltaic-related	984	5.9	△2,393	-	△3,377	-
Others	218	18.7	20	1.5	△198	△90.8
Corporate & elimination	△43	-	△37	-	6	-
T o t a l	3,564	10.0	△2,153	-	△5,717	-

Consolidated Balance Sheet ~Assets~



(¥ in millions)	FY3/12	FY3/13 1H	Difference
Current assets	41,330	35,633	△5,697
Cash & deposits	9,560	7,460	△2,100
Note & accounts receivable	13,921	14,510	589
Inventory	11,987	11,224	△763
Fixed assets	31,241	33,025	1,784
Tangible fixed assets	25,397	25,389	△8
Building	5,279	5,105	△174
Equipment & machinery	7,205	8,047	842
Tools, furniture, and fixture	4,813	5,537	724
Land	2,718	2,718	0
Intangible fixed assets	2,368	2,139	△229
Goodwill	1,118	925	△193
Investments & other assets	3,475	5,496	2,021
Total assets	72,571	68,658	△3,913

【Major factors for decrease in current assets】

Mainly due to decrease in cash and deposits, inventories, and deferred tax assets

Major inventories

Vacuum feedthrough : ¥ 817 million、quarts:¥1,043 million、thermo-module:¥1,173 million ceramics:¥785 million、PV manufacturing : ¥2,266 million, PV silicon products:¥1,904 million

【Major factors for decrease in tangible fixed assets】

Construction in progress of PV silicon products was shifted to mechanical equipment, tools, furniture and fixtures and slightly decreased due to depreciation

【Intangible fixed assets】

Amortization of goodwill:

1st half (actual) : ¥209 million 2nd half : ¥209 million

Consolidated Balance Sheet

~Liabilities and
net worth~



(¥ in millions)	FY3/12	FY3/13 1H	Difference
Current liabilities	29,592	29,678	86
Notes and accounts payable	8,610	8,862	252
Short-term debt	11,834	12,103	269
Current portion of long-term borrowings.	3,177	3,542	365
Fixed liabilities	8,792	11,069	2,277
Bond	200	-	△200
CB	-	2,396	2,396
Long-term debt	5,856	5,948	92
Total liabilities	38,384	40,748	2,364
Net Assets	34,186	27,910	△6,276
Shareholder's equity	36,311	29,741	△6,570
Total adjustment	△2,923	△2,461	462
Minority interests	799	629	△170
Total liabilities & shareholder's equity	72,571	68,658	△3,913

【Major factors for increase in current liabilities】

Slightly increased mainly due to decrease in accounts payable-facilities although notes payable, short-term debt and a portion of long-term debt increased.

【Interest-bearing debt ratio】 (): the figures as of end-FY3/12

Short-term debt + a portion of long-term debt ¥15,645 million (15,011)

Long-term debt + bonds etc ¥5,948 million (6,056)

Total ¥21,593 million (21,068)

【Net interest-bearing debt ¥14,133 million (11,508)】

【Net assets】

Shareholder's equity:

Conversion of convertible bonds : ¥200 million

Net income : ¥ △6,157 million

Dividends : ¥ △ 612 million

Consolidated Cash Flow



(¥ in million)	FY3/11 1H	FY3/12 1H
Cash flow from operating activities	2,460	△157
Income before income taxes	2,814	△5,541
Depreciation	1,371	1,573
Exchange gain & loss (△ : gain)	△48	△54
Changes in restructuring expense (△ : decrease)	—	2,396
Changes in notes & accounts receivable (△ : increase)	△2,189	△321
Changes in inventories (△ : increase)	△3,775	908
Changes in accounts payable (△ : decrease)	3,355	△102
Others	932	984
Cash flow from investing activities	△4,701	△2,024
Payments for purchase of tangible fixed assets	△4,298	△1,820
Proceeds from sales of tangible fixed assets	152	14
Payments for purchase of marketable securities	△1	△1
Proceeds from sales of marketable securities	—	—
Others	△554	△217
Cash flow from financing activities	8,331	△71
Changes in short-term borrowing	4,329	175
Proceeds from long-term debt	426	2,000
Payments of long-term debt	△1,962	△1,572
Proceeds from issuance of common stock	6,093	—
Payments for dividend	△497	△607
Others	△58	△67
Changes in cash & cash equivalents	6,127	△2,100
Cash and cash equivalents, beginning of year	7,310	9,560
Cash and cash equivalents, end of year	13,438	7,460

【Operating CF】

Net income before income taxes+ Depreciation: -¥3,968 million
 Increase in operating CF due to increased allowance for business structural reform: ¥2,396 million
 Decrease in operating CF due to increased trade receivables: -¥321 million
 Increase in operating CF due to decreased inventories: ¥908 million
 Decrease in operating CF due to decreased trade payables: -¥102 million

【Investing CF】

Major details of payments for acquisition of tangible fixed assets
 • Shanghai subsidiary: ¥248 million
 • Hangzhou subsidiary: ¥1,116 million
 • Yinchuan subsidiary: ¥261 million

【Financing CF】

Proceeds from long-term debt
 Implementation of syndicated loan
 Repayment of long-term debt
 Ferrotec Group's scheduled payment

Full-Year Forecast



(¥ in millions)	FY3/11	FY3/13	FY3/13	Comparison between FY3/13 and figures	
		Initial forecast	Revised forecast	Vs. FY3/12(%)	Vs. Initial plan(%)
Net sales	60,088	50,000	39,000	△35.1	△22.0
Operating profit	4,124	1,200	△3,400	—	—
Ordinary profit	3,287	800	△4,400	—	—
Net profit	1,715	450	△8,300	—	—
Capital investment	7,877	1,800	2,300	△70.8	27.8
Depreciation	2,825	3,100	3,100	9.7	—

Full-Year Forecast

(¥ in millions)	FY3/13 forecast
Net sales	39,000
Operating profit	△3,400
Ordinary profit	△4,400
Net profit	△8,300

Mainly PV-related business become unprofitable

Also for the equipment-related business, no sign of recovery in the semiconductor market

SG&A expenses : partial impairment of patent light 164

Extraordinary loss

[Special retirement benefits	222
Impairment of facilities	104
Additional adjustment expenses	85

Full-Year Forecast (sales by segment)

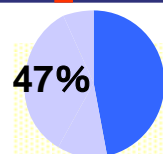


(¥ in millions)	FY3/12	FY3/13	FY3/13	Comparison between FY3/13 and figures	
		Initial forecast	Revised forecast	Vs. FY3/12(%)	Vs. Initial plan(%)
Equipment-related	24,883	23,530	18,770	△24.6	△20.2
Vacuum Feedthroughs	6,763	4,650	4,430	△34.5	△4.7
Quartz	5,509	4,800	3,700	△32.8	△22.9
Ceramics	4,507	4,500	4,140	△8.1	△8.0
EB-Gun, LED	4,078	3,830	2,430	△40.4	△36.6
semiconductor wafer	4,027	5,750	4,070	1.1	△29.2
Electronic device	5,337	4,950	4,530	△15.1	△8.5
Thermo-electric module	4,933	4,550	4,120	△16.5	△9.5
Ferrofluid, others	404	400	410	1.5	2.5
Photovoltaic-related	27,357	18,870	13,440	△50.9	△28.8
Quartz crucibles	4,887	5,720	3,300	△32.5	△42.3
Solar silicon	7,420	5,400	6,260	△15.6	15.9
PV manufacturing Equip.	12,959	5,000	1,860	△85.6	△62.8
Others	2,091	2,750	2,020	△3.4	△26.5
Others	2,509	2,650	2,260	△9.9	△14.7
total	60,088	50,000	39,000	△35.1	△22.0

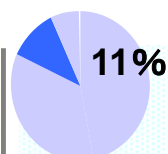


Status by Segment and Outlook

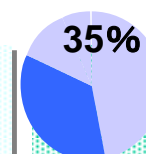
Segment



Equipment-related



Electronic device



Photovoltaic-related

Vacuum feedthroughs



Quartz



Ceramics

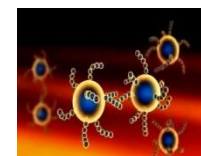
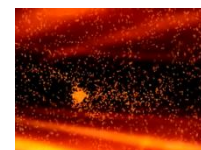


Deposition equipment

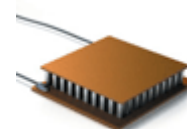


And wafer processing

Ferrofluid



Thermo-electric module



PV manufacturing equip.

Single crystal silicon growing furnaces



Multi crystal silicon casting furnaces



Consumable

Quartz crucible Hot zone



Vessel



PV silicon (Ingot)

Single crystal ingot



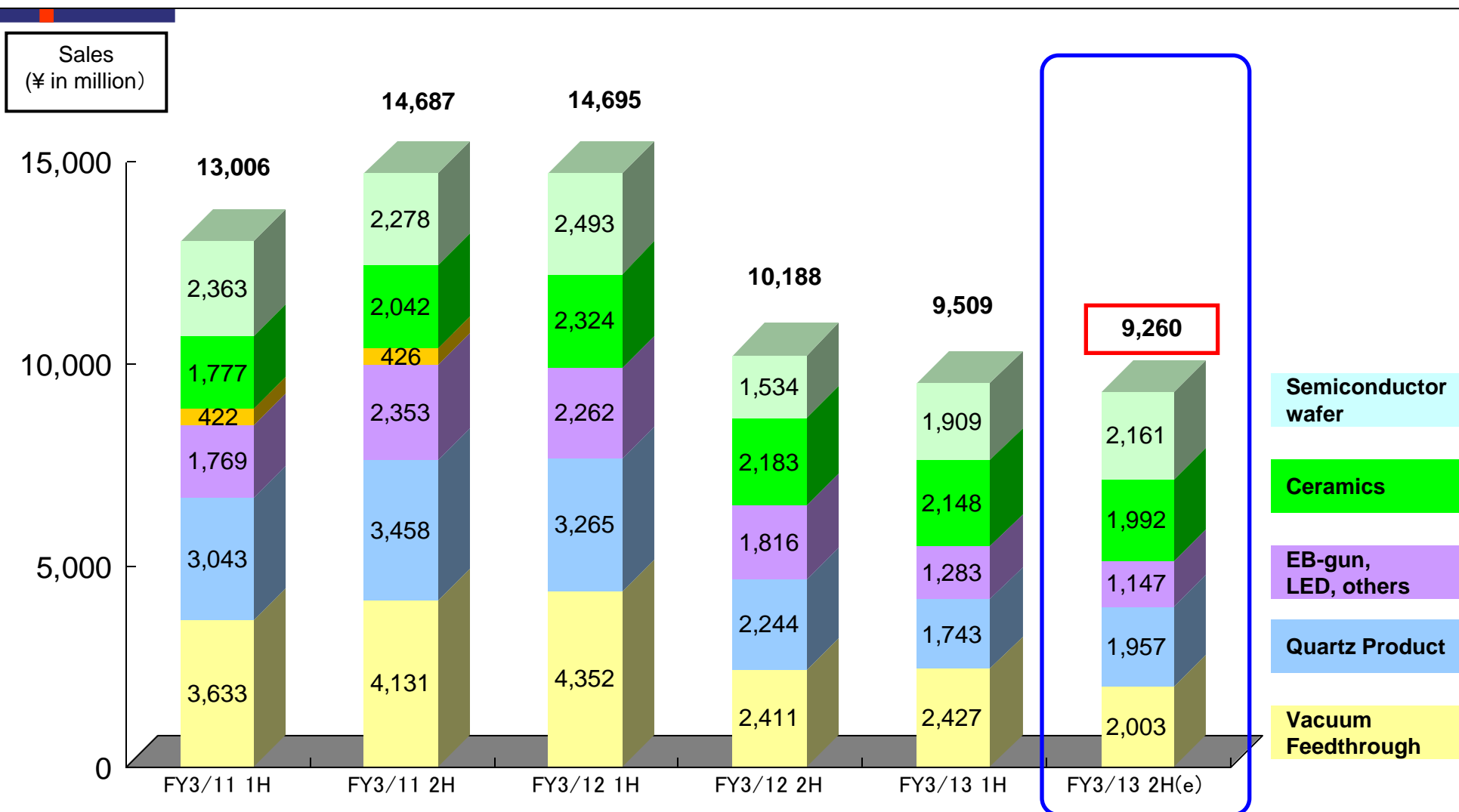
Multi-crystal ingot



PV wafer

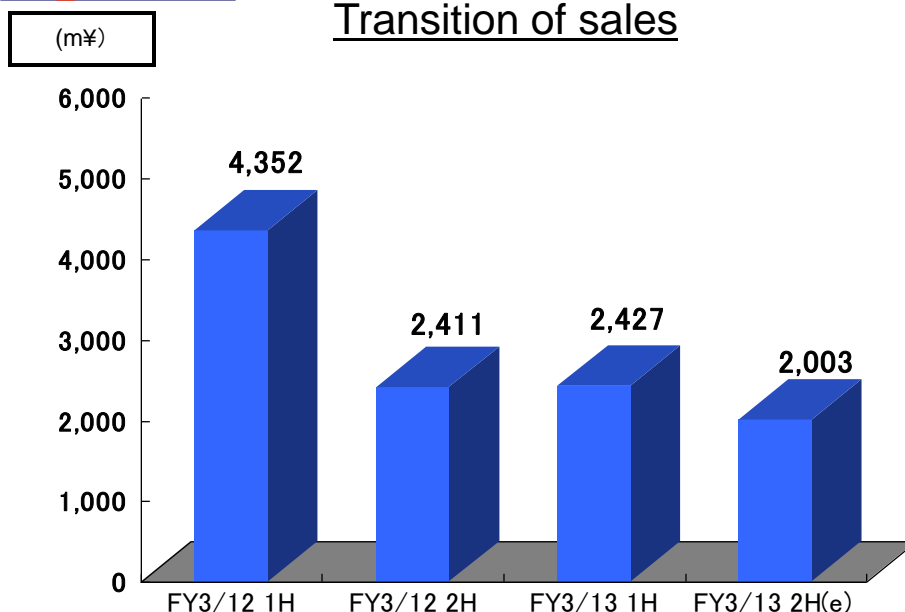


Equipment-related segment

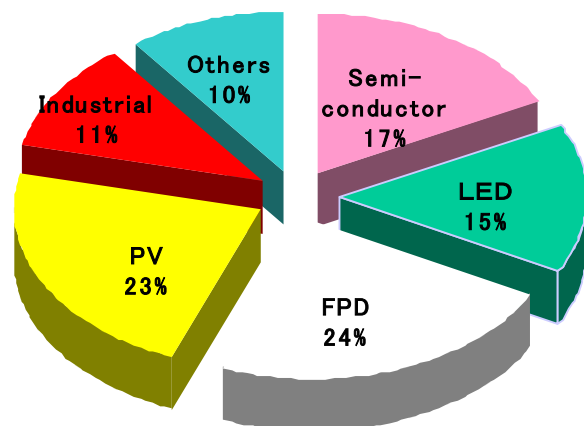


=Semiconductor silicon products have been shifted to semiconductor wafer from FY3/12.

Transition of sales



Sales by category



Industrial: Industrial Vacuum Equipment Others: Aero, Medical, Science etc

1. Status of 1st half of FY3/13

- No specific recovery of capital expenditure for the FPD process equipments was observed and only that for the OLED process equipments of mobile application was slightly occurred.
- Expected capital expenditure for the down scaling of semiconductor nanotechnology at the foundries, but were limited.
- Remained weak demand for North America and Europe in the 1st half.

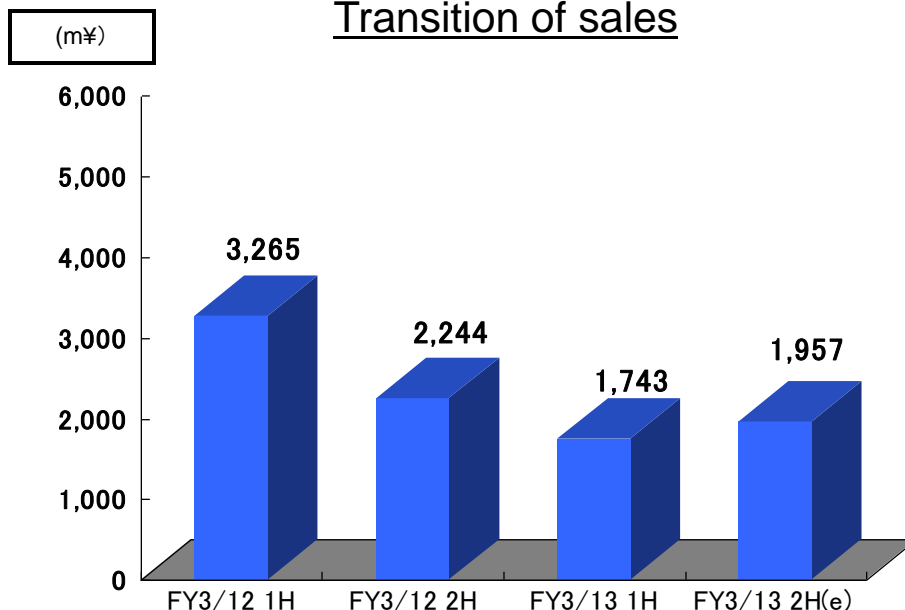
2. Outlook for 2nd half of FY3/13

- In the LED market, motivation for capital expenditure will decrease due to drop in product prices.
- In the FPD market, expect capital expenditure for large 4K device and touch panel systems.
- Demand from clean robot manufacturers will recover.
- Slow sales of PCs but expect replacement demand due to the launch of Windows 8.

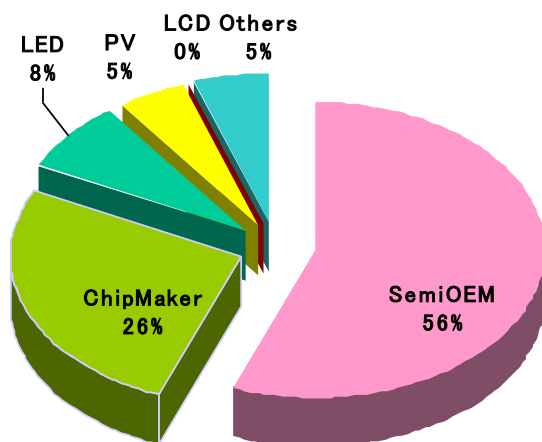
《Measures》

- Reinforce overseas marketing activity (Asia) and provide technical assistance from Japan.
- Implement reduction of fixed costs and reduce inventories.
- Promote contract manufacturing for non-electronics industry.

Transition of sales



Sales by category



1. Status of 1st half of FY3/13

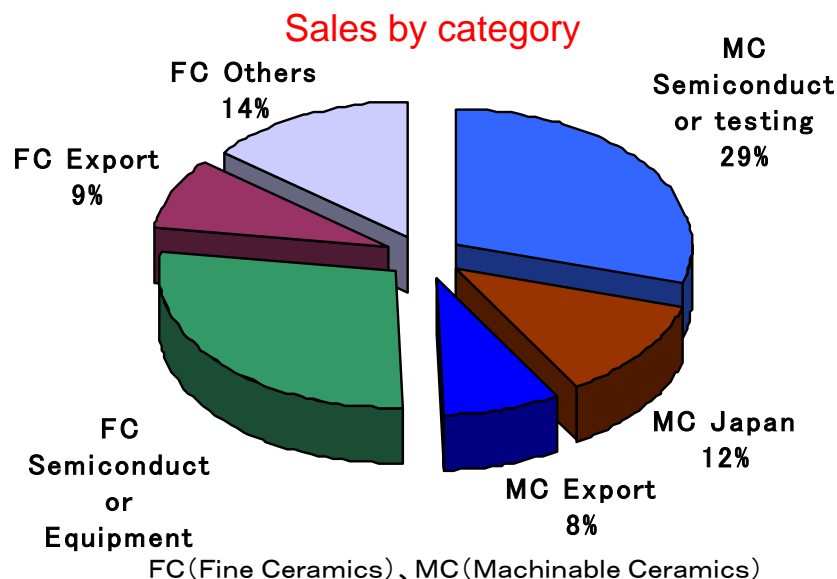
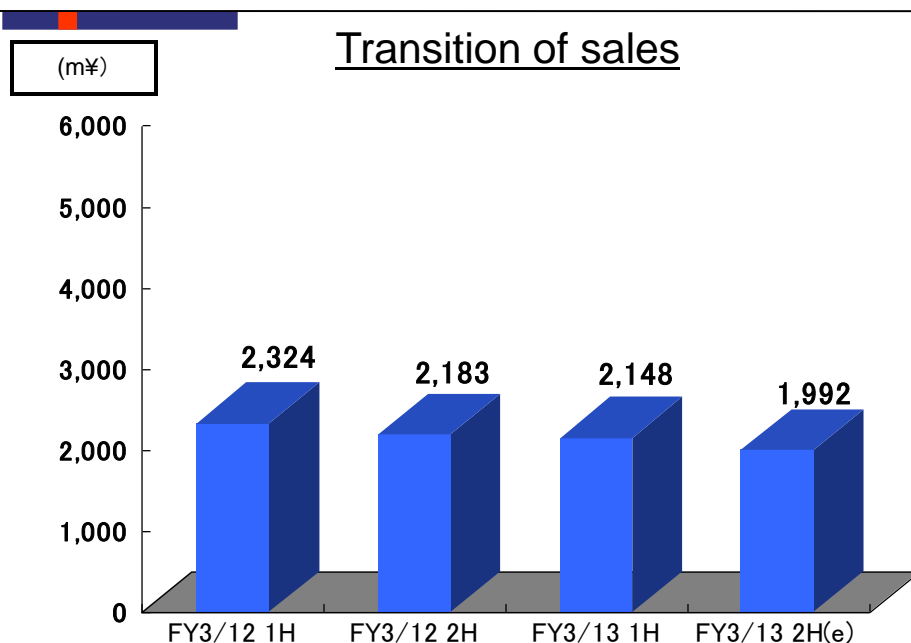
- Demand of Japanese domestic semiconductor manufacturers was weak in the 1st half. End user in Taiwan showed consistent demand.
- Orders from major OEM customers in the U.S. recovered but slowed down as a result of announcing layoffs.
- Orders from major OEM customers in Japan remained low level due to postponement of capital expenditure by Korea and Taiwan Memory manufacturers.
- Operating rate in the LED market was low due to adjust inventory for LCD.

2. Outlook for 2nd half of FY3/13

- Expect to recover of order by major Taiwan foundry's additional capital expenditure for the down scaling of semiconductor nanotechnology.
- Major OEM customers in Japan slow down with the orders by decline of capital expenditure of the Memory manufacturers.
- Semiconductor market remains flat and recovering demand is unclear.
- Expect plan of capital expenditure in Asia in the New Year.

《Measures》

- Improve lead time by reorganization of production system.
- Conduct business targeting Chinese factories of overseas companies (U.S. Logic, Taiwan Memory).
- Increase in high-purity products and plan of transferring to China.
- Challenge high-end or 18 inch products.
- Reduce fixed costs.



1. Status of 1st half (Jan-June) of FY 3/13

Machinable Ceramics (Photoveel)

Jig for semiconductor wafer Inspection application; Sales of Machinable Ceramics (MC) to both Memory (N/Flash) and Non-Memory (Logic) for Japanese, Korean and Taiwanese semiconductor manufacturers and foundries were on par with last fiscal year due to booming demand for smart-phones.

Other than wafer Inspection applications; MC also achieved a substantial increase in sales for the new use for OLED manufacturing equipment.

Fine Ceramics

Sales were on par with last fiscal year due to capital expenditure for the advanced scaling down of Semiconductor nanotechnology in the U.S. and Taiwanese semiconductor manufacturers and foundries since the end of last fiscal year and expansion of sales of overseas exports.

2. Outlook for 2nd half (July-Dec) of FY 3/13

Machinable Ceramics (Photoveel)

- With regard to Memory (N/Flash), because of a decline in demand for use other than smart-phones, Japanese and Korean semiconductor manufacturers will make a decreasing in production by the end of the year due to adjust balance of supply and demand. Non-Memory (Logic) will enter a changeover period in the middle of 3Q with the launch of new model and expect to recover from the middle of 4Q..
- Keep steady sales of MC for OLED manufacturing equipment.
- Despite decrease in sales for semiconductor wafer Inspection application, a slight decrease is expected compared with the 1st half due to the product mix with non wafer inspection application.

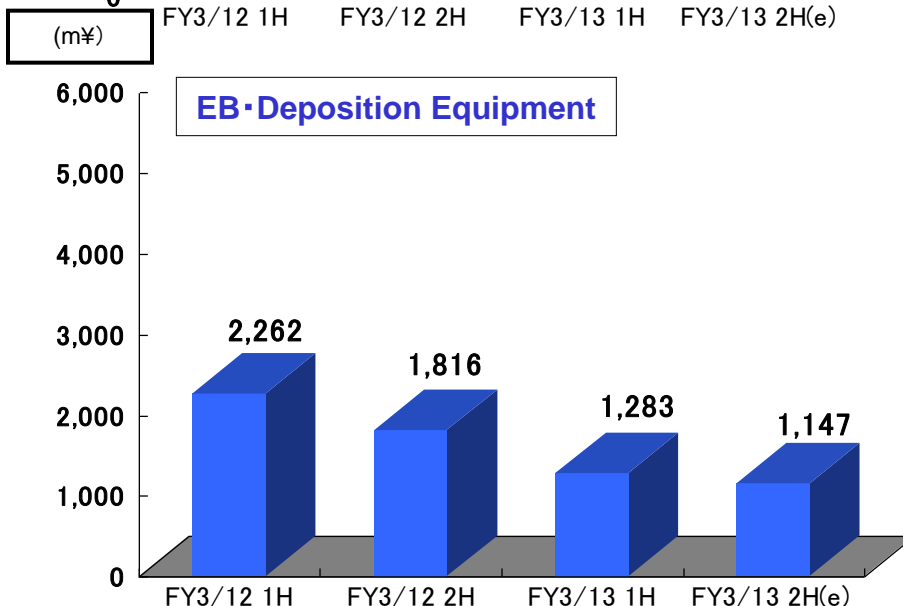
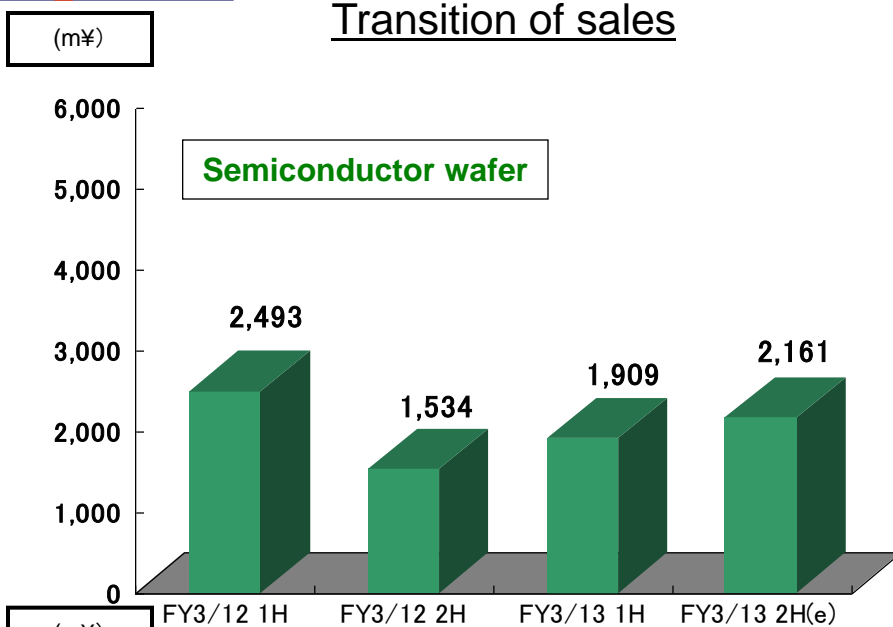
Fine Ceramics

- With worldwide economic slowdown, capital expenditure by semiconductor manufacturers temporarily decline sharply due to concerns about prolonged sluggish demand.
- Sharp decline in orders from domestic semiconductor equipment manufacturers (OEM) from the end of 3Q. In the 2nd half, it is difficult to secure sales on par with the 1st half.

3. Continued sales policy

- Expand the use of Jig for Semiconductor wafer Inspection application
- Expansion the use of MC for non wafer inspection application and expansion of sales (Reinforce marketing activity).
- Develop new customers and new application in the European market in addition to the U.S. and Asian market (Reinforce marketing activity).
- Strengthen competitiveness by new material development.

Transition of sales



Semiconductor Wafer :

1. Status of 1st half of FY 3/13

- Demand for small diameter wafer was strong but expect to remain flat.
- Achieved an output of 120 thousand wafers per month of Ferrotec's own brand which is almost the same number as order from OEM.

2. Outlook for 2nd half of FY3/13

- Semiconductor market enters an adjustment phase and expects to be at a standstill.
- Severe small diameter wafer price competition in the Chinese, Taiwanese and European markets.

《Measures》

- Expand sales of Ferrotec's own brand products. Reduce costs to respond for price requirements.
- Increase production capacity of Ferrotec's own brand products.

EB-Deposition Equipment:

1. Status of 1st half of FY 3/13

Weak demand due to cut in Capital expenditure in LED deposition equipment, etc.

2. Outlook for 2nd half of FY3/13

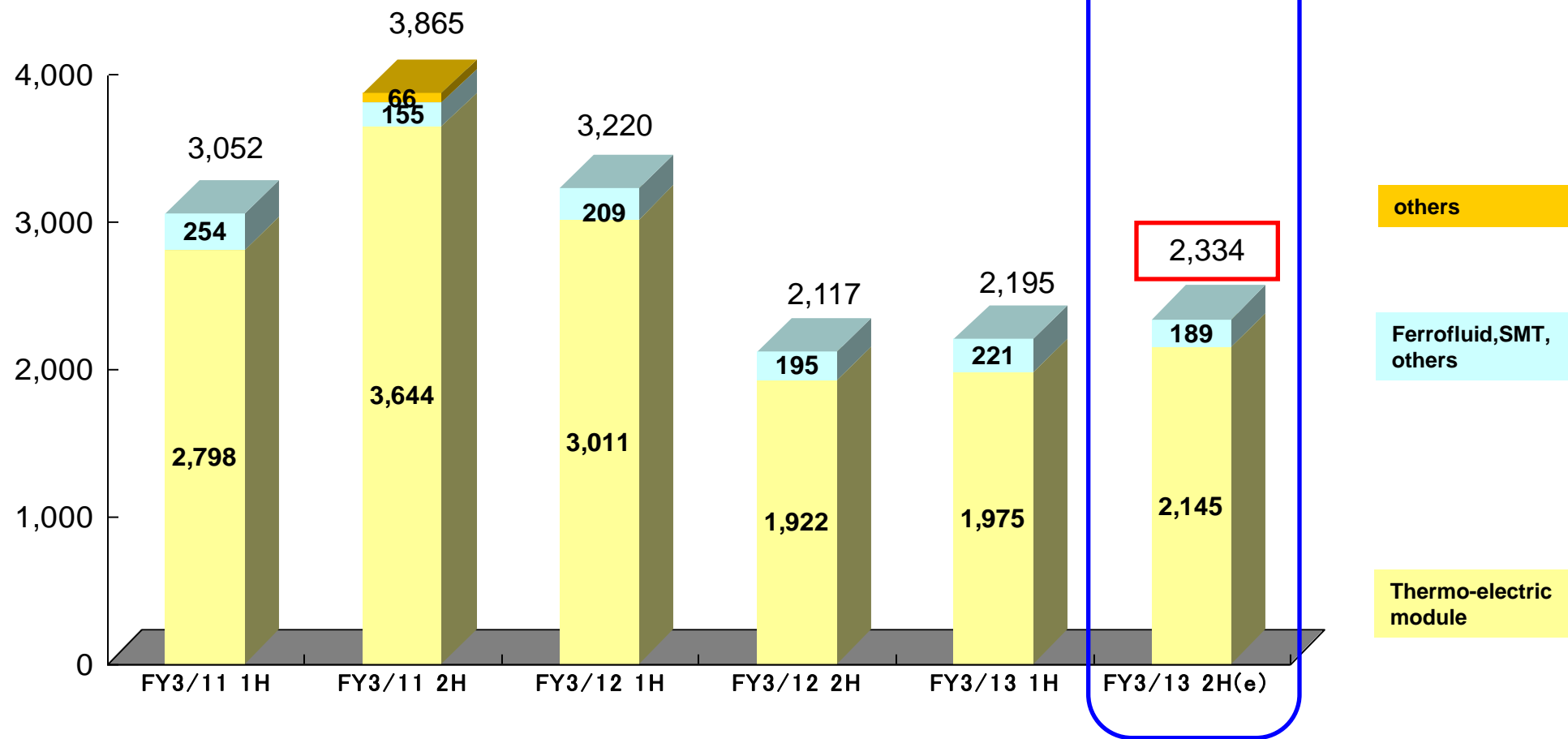
- LED deposition equipment, etc. are expected to remain flat in the 2nd half.
- Receive orders as IC chip for smart phone.
- Scheduled to ship by the end of the year.

《Measures》

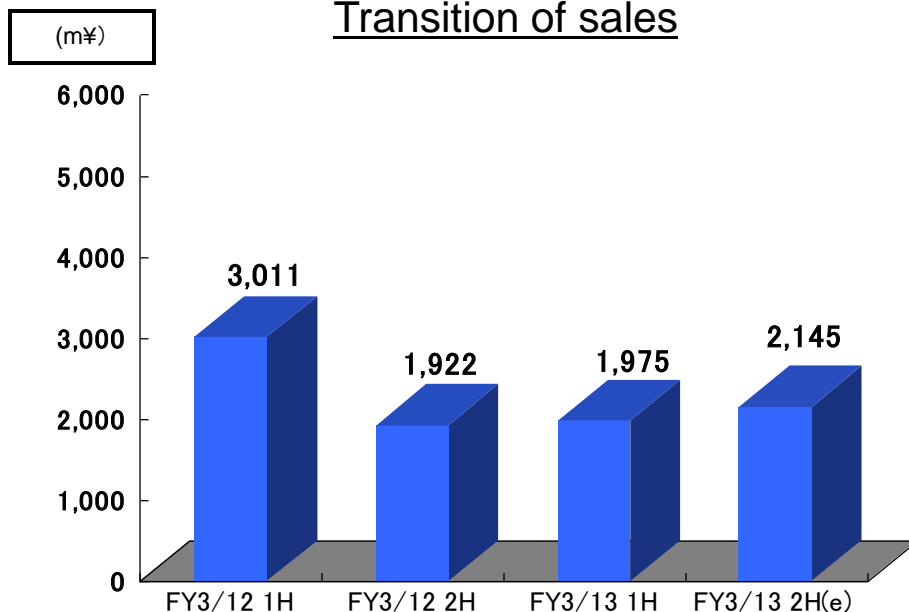
Aim to complete the development of the equipment for the Chinese market during the year.

Electronic Device Segment

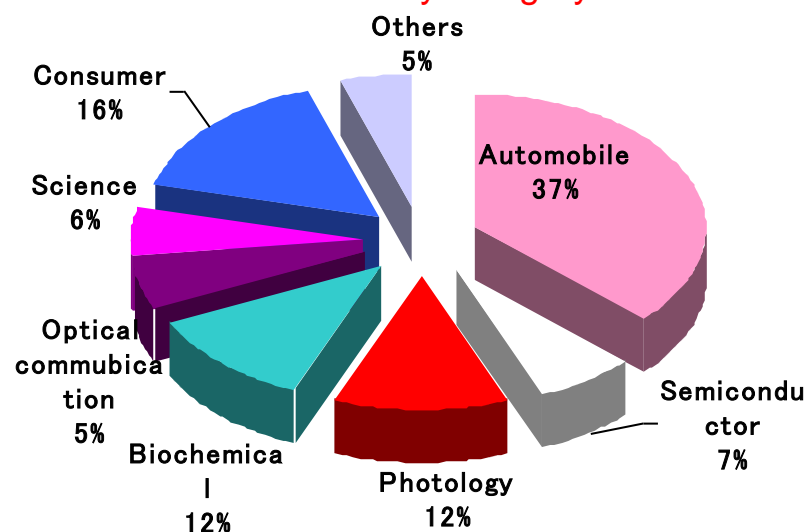
Sales
(¥ in million)



Transition of sales



Sales by category



1. Status of 1st half of FY 3/13

Automobile Seat Application

Almost as planned.

Other Application

- Consumer application slightly weak due to the completion of seasonal products.
- Other applications were almost as planned.

2. Outlook for 2nd half of FY 3/13

Automobile Seat Application

New models will be launched.

Other Application

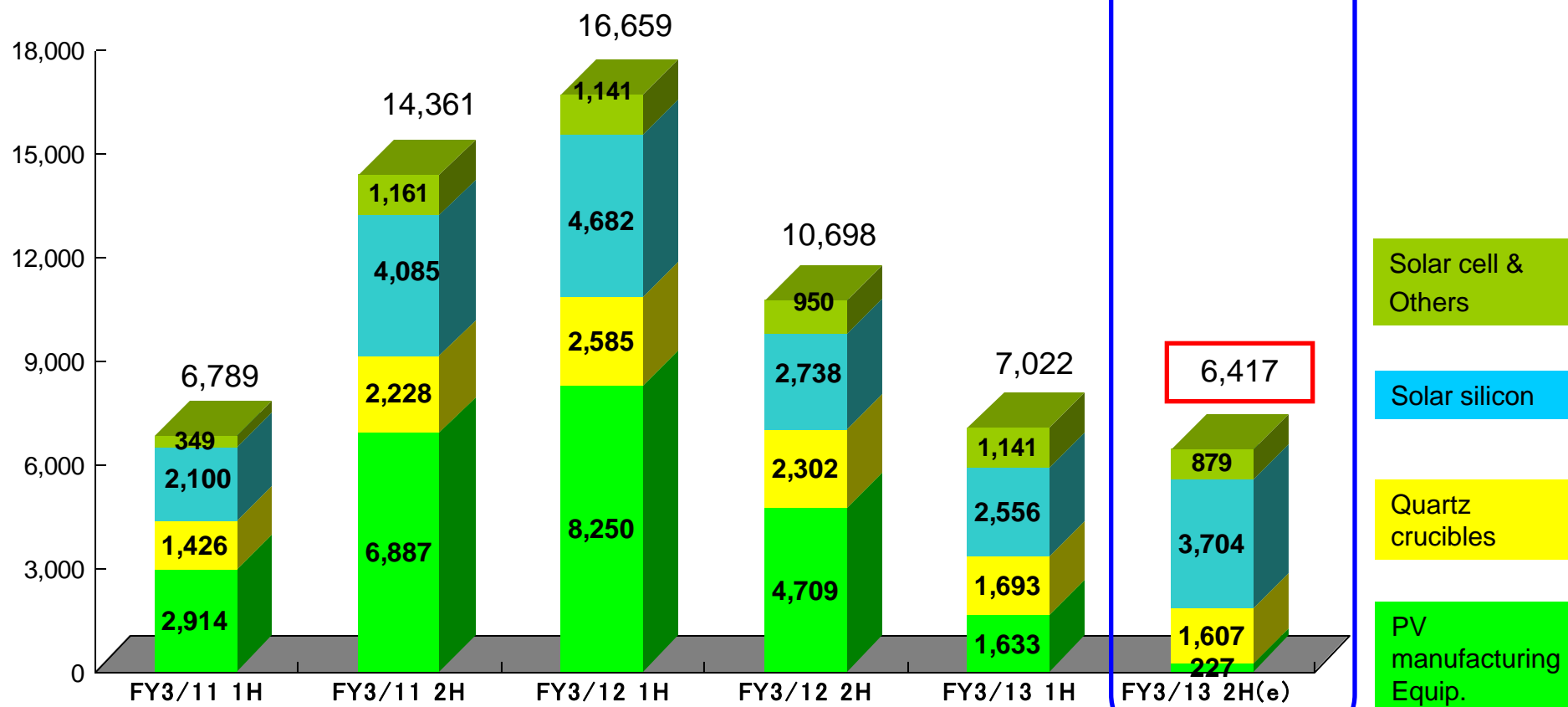
- Increase in inquiries for new application.
- Medical, biotech equipment, semiconductors and optics applications are expected to be strong.
- Market for optical communication is expected to expand in China.
- Launch power device substrates.

《Measures》

- Additional investment in the automated production line.
- Increase sales of High-End Product in optical communication by enhancement of its performance
- Increase sales of power device substrate by improvement of the quality
- Strengthen the direct sales system of North American market and aim for high-end market.

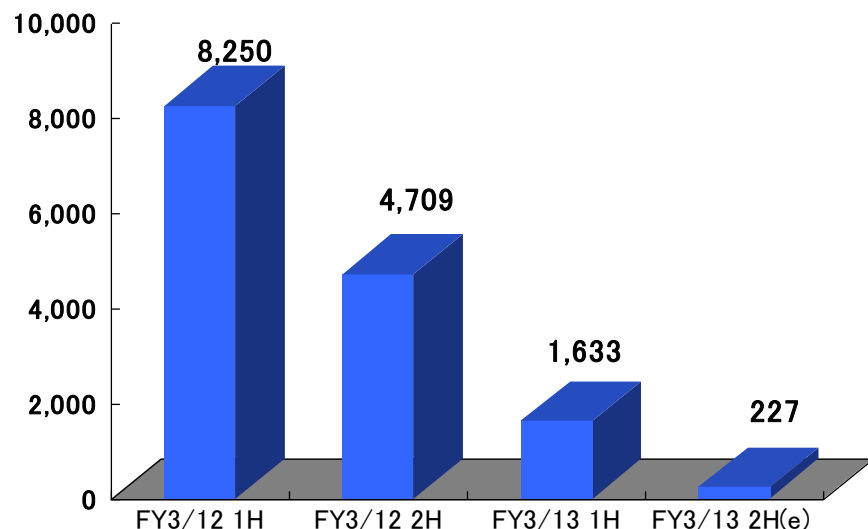
Photovoltaic-related Segment

Sales
(¥ in million)



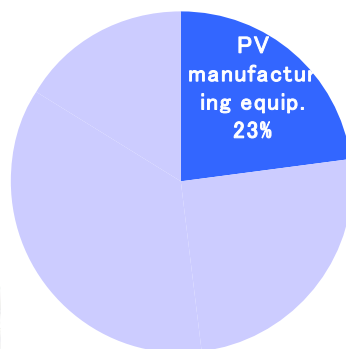
Transition of sales

(m¥)



**Pct. Of sales
In the PV segment**

FY3/13 1H



Single crystal silicon
growing furnaces

Multi crystal silicon
casting furnaces

Block Cutting

1. Status of 1st half of FY3/13

- Business environment remains unexpectedly severe.
- Freeze of new projects including replacement demand.
- PV industry went into the process of selection and the market worsened.

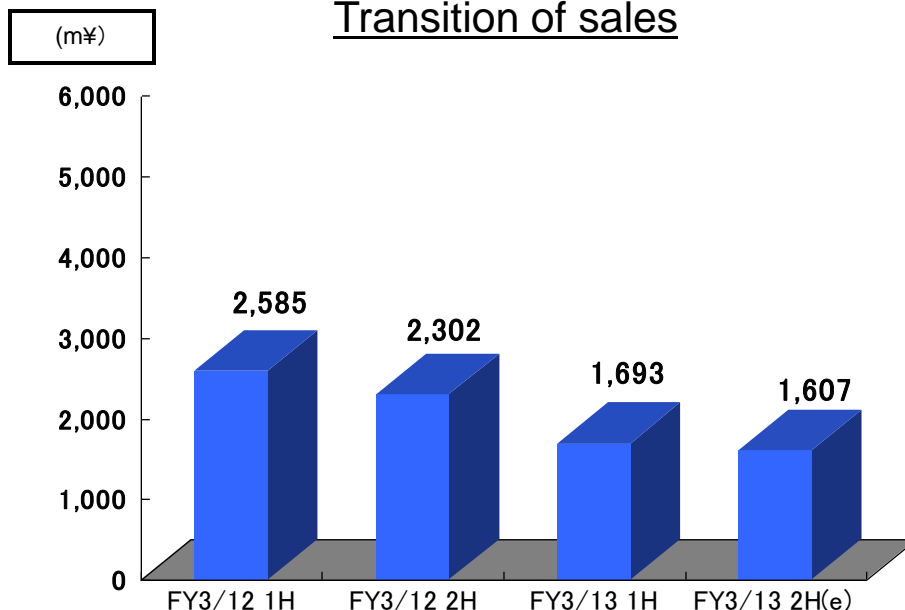
2. Outlook for 2nd half of FY3/13

- Sales of Crystal growing system shrink due to the worsening of PV market
- Discontinue selling other related equipment due to drop in prices
- Operating rate of Chinese users fell below 30% that the equipment sales cannot be expected. Only assume maintenance sales.

《Measures》

- Specialize in the development of efficient products including energy-saving and yield rate.
- Shift from the application of furnace body technology to development of sapphire furnace.
- Shift from the application of existing NC router and machine tool technologies to the development of processing machinery including core drill and polishing equipment.
- Reduce fixed costs.

Transition of sales



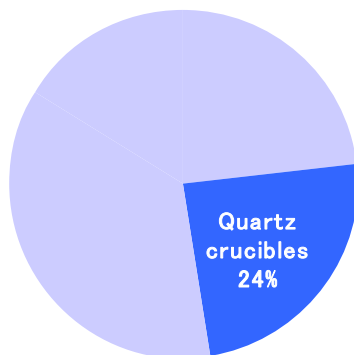
Single-crystal quartz crucible



Multi-crystal vessel

**Pct. Of sales
In the PV segment**

FY3/13 1H



1. Status of 1st half of FY3/13

- Unexpectedly severe state due to demand for lowering prices.
- Price dropped and quantity decreased due to decline in operating rate of customers.
- Business environment worsened including withdrawal of competitors and suspension of operation of client companies.
- Vessels were weak due to a price drop despite increased quantity.

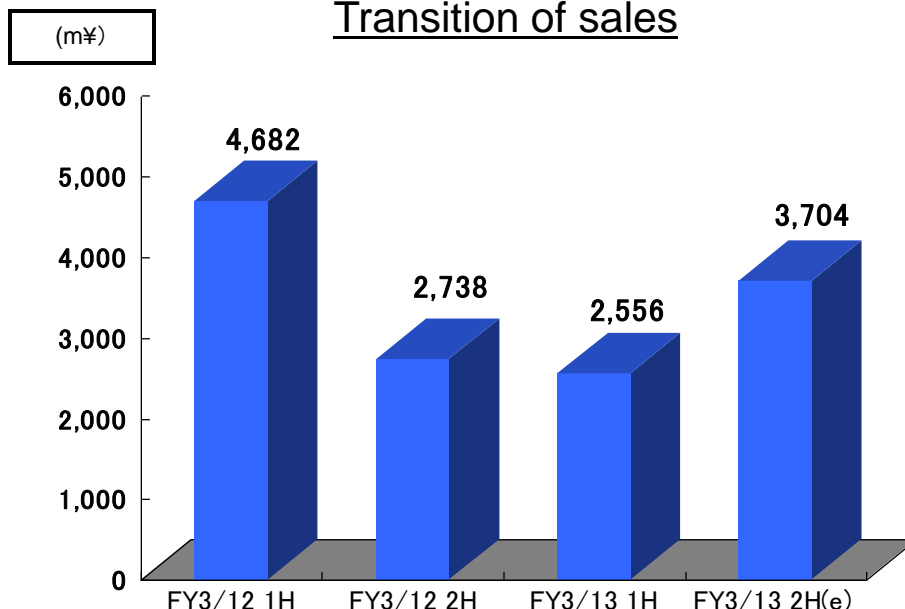
2. Outlook for 2nd half of FY3/13

- Korean and Chinese markets expect to worsen.
- Regarding crucibles, expect to increase number of speced-in products by Semiconductor customers which is highly-value added application.
- Order situation remains severe and can not foresee a recovery.

《Measures》

- Dispose old crucible fusion equipment due to low operating rate.
- Reduce fixed costs.

Transition of sales



1. Status of 1st half of FY3/13

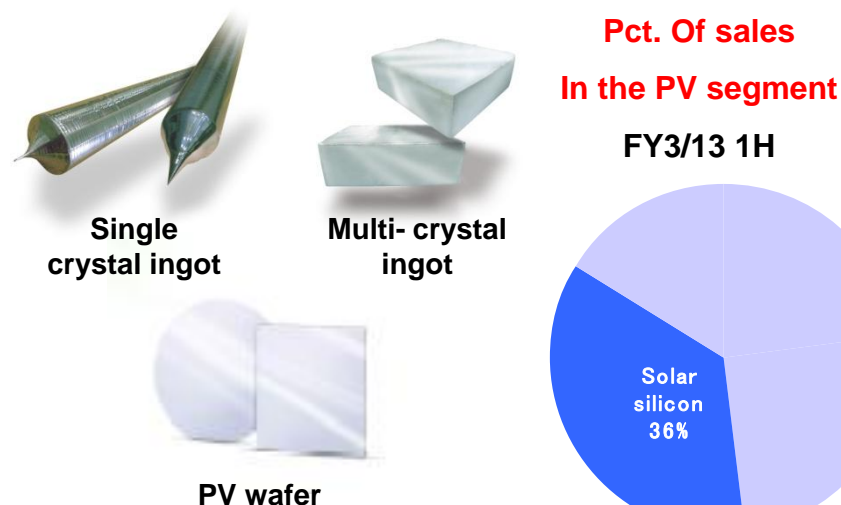
- There is demand but poorly performed due to a severe price competition.
- PV wafer price continued to fall.
- Unprofitable because consumers demanded high conversion efficiency and low cost.
- Posted a loss on valuation of poly-silicon.

2. Outlook for 2nd half of FY3/13

- The bottoming out of wafer and cell prices is unclear.
- Adjust production due to the worsening of the market.
- Sell stock and generate cash.

《Measures》

- Plan to withdraw from own brand (place priority on stock reduction).
- Continue with OEM and obtain new OEM customers.
- Discontinuation of procurement of materials for own brand
- Reduce fixed costs.





Reference Materials

Corporate Data



Corporate Name	Ferrotec Corporation
Date of Foundation	September 27, 1980
A d d r e s s	Nihonbashi Plaza Building, 2-3-4, Nihonbashi, Chuo-ku, Tokyo Japan
L i s t e d	JASDAQ (Listed Code: 6890)
P r e s i d e n t	Akira Yamamura
Business Segment	<ul style="list-style-type: none">• Equipment-related business : Vacuum Feedthrough, Quartz, Ceramics, silicon, wafer processing• PV-related business : PV manufacturing equip, Quartz crucibles, solar silicon• Electronic device business : thermo-electric module, Ferrofluid
C a p i t a l	13,201,346 thousand JPY
Issued Stock	30,903,702
Related Company	【20 Consolidated Subsidiary】 【6 Companies Accounted for by the Equity Method】
E m p l o y e e s	【Consolidated】5,584 【Non-consolidated】209

