

A background image for the FerroTec presentation. It features a collage of various industrial components, including what appears to be a large turbine or engine part, and several smaller mechanical parts like valves and nozzles. The FerroTec logo is overlaid on the left side of this image.

# FerroTec Corporation

Results for the 1<sup>st</sup> half of the fiscal year ended March 31, 2012

November 24, 2011

(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 1<sup>st</sup> half of the fiscal year ending March 31, 2012. These materials were prepared based on information available as of Nov. 24, 2011. 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 2012 Financial Results

# Consolidated Financial Summary



(¥ in millions)	FY March 2011 1 <sup>st</sup> half		FY March 2012 1 <sup>st</sup> half		YoY change	
	Amount	Pct. of sales(%)	Amount	Pct. of sales(%)	Amount	Pct(%)
Net sales	23,765	100.0	35,737	100.0	11,972	50.4
cost of sales	16,254	68.4	25,688	71.9	9,434	58.0
Gross profit	7,511	31.6	10,049	28.1	2,538	33.8
SG&A expenses	5,267	22.2	6,484	18.1	1,217	23.1
Operating profit	2,243	9.4	3,564	10.0	1,321	58.9
Non-operating income	173	0.7	190	0.5	17	9.8
Non-operating expense	524	2.2	616	1.7	92	17.6
Ordinary profit	1,893	8.0	3,138	8.8	1,245	65.8
Extraordinary income	104	0.4	79	0.2	△25	△24.0
Extraordinary loss	81	0.3	402	1.1	321	396.3
Net profit	1,344	5.7	1,968	5.5	624	46.3
Capital investment	2,094	-	4,298	-	2,204	105.3
Depreciation	1,308	-	1,371	-	63	4.8

# Net Sales and Operating Profits by Segment



<b>Net sales</b> (¥ in millions)	FY March 2011 1 <sup>st</sup> half		FY March 2012 1 <sup>st</sup> half		YoY change	
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)
Equipment-related	13,006	54.7	14,695	41.1	1,689	13.0
Electronic device	3,050	12.8	3,220	9.0	170	5.6
Photovoltaic-related	6,788	28.6	16,659	46.6	9,871	145.4
Others	919	3.9	1,163	3.3	244	26.6
<b>T o t a l</b>	<b>23,765</b>	<b>100.0</b>	<b>35,737</b>	<b>100.0</b>	<b>11,972</b>	<b>50.4</b>

<b>Operating income</b> (¥ in millions)	FY March 2011 1 <sup>st</sup> half		FY March 2012 1 <sup>st</sup> half		YoY change	
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)
Equipment-related	1,370	10.5	1,878	12.8	508	37.1
Electronic device	411	13.5	526	16.3	115	28.0
Photovoltaic-related	357	5.3	984	5.9	627	175.6
Others	126	13.7	218	18.7	92	73.0
Corporate & elimination	△22	-	△43	-	△21	-
<b>T o t a l</b>	<b>2,243</b>	<b>9.4</b>	<b>3,564</b>	<b>10.0</b>	<b>1,321</b>	<b>58.9</b>

# Consolidated Balance Sheet ~Assets~



(¥ in millions)	FY3/11	FY3/12 1H	Difference
<b>Current assets</b>	<b>36,133</b>	<b>48,979</b>	<b>12,846</b>
Cash & deposits	7,310	<b>13,438</b>	6,128
Note & accounts receivable	15,426	<b>17,471</b>	2,045
Inventory	9,312	<b>12,968</b>	3,656
<b>Fixed assets</b>	<b>25,365</b>	<b>28,080</b>	<b>2,715</b>
<b>Tangible fixed assets</b>	<b>19,204</b>	<b>22,320</b>	<b>3,116</b>
Building	4,538	<b>4,583</b>	45
Equipment & machinery	6,319	<b>7,179</b>	860
Tools, furniture, and fixture	3,352	<b>4,106</b>	754
Land	2,792	<b>2,725</b>	△67
<b>Intangible fixed assets</b>	<b>2,812</b>	<b>2,546</b>	<b>△266</b>
Goodwill	1,563	<b>1,350</b>	△213
Investments & other assets	3,349	<b>3,213</b>	△136
<b>Total assets</b>	<b>61,499</b>	<b>77,059</b>	<b>15,560</b>

## 【Major factors for increase in current assets】

increase in cash and deposits due to public offering, increase in receivable due to sales increase and increased inventories

## Major inventories

Vacuum feedthroughs:¥1,094million, quartz:¥1,299million, thermo module:¥1,307million, ceramics:¥948million, PV manufacturing equipment:¥4,748million, PV silicon products:¥1,018million

## 【Major factors for increase in tangible fixed assets】

machinery: Due mainly to PV silicon facilities, crucible manufacturing facilities

Tools & devices: Due mainly to vacuum feedthrough facilities, PV cell facilities

Construction in progress: Due mainly to extension of Hangzhou Solartech

## 【Intangible fixed assets situation】

Amortization of goodwill:

1<sup>st</sup> half (actual):¥210million    2<sup>nd</sup> half (plan):¥210million

## 【Investment and other asset situation】

Decreased compared with the end of the previous fiscal year due to mark to market for investment securities

# Consolidated Balance Sheet

~Liabilities and  
net worth~



(¥ in millions)	FY3/11	FY3/12 1H	Difference
Current liabilities	25,848	35,021	9,173
Notes and accounts payable	8,708	12,238	3,530
Short-term debt	7,081	11,369	4,288
Current portion of long-term borrowings.	3,753	3,226	△527
Fixed liabilities	10,086	7,408	△2,678
Bond	150	-	△150
CB	1,800	400	△1,400
Long-term debt	6,305	4,570	△1,735
Total liabilities	35,935	42,429	6,494
Net Assets	25,564	34,630	9,066
Shareholder's equity	27,362	36,364	9,002
Total adjustment	△2,701	△2,616	85
Minority interests	903	882	△21
Total liabilities & shareholder's equity	61,499	77,059	15,560

## 【Major factors for increase in current liabilities】

Increase in accounts payable due to increased purchase

## 【Interest-bearing debt ratio】 Parenthesis represent the figures at the end of Mar. 2011

	(¥ in millions)
Short-term debt + Current portion of long-term borrowings	14,595 (10,834)
Long-term debt + bond etc.	4,970 (8,255)
<b>T o t a l</b>	<b>19,565 (19,090)</b>
<b>Net interest-bearing debt</b>	<b>6,127 (11,780)</b>

## 【Net assets】

### Shareholder's equity:

Net income:  
+¥1,968million

Dividends:  
△¥500million

Conversion of bonds with stock acquisition rights :  
+¥1,400million

Public offering + third-party allotment associated with OA:  
+¥6,134million

# Consolidated Cash Flow



(¥ in million)	FY3/11 1H	FY3/12 1H
<b>Cash flow from operating activities</b>	<b>527</b>	<b>2,460</b>
Income before income taxes	1,916	2,814
Depreciation	1,308	1,371
Exchange gain & loss (Δ : gain)	120	Δ48
Changes in notes & accounts receivable (Δ : increase)	Δ3,909	Δ2,189
Changes in inventories (Δ : increase)	Δ2,052	Δ3,775
Changes in accounts payable (Δ : decrease)	2,955	3,355
Others	189	932
<b>Cash flow from investing activities</b>	<b>Δ1,124</b>	<b>Δ4,701</b>
Payments for purchase of tangible fixed assets	Δ2,094	Δ4,298
Proceeds from sales of tangible fixed assets	21	152
Payments for purchase of marketable securities	Δ8	Δ1
Proceeds from sales of marketable securities	-	-
Others	957	Δ554
<b>Cash flow from financing activities</b>	<b>1,457</b>	<b>8,331</b>
Changes in short-term borrowing	1,702	4,329
Proceeds from long-term debt	1,838	426
Payments of long-term debt	Δ1,725	Δ1,962
Proceeds from issuance of common stock	-	6,093
Payments for dividend	Δ296	Δ497
Others	Δ62	Δ58
<b>Changes in cash &amp; cash equivalents</b>	<b>573</b>	<b>6,127</b>
<b>Cash and cash equivalents, beginning of year</b>	<b>5,867</b>	<b>7,310</b>
<b>Cash and cash equivalents, end of year</b>	<b>6,440</b>	<b>13,438</b>

## 【Operating CF】

Net income + Depreciation : +¥4,185million  
 Increase in current assets due to sales purchase :  
 Δ¥5,964million  
 Increase in current liabilities due to increased  
 purchase : +¥3,355million

## 【Investing CF】

Details of increased tangible fixed assets  
 • Shanghai subsidiary : ¥391million  
 • Hangzhou subsidiary : ¥2,808million  
 • Yinchuan subsidiary : ¥724million

## 【Financing CF】

Details of short-term debt  
 • Additional working capital  
 Repayment of long-term debt  
 • Ferrotec Group's scheduled payment  
 Public offering  
 • Mainly for investments in PV-related business

# Full-Year Forecast



(¥ in millions)	FY3/11	FY3/12	FY3/12	Comparison between FY3/12 and figures	
		Initial forecast	Revised forecast	Vs. FY3/11(%)	Vs. Initial plan(%)
Net sales	57,880	70,000	63,000	8.8	△10.0
Operating profit	6,931	7,500	5,200	△25.0	△30.7
Ordinary profit	6,290	7,200	4,200	△33.2	△41.7
Net profit	4,483	5,000	2,700	△39.8	△46.0
Capital investment	5,036	7,000	7,000	—	—
Depreciation	2,655	3,355	3,000	13.0	△10.6



# Full-Year Forecast (sales by segment)



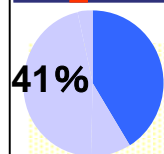
(¥ in millions)	FY3/11	FY3/12	FY3/12	Comparison between FY3/12 and figures	
		Initial forecast	Revised forecast	Vs. FY3/11(%)	Vs. Initial plan(%)
Equipment-related	27,693	27,232	25,360	△7.7	△6.9
Vacuum Feedthroughs	7,764	6,555	6,690	△13.8	2.1
Quartz	6,501	7,254	6,110	△6.0	△15.8
Ceramics	3,819	4,200	4,290	12.3	2.1
Silicon products	848	-	-	-	-
EB-Gun, LED	4,122	4,082	3,910	△5.1	△4.2
semiconductor wafer	4,641	5,141	4,360	△6.1	△15.2
Electronic device	6,917	6,727	5,280	△23.7	△21.5
Thermo-electric module	6,442	6,271	4,900	△23.9	△21.9
Ferrofluid, others	475	456	380	△7.1	△16.7
Photovoltaic-related	21,151	33,835	30,110	42.4	△11.0
Quartz crucibles	3,654	5,635	5,380	47.2	△4.5
Solar silicon	6,185	8,480	7,630	23.4	△10.0
PV manufacturing Equip.	9,801	15,050	15,160	54.7	0.7
Others	1,510	4,670	1,940	28.5	△58.5
Others	2,117	2,206	2,250	6.3	2.0
total	57,880	70,000	63,000	8.8	△10.0

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



## Status by Segment and Outlook

# Segment



Equipment-related

Vacuum feedthroughs



Quartz



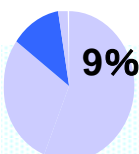
Ceramics



Deposition equipment

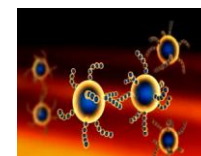
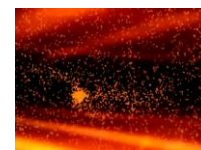


And wafer processing

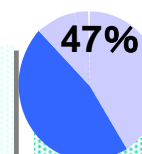
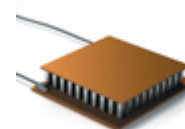


Electronic device

Ferrofluid



Thermo-electric module



Photovoltaic-related

PV manufacturing equip.

Single crystal silicon growing furnaces



Multi crystal silicon casting furnaces

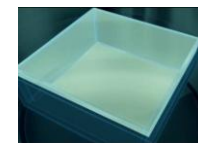


Consumable

Quartz crucible Hot zone



Vessel



PV silicon (Ingot)

Single crystal ingot



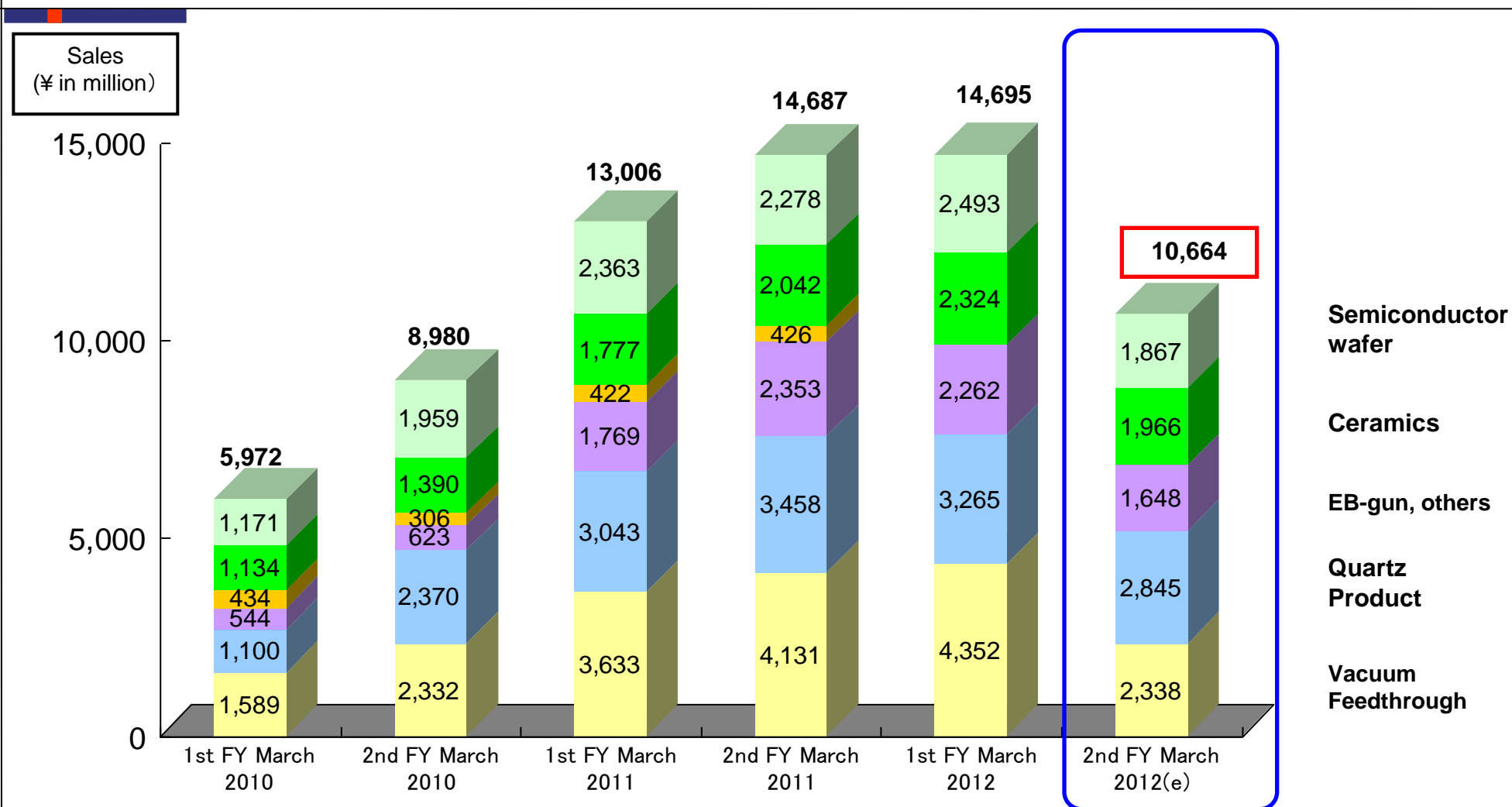
Multi-crystal ingot



PV wafer

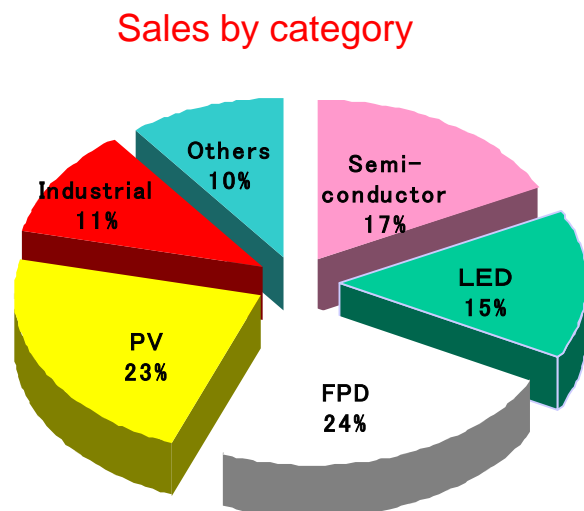
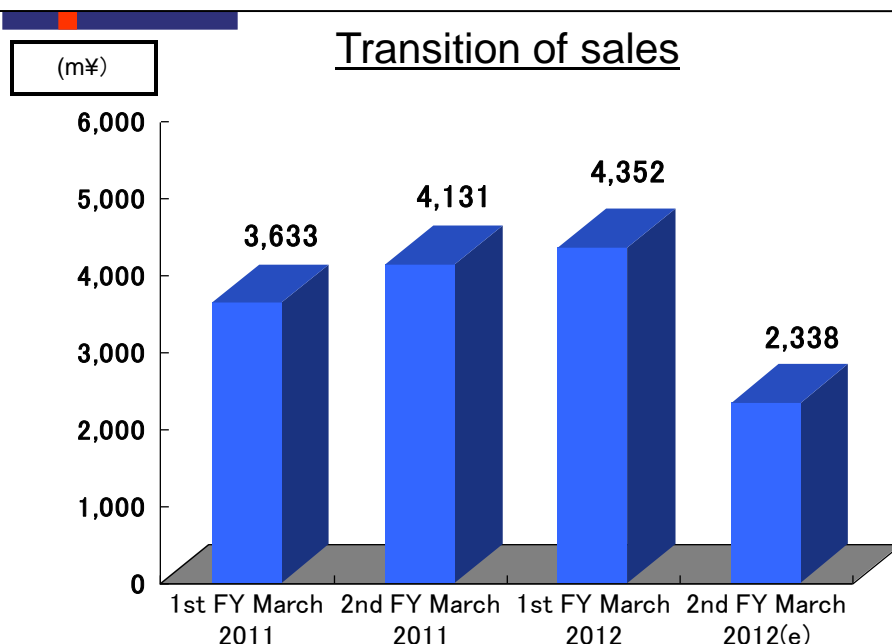


# Equipment-related segment



Note: From FY3/11, regarding “CMS”, shifted semiconductor wafer process to “Equipment-related”.

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



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

## 1. Status of 1<sup>st</sup> half of FY3/12

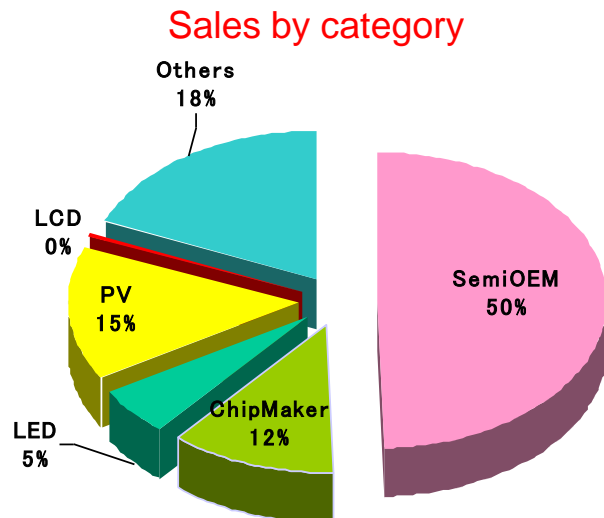
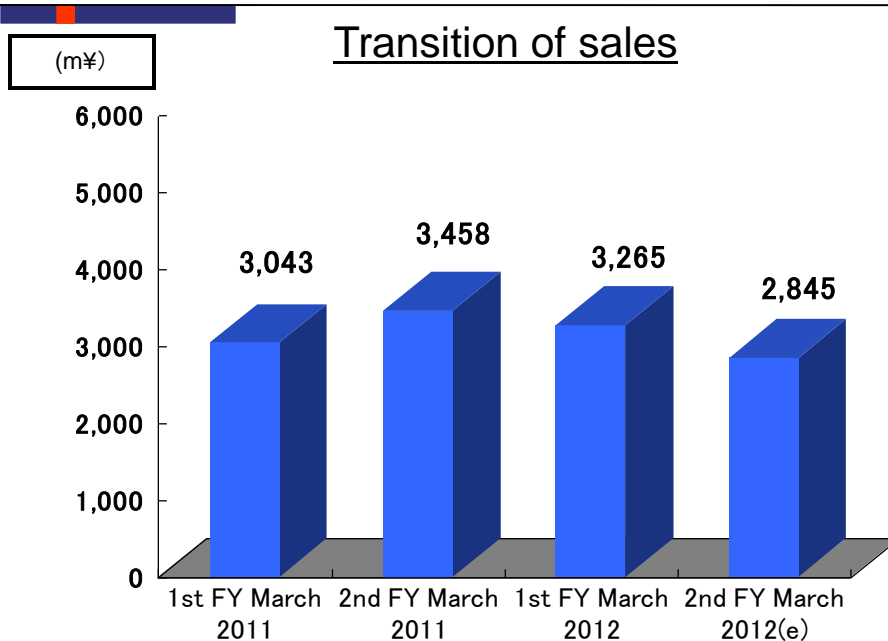
- Asian and the US semiconductor markets were strong due to demand in emerging countries and domestic market was also strong
- Investments in equipment in the LED market have almost been completed
- LCD market weakened and only the organic EL use increased
- PV thin-film equipment use gradually decreased

## 2. Outlook for 2<sup>nd</sup> half of FY3/12

- A rapid decline in motivation to invest in the semiconductor market
- In the LED market, motivation for investment will decrease due to drop in product prices
- In the FPD market, only the demand for mobiles will be strong and investment in EL-TV is expected
- Demand for robot manufacturers will decline
- Decrease in demand for PV thin-film equipment funds stands out

## 《Measures》

- Now strengthening marketing overseas
- Reductions of fixed cost and inventories of Chinese factories



## 1. Status of 1<sup>st</sup> half of FY3/12

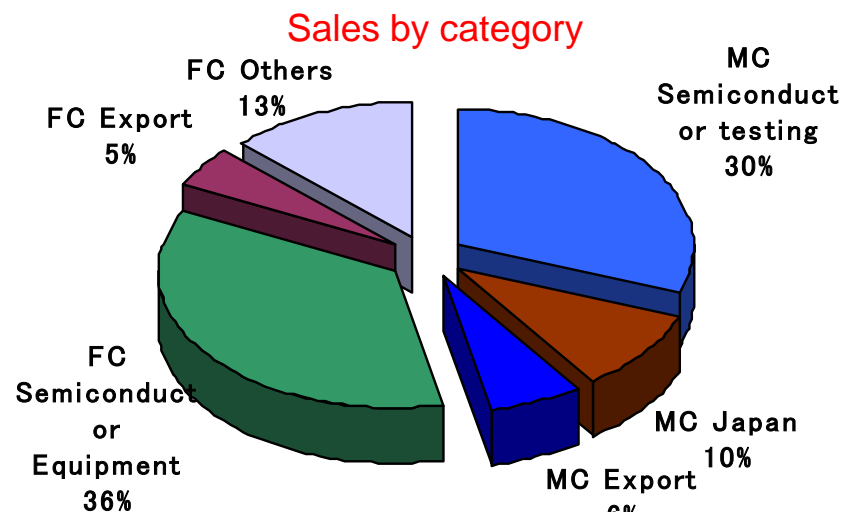
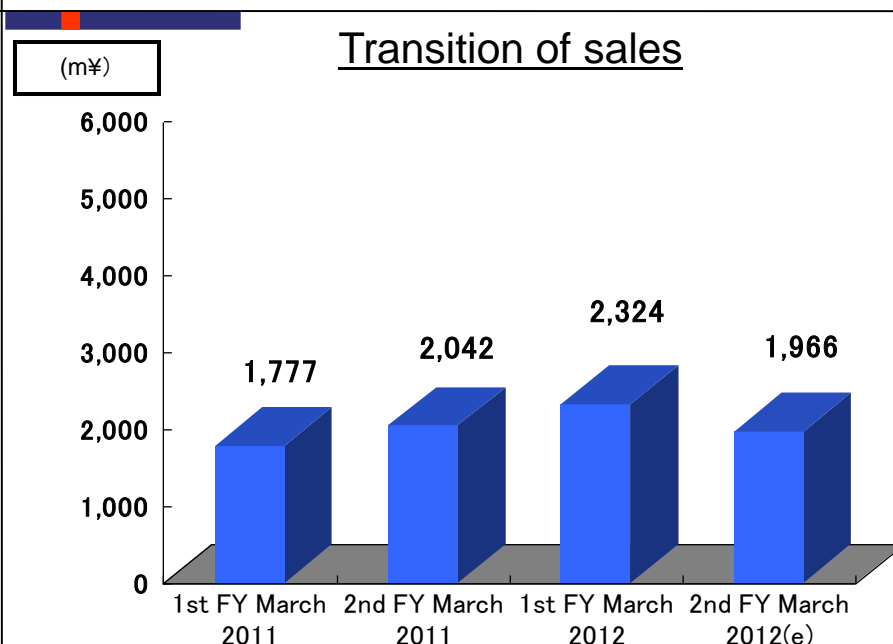
- Taiwan memory manufacturer's production continued to increase and continued to receive orders
- Strong orders from Asian and domestic users and major OEM customers in the US
- Continued to receive orders for MOCVD equipment in the LED market

## 2. Outlook for 2<sup>nd</sup> half of FY3/12

- Declining in Taiwan as its operating rate is below 80%
- Decrease in orders from domestic OEM and major OEM customers in the US
- Saturation in demand for MOCVD equipment but will remain strong
- Expectation for planned reinvestment in Asia in the new year

## 《Measures》

- Attach paramount importance to respond to quick delivery and review the production system
- Dominate the LED market
- Prepare for a sudden change in demand with no drop in operating rate while reducing fixed cost



FC(Fine Ceramics)、MC(Machinable Ceramics)

## 1. Status of 1<sup>st</sup> half (Jan-Jun) of FY 3/12

### Machinable Ceramics (Photoveel)

Memory (N/Flash) and logic were driven by booming demand for smartphones and tablet terminals. As a result, sales largely surpassed the previous fiscal year due mainly to the contributions from Japanese and Korean manufacturers

### Fine Ceramics

Sales exceeded the previous fiscal year due to Japanese, Taiwan and Korean semiconductor manufacturers' investments in miniaturization and in increased production since the middle of last year

## 2. Outlook for 2<sup>nd</sup> half (Jul-Dec) of FY 3/12

### Machinable Ceramics (Photoveel)

- Memory (N/Flash): With the expansion of new use, in terms of quantities, demand will remain strong. Demand for lower price remains strong
- For logics: Enter an inventory adjustment phase for smartphones and tablet terminal semiconductors. Expect a recovery in demand from the end of 4Q

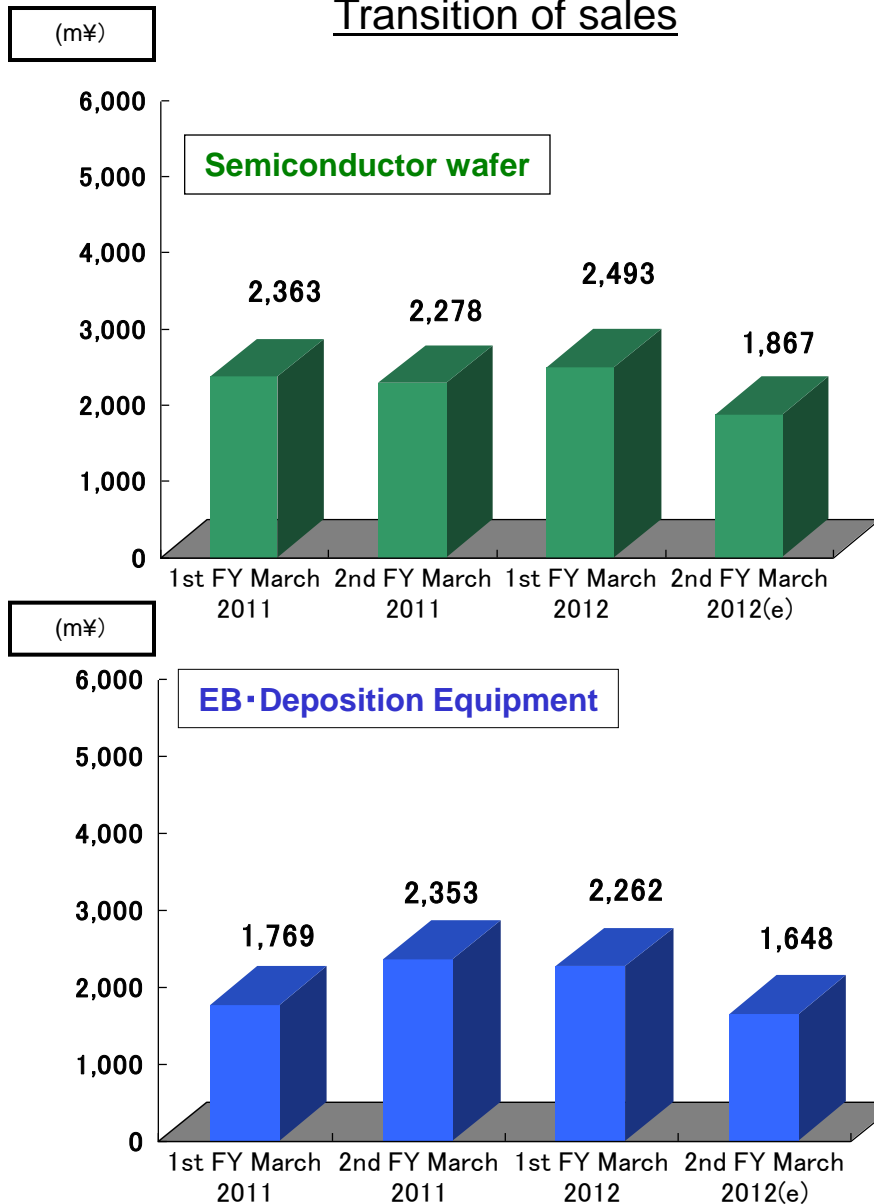
### Fine Ceramics

- Adjustments of DRAM and LSI semiconductor productions led to production cutbacks from the beginning of the fiscal year. Sharp downturn in investments in equipment and facilities by major companies
- Some major companies started investing again from the middle of the quarter but difficult to secure sales as in the 1<sup>st</sup> half

## 3. Continued sales policy

- Expand use of wafer circuit inspection tools
- Restrengthen marketing to develop new customers and new use in the European market in addition to the US and Asian markets
- Strengthening of competitiveness due to new material developmen

## Transition of sales



## Semiconductor Wafer :

### 1. Status of 1<sup>st</sup> half of FY 3/12

- Minor wafer demand was strong
- Established our own brand products. Achieved an output of 80 thousand wafers per month

### 2. Outlook for 2<sup>nd</sup> half of FY3/12

- Rapid worsening in the semiconductor market from September
- Negotiating the contract details due to sale of business of our customers
- Our products are more appreciated by Chinese, Taiwanese and Korean companies

#### 《Measures》

- Increase our products
- Increased production capacity of our products and maintenance

## EB-Deposition Equipment:

### 1. Status of 1<sup>st</sup> half of FY 3/12

LED deposition equipment remained favorable

### 2. Outlook for 2<sup>nd</sup> half of FY 3/12

- LED: Investment completed and now developing a cheap version for the Chinese market
- Testing coating ability for use in general industry

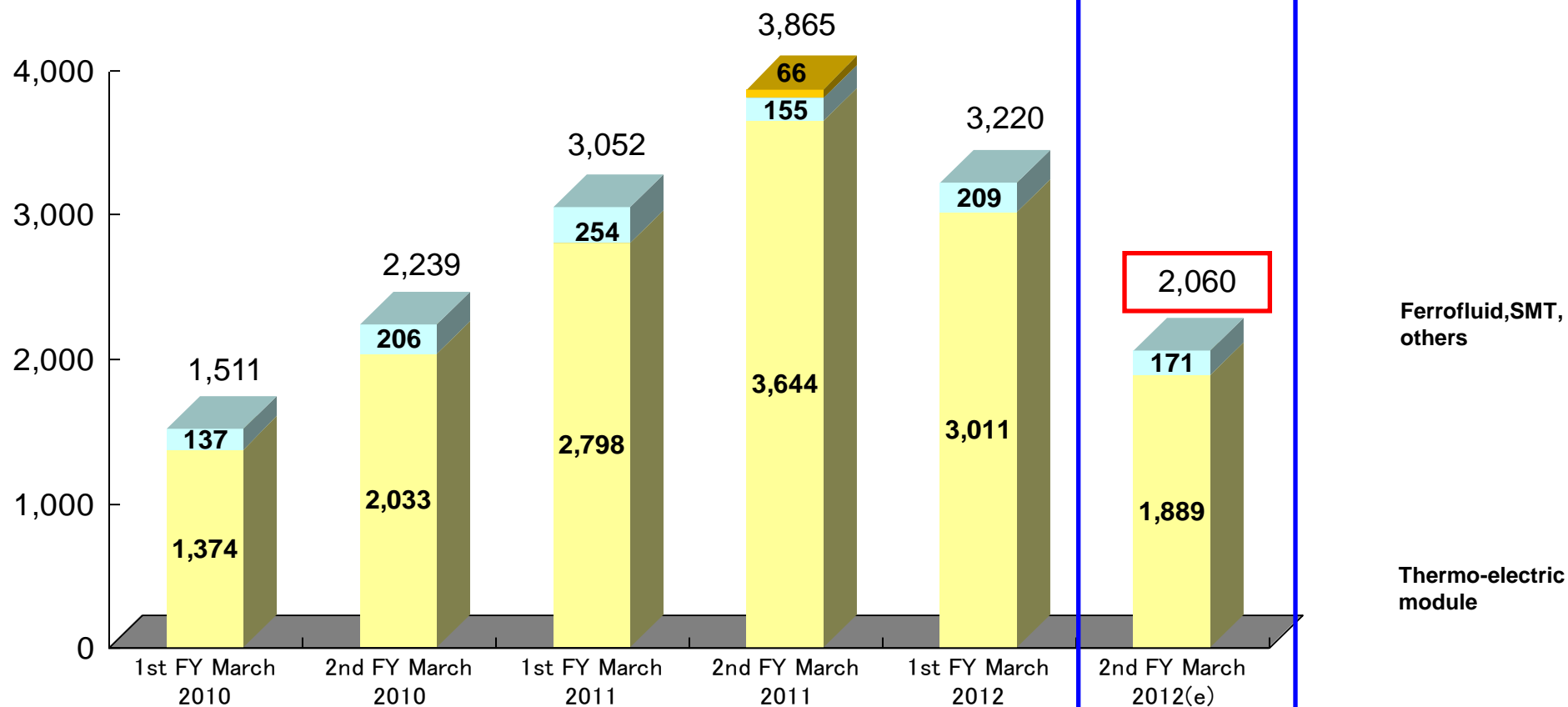
#### 《Measures》

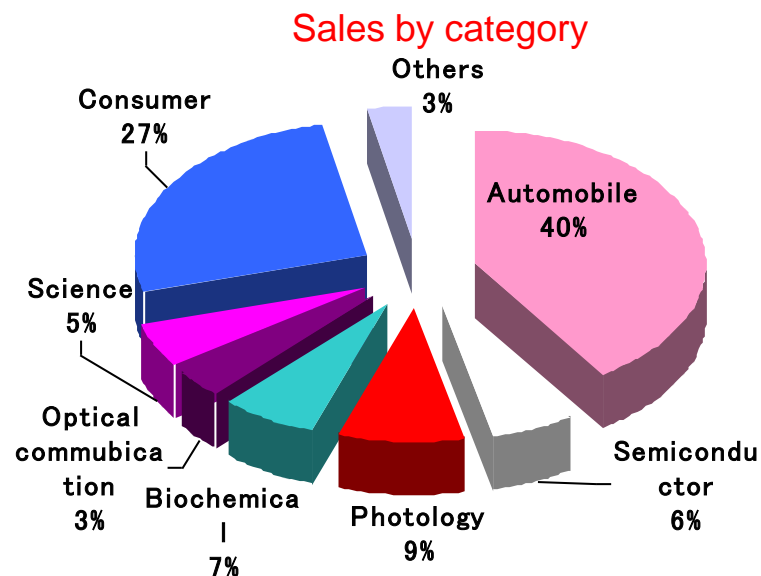
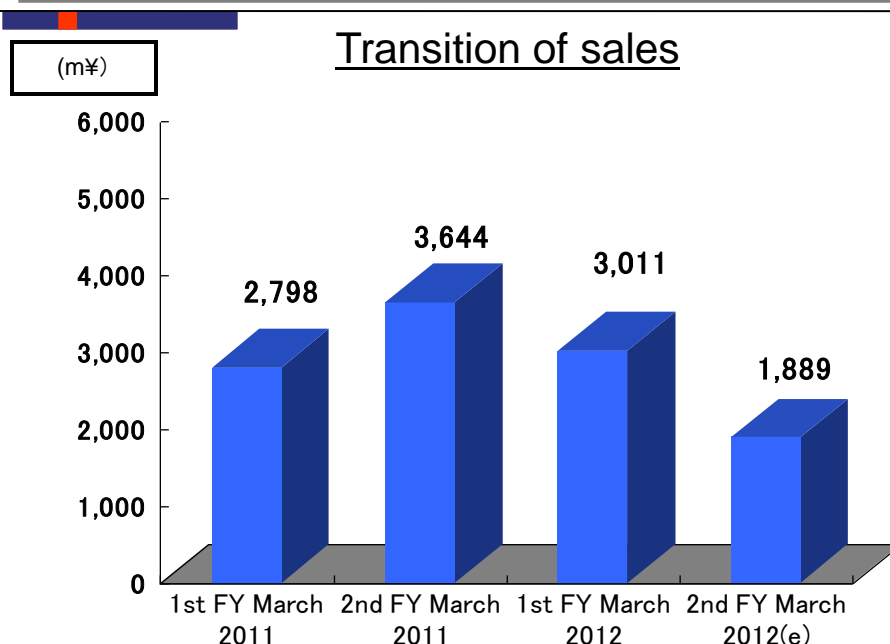
Aim to complete the development of a cheap version for the Chinese market during the current fiscal year



## Electronic Device Segment

Sales  
(¥ in million)





## 1. Status of 1<sup>st</sup> half of FY 3/12

### Automobile Seat Application

Strong as the effect of the earthquake was minimal

### Other Application

- Seasonal consumer products increased and were in good demand
- Other uses were strong and as planned

## 2. Outlook for 2<sup>nd</sup> half of FY 3/12

### Automobile Seat Application

Expect a temporary inventory adjustment due to model change

### Other Application

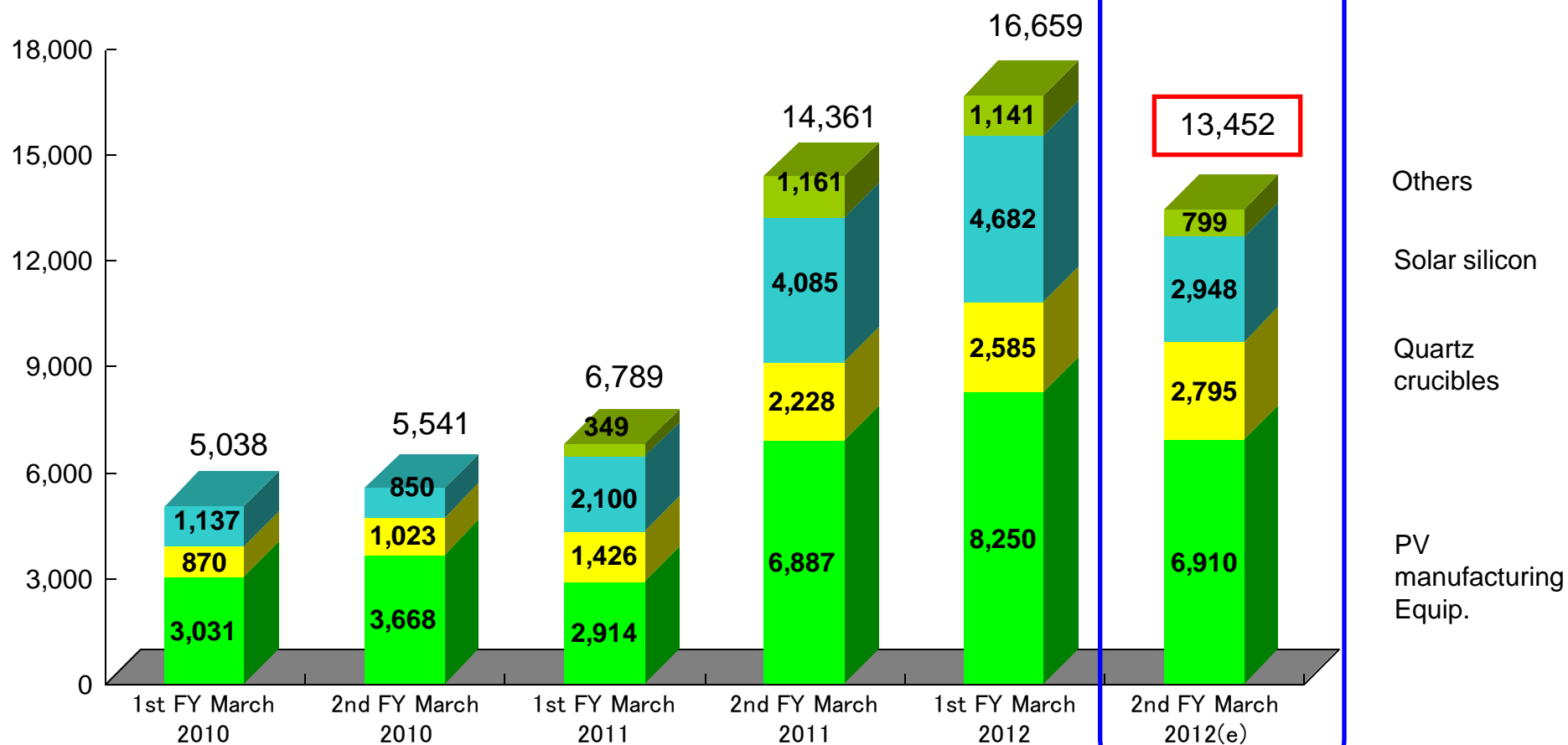
- Medical, biotech equipment, semiconductor and optics applications are expected to be strong
- Consumer use is expected to decrease from the 1<sup>st</sup> half due to change of seasons
- Optical communication market is sluggish but expect a larger market share

## 《Measures》

- Aim to additionally invest in the automobile line
- Enhance optical communication performance and increase high-end products
- Offset increase in material cost with weight-loss products of rare metal tellurium
- Improve the quality of power device substrate and expand sales

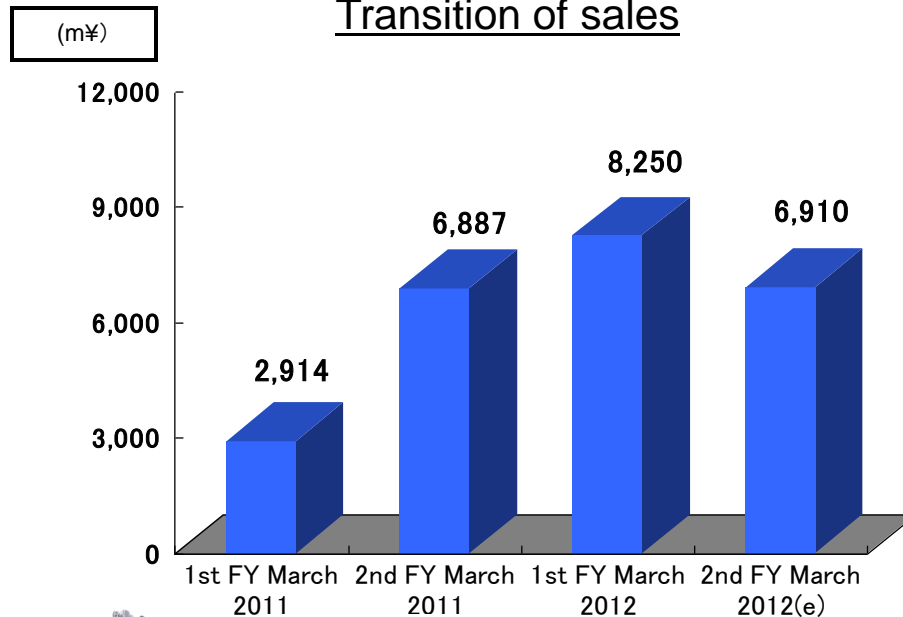
# Photovoltaic-related Segment

Sales  
(¥ in million)



# Status and Outlook for PV Manufacturing Equip.

## Transition of sales



## 1. Status of 1<sup>st</sup> half of FY3/12

- Increased manufacturing capacity and responded to the needs of customers
- Shipments made good progress and orders were also strong

## 2. Outlook for 2<sup>nd</sup> half of FY3/12

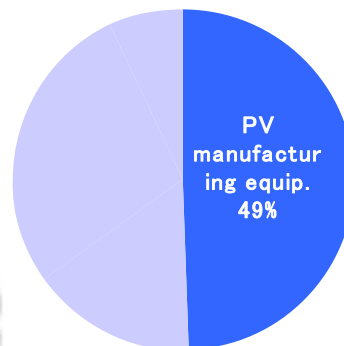
- Requests for the postponement of delivery of manufacturing equipment due to the worsening of the PV market
- There are inquiries but require time to actually receive orders (obtain an advance)
- Expected to be affected by the Chinese government's credit crunch. In particular, small and medium sized manufacturers will be affected

## 《Measures》

- Develop products with lower running cost which is customer request
- Introduction of efficient products including energy-saving, yield rate and lifting speed. Stimulate repurchase demand of customers who own other companies' single crystal furnace and multi crystal furnace

Pct. Of sales  
In the PV segment

FY3/12 1H



Single crystal silicon  
growing furnaces

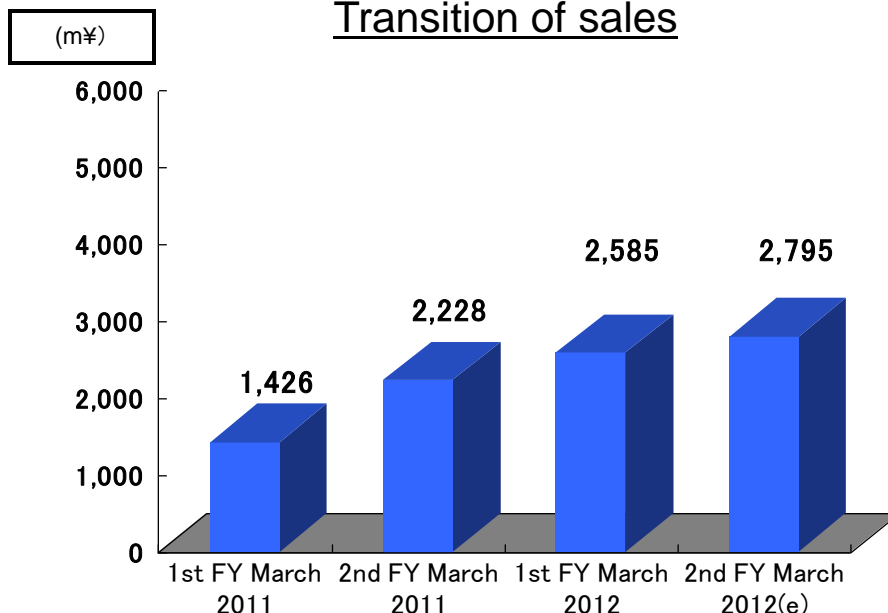


Multi crystal silicon  
casting furnaces



Block Cutting

## Transition of sales



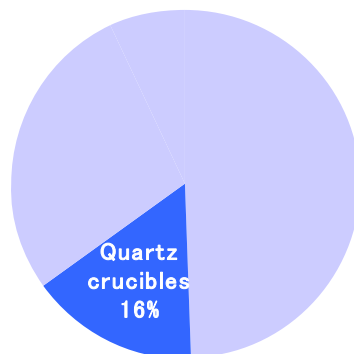
Single-crystal quartz crucible



Multi-crystal vessel

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

**FY3/12 1H**



## 1. Status of 1<sup>st</sup> half of FY3/12

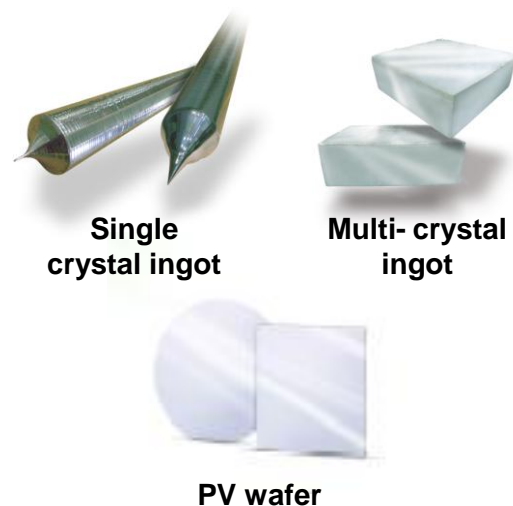
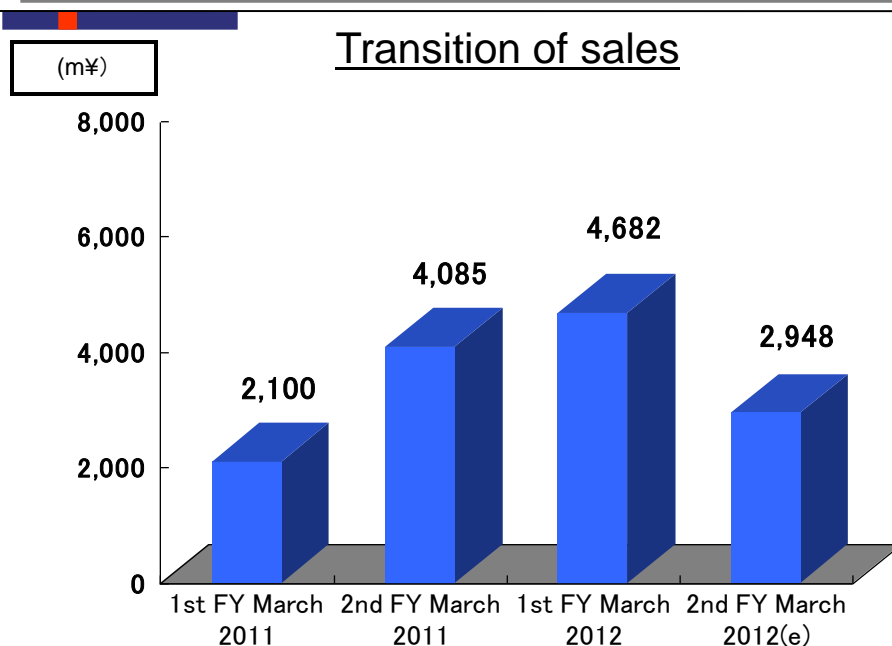
- Expansion of Japanese, Korean and Chinese markets led to steady increase in sales
- Began constructing a new factory in Yinchuan city, China to upgrade crucible production
- New multi crystal vessel factory completed in Hangzhou city, China
- Shortage of sand, the raw material, for crucible

## 2. Outlook for 2<sup>nd</sup> half of FY3/12

- Expect demands for crucibles to be strong and vessels to be slightly weak
- Ship crucibles for a highly-value added semiconductor use
- Completion of new crucible factory in Yinchuan city, China
- Gradual adjustment is expected regarding the order situation

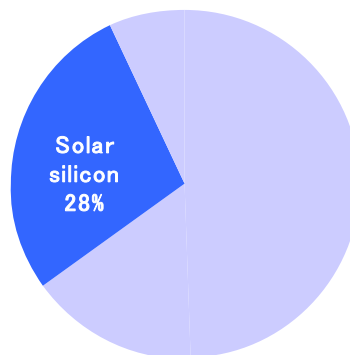
## 《Measures》

- Yinchuan crucible factory: Begin commercial production in October
- Hangzhou vessel factory: Begin commercial production in July



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

**FY3/12 1H**



## 1. Status of 1<sup>st</sup> half of FY3/12

- The market worsened triggered by downturn in the European market demand
- PV wafer price plunged
- The price of poly-silicon, the raw material, dropped
- The market's cell module price started to fall
- Strong sales of ingot

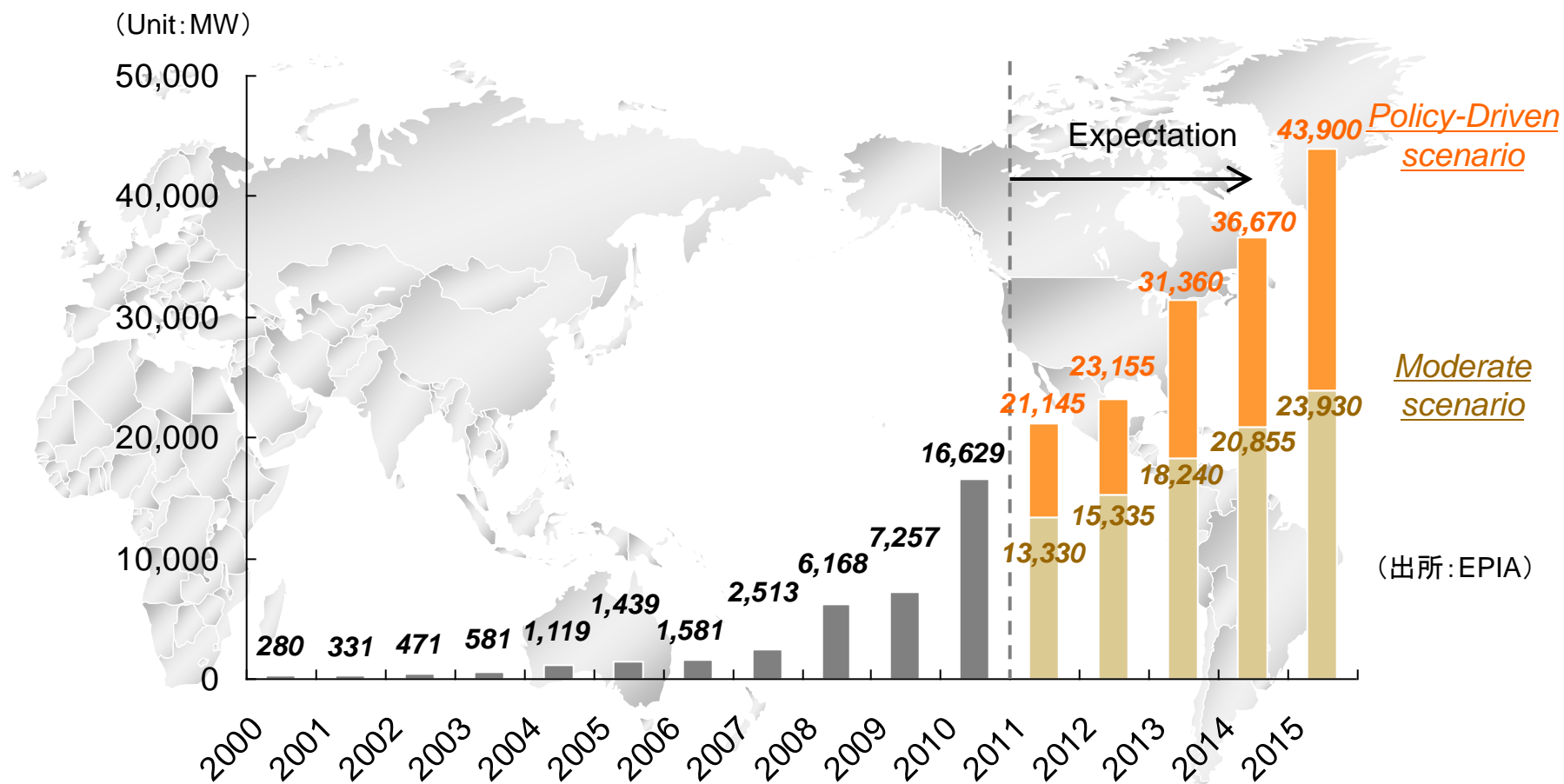
## 2. Outlook for 2<sup>nd</sup> half of FY3/12

- PV wafer price is likely to continue to decline
- Carry out multi crystal production adjustments due to the worsening market
- Concentrate on the production of a high conversion efficient 8 inch single crystal
- PV cell module price continues to fall
- Expand sales other than in China

## 《Measures》

- Improve costs to respond the rapidly worsening market
- Promote the development of Taiwan, India, Europe, Korea and other overseas market

## Photovoltaic Market Result until 2009 and Future Forecast



Moderate Scenario: based on the assumption of a “business as-usual” market

Policy-Driven Scenario: based on the assumption of political growth acceleration



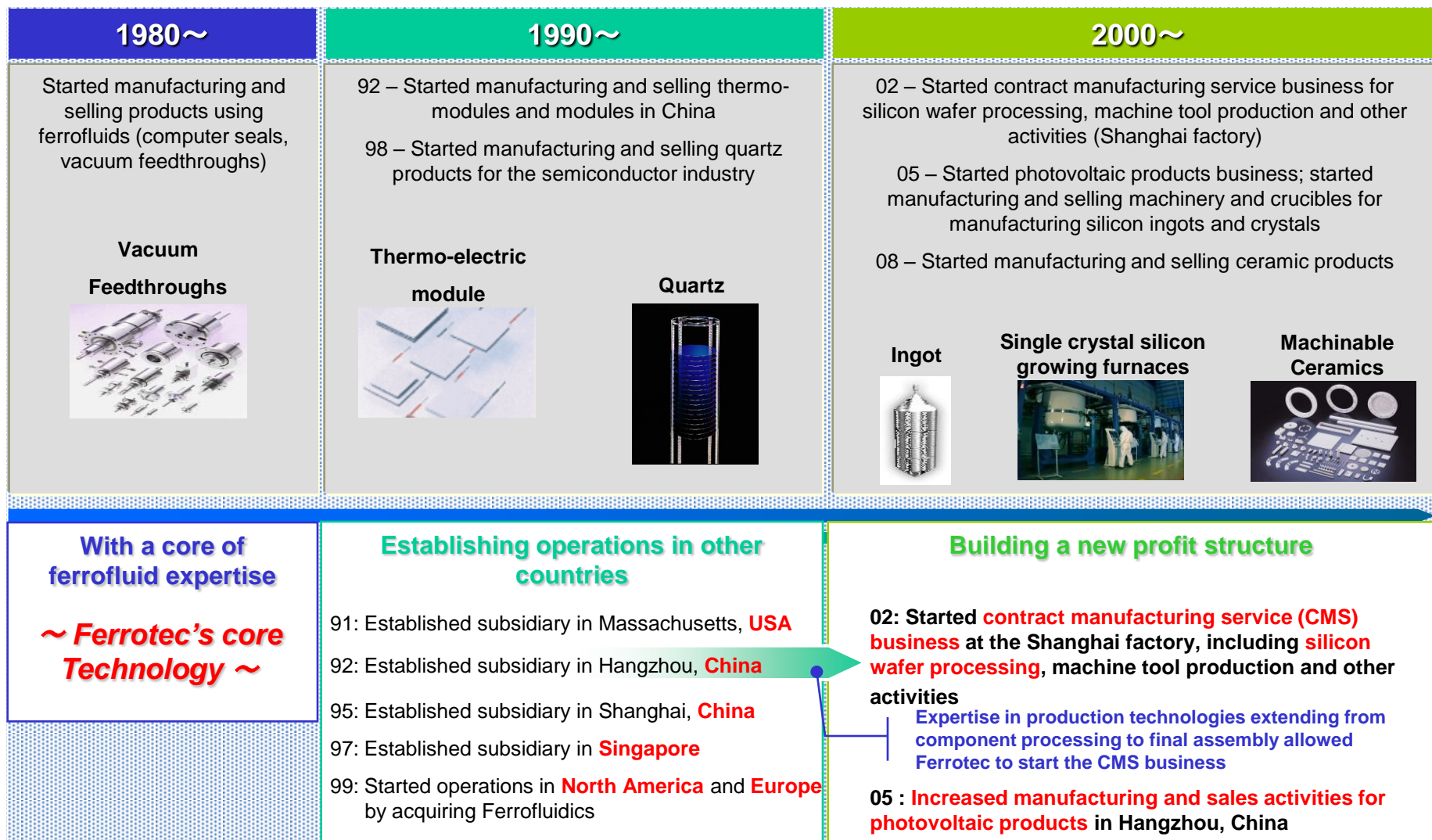
## Reference Materials



# Corporate Data

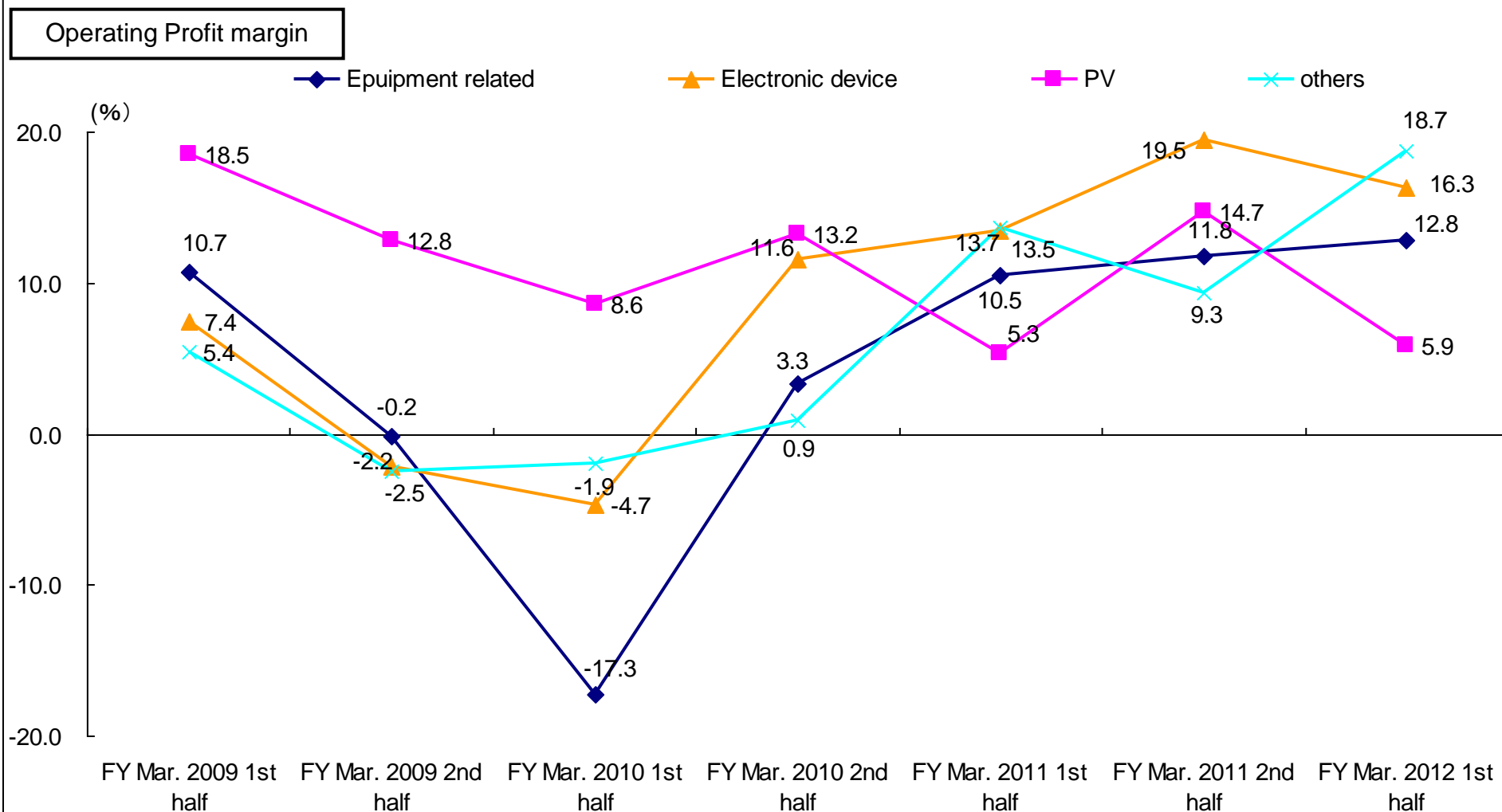


Corporate Name	Ferrotec Corporation
Date of Foundation	September 27, 1980
A d d r e s s	Nihonbashi Plaza Building, 2-3-4, Nihonbashi, Chuo-ku, Tokyo Japan
L i s t e d	JASDAQ (Listed Code: 6890)
P r e s i d e n t	Akira Yamamura
Business Segment	<ul style="list-style-type: none"><li>• Equipment-related business : Vacuum Feedthrough, Quartz, Ceramics, silicon, wafer processing</li><li>• PV-related business : PV manufacturing equip, Quartz crucibles, solar silicon</li><li>• Electronic device business : thermo-electric module, Ferrofluid</li></ul>
C a p i t a l	13,001,346 thousand JPY
Issued Stock	30,507,624
Related Company	【21 Consolidated Subsidiary】 【6 Companies Accounted for by the Equity Method】
E m p l o y e e s	【Consolidated】6,807      【Non-consolidated】211



# Operating Margin by Business Segment

From FY3/11, regarding “CMS”, shifted silicon wafer process to “Equipment-related” and the rest is indicated as “Others.”



# Strategies for M&A and Alliances



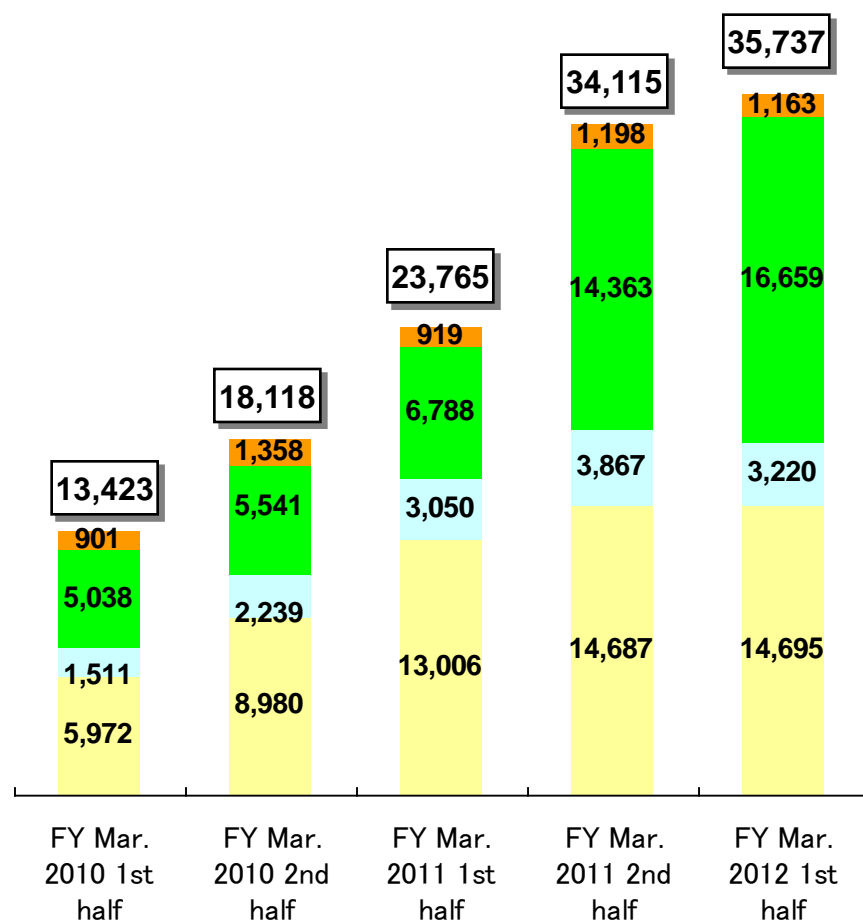
Time	Company acquired/Alliance partner	Description
Oct. 2010	Merged with a subsidiary	Merged with Ferrotec silicon which manufactures and sells single crystal silicon products
Sep. 2010	Established a joint venture manufacturing and sales company	Ferrotec, a local subsidiary and Covalent Materials agreed 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 Sumikin Ceramics and Quartz Corporation 's(SCQ) stock after SCQ divests all business excluding the Ceramic business. New company's name is Ferrotec Ceramics.
May.2008	Business cooperation of Wire-Saw and establishment of joint venture for trading Wire-Saw outside Japan with Tokyo Rope Manufacturing Co., Ltd	Tokyo Rope Group and Ferrotec Group agreed to form an alliance to manufacture and establish a joint venture to distribute wire saws in countries other than Japan.
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
Oct. 2004	Acquired trade right from Advanced Fluid Systems(U.K.)	Purchased rights from this company for the European vacuum feedthrough business
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
July 2002	Established a joint venture Diacelltec Corporation with Mitsubishi Cable Industries, Ltd	Established jointly owned company to manufacture and sell lithium-ion batteries and take over the lithium-ion battery business of Mitsubishi Cable
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

# Sales and Operating income Trend

## Sales Trend

(¥ in millions)

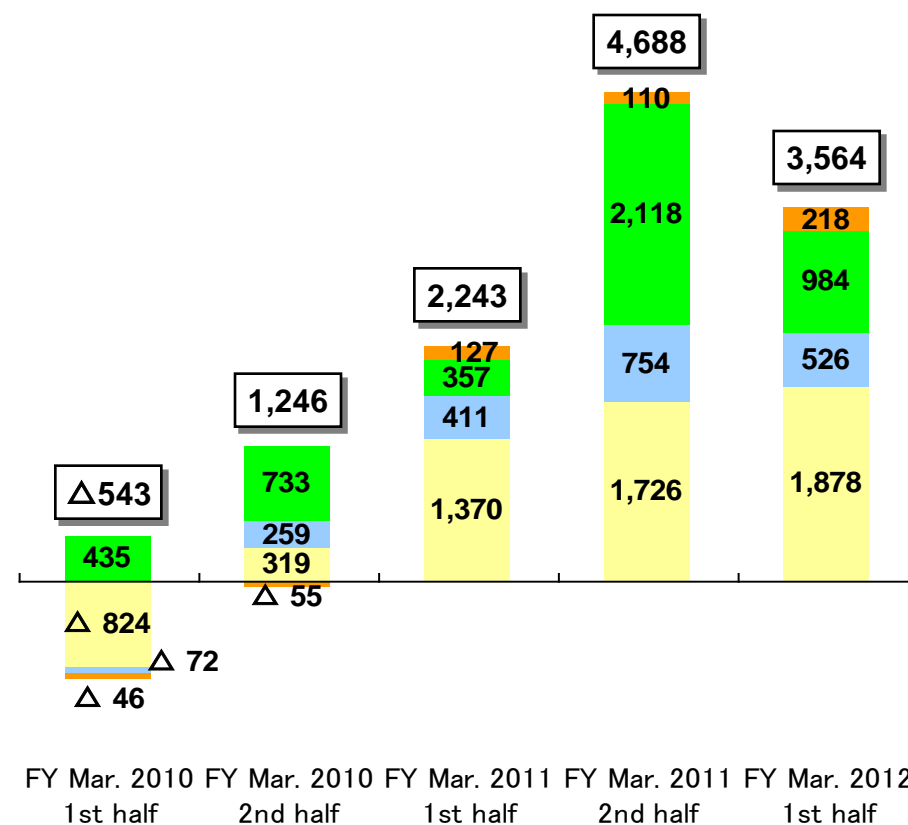
Equipment related Electronic device PV Others



## Operating income Trend

(¥ in millions)

Equipment related Electronic device PV Others



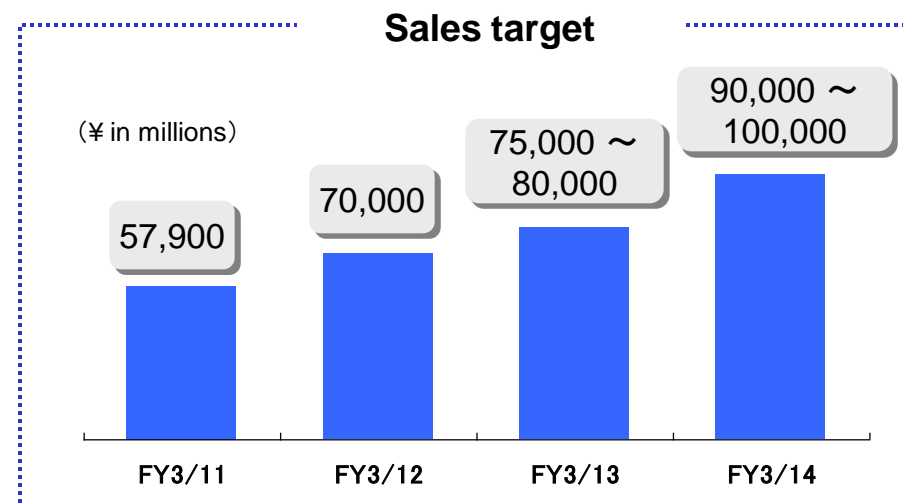
Note: From FY3/11, regarding "CMS," silicon wafer process has been shifted to "Equipment-related" and the rest is indicated as "Others". Same with FY Mar.2010

Form a midterm management plan “Challenge 1000” aiming for the “Second Foundation”

「Challenge 1000」 basic policy  
**Concentrate management resources  
even more on the environment and  
new energy fields**

**Further expand PV-related equipment /  
consumables businesses**

**Steady growth of LED-related business in the  
equipment related business**



*Capable of responding flexibly to capital needs associated with business expansion*

**Signed a long-term loan agreement with a commitment preperiod**

## Major contract details

Contract amount	Date of contract signed	Contract period
A total of ¥5 billion	September 30, 2011	5 years (commitment period:1year)

# Full-Year Forecast



(¥ in millions)	FY3/11	FY3/12 1H	FY3/12 2H forecast		
			Initial	Revised	YoY
Net sales	57,880	35,737	36,380	<b>27,263</b>	<b>△25.1</b>
Operating profit	6,931	3,564	3,802	<b>1,635</b>	<b>△57.0</b>
Ordinary profit	6,290	3,138	3,652	<b>1,062</b>	<b>△70.9</b>
Net profit	4,483	1,968	2,551	<b>732</b>	<b>△71.3</b>
Capital investment	5,036	4,298	3,500	<b>2,702</b>	<b>△22.8</b>
Depreciation	2,655	1,371	1,800	<b>1,629</b>	<b>△9.5</b>

FY3/12 forecast			
Initial	Revised	Vs. FY3/11(%)	Vs. Initial plan(%)
70,000	<b>63,000</b>	<b>8.8</b>	<b>△10.0</b>
7,500	<b>5,200</b>	<b>△25.0</b>	<b>△30.7</b>
7,200	<b>4,200</b>	<b>△33.2</b>	<b>△41.7</b>
5,000	<b>2,700</b>	<b>△39.8</b>	<b>△46.0</b>
7,000	<b>7,000</b>	<b>39.0</b>	<b>-</b>
3,355	<b>3,000</b>	<b>13.0</b>	<b>△10.6</b>

# Business performance ( FY March 2012 1<sup>st</sup> half plan vs. results )



(¥ in millions )	FY3/12 1H Plan		FY3/12 1H Results			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct(%)
Equipment-related	13,874	39.6	14,695	41.1	821	5.9
Vacuum Feedthroughs	4,232	12.1	4,352	12.2	120	2.8
Quartz	3,366	9.6	3,265	9.1	△101	△3.0
Ceramics	2,183	6.2	2,324	6.5	141	6.5
EB-Gun, LED	1,836	5.2	2,262	6.3	426	23.2
semiconductor wafer	2,257	6.4	2,493	7.0	236	10.5
Electronic device	3,146	9.0	3,220	9.0	74	2.4
Thermo-electric module	2,922	8.3	3,011	8.4	89	3.0
Ferrofluid, others	224	0.6	209	0.6	△15	△6.7
Photovoltaic-related	16,954	48.4	16,659	46.6	△295	△1.7
Quartz crucibles	2,439	7.0	2,585	7.2	146	6.0
Solar silicon	3,577	10.2	4,682	13.1	1,105	30.9
PV manufacturing Equip.	9,997	28.6	8,250	23.1	△1,747	△17.5
Others	941	2.7	1,141	3.2	200	21.3
Others	1,026	2.9	1,163	3.3	137	13.4
<b>Total</b>	<b>35,000</b>	<b>100.0</b>	<b>35,737</b>	<b>100.0</b>	<b>737</b>	<b>2.1</b>

Gross income	10,295	29.4	10,049	28.1	△246	△2.4
SG&A expenses	6,294	18.0	6,484	18.1	190	3.0
Operating income	4,000	11.4	3,565	10.0	△435	△10.9
Ordinary income	3,700	10.6	3,138	8.8	△562	△15.2
Net income	2,400	6.9	1,968	5.5	△432	△18.0



Business performance ( FY March 2012 2<sup>nd</sup> half initial planned vs.  
revised figures )



(¥ in millions )	FY3/12 2H Initial plan		FY3/12 2H Revised plan			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct(%)
Equipment-related	13,222	36.3	10,664	39.1	△2,558	△19.3
Vacuum Feedthroughs	3,095	8.5	2,338	8.6	△757	△24.5
Quartz	3,522	9.7	2,845	10.4	△677	△19.2
Ceramics	2,090	5.7	1,966	7.2	△124	△5.9
EB-Gun, LED	2,025	5.6	1,648	6.0	△377	△18.6
semiconductor wafer	2,490	6.8	1,867	6.8	△623	△25.0
Electronic device	3,090	8.5	2,060	7.6	△1,030	△33.3
Thermo-electric module	2,862	7.9	1,889	6.9	△973	△34.0
Ferrofluid, others	228	0.6	171	0.6	△57	△25.0
Photovoltaic-related	18,826	51.7	13,452	49.3	△5,374	△28.5
Quartz crucibles	3,228	8.9	2,795	10.3	△433	△13.4
Solar silicon	4,550	12.5	2,948	10.8	△1,602	△35.2
PV manufacturing Equip.	7,938	21.8	6,910	25.3	△1,028	△13.0
Others	3,110	8.5	799	2.9	△2,311	△74.3
Others	1,242	3.4	1,087	4.0	△155	△12.5
<b>Total</b>	<b>36,380</b>	<b>100.0</b>	<b>27,263</b>	<b>100.0</b>	<b>△9,117</b>	<b>△25.1</b>

Gross income	10,350	28.4	7,336	26.9	△3,014	△29.1
SG&A expenses	6,548	18.0	5,701	20.9	△847	△12.9
Operating income	3,802	10.5	1,635	6.0	△2,167	△57.0
Ordinary income	3,652	10.0	1,062	3.9	△2,590	△70.9
Net income	2,551	7.0	732	2.7	△1,819	△71.3

# Business performance (FY March 2012 1<sup>st</sup> half vs. 2<sup>nd</sup> half)



(¥ in millions )	FY3/12 1H Results		FY3/12 2H Plan			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct(%)
Equipment-related	14,695	41.1	10,664	39.1	△4,031	△27.4
Vacuum Feedthroughs	4,352	12.2	2,338	8.6	△2,014	△46.3
Quartz	3,265	9.1	2,845	10.4	△420	△12.9
Ceramics	2,324	6.5	1,966	7.2	△358	△15.4
EB-Gun, LED	2,262	6.3	1,648	6.0	△614	△27.1
semiconductor wafer	2,493	7.0	1,867	6.8	△626	△25.1
Electronic device	3,220	9.0	2,060	7.6	△1,160	△36.0
Thermo-electric module	3,011	8.4	1,889	6.9	△1,122	△37.3
Ferrofluid, others	209	0.6	171	0.6	△38	△18.2
Photovoltaic-related	16,659	46.6	13,452	49.3	△3,207	△19.3
Quartz crucibles	2,585	7.2	2,795	10.3	210	8.1
Solar silicon	4,682	13.1	2,948	10.8	△1,734	△37.0
PV manufacturing Equip.	8,250	23.1	6,910	25.3	△1,340	△16.2
Others	1,141	3.2	799	2.9	△342	△30.0
Others	1,163	3.3	1,087	4.0	△76	△6.5
<b>Total</b>	<b>35,737</b>	<b>100.0</b>	<b>27,263</b>	<b>100.0</b>	<b>△8,474</b>	<b>△23.7</b>

Gross income	10,049	28.1	7,336	26.9	△2,713	△27.0
SG&A expenses	6,484	18.1	5,701	20.9	△783	△12.1
Operating income	3,565	10.0	1,635	6.0	△1,930	△54.1
Ordinary income	3,138	8.8	1,062	3.9	△2,076	△66.2
Net income	1,968	5.5	732	2.7	△1,236	△62.8

# Business performance (FY March 2011 vs. FY March 2012)

Note: Silicon products have been shifted to semiconductor wafer from FY3/12.



(¥ in millions )	FY3/11 Results		FY3/12 Plan			
	Amount	Pct. Of Sales(%)	Amount	Pct. Of Sales(%)	Amount	Pct(%)
Equipment-related	27,693	47.8	25,360	40.3	△2,333	△8.4
Vacuum Feedthroughs	7,764	13.4	6,690	10.6	△1,074	△13.8
Quartz	6,501	11.2	6,110	9.7	△391	△6.0
Ceramics	3,819	6.6	4,290	6.8	471	12.3
Silicon products	848	1.5	-	-	-	-
EB-Gun, LED	4,122	7.1	3,910	6.2	△212	△5.1
semiconductor wafer	4,641	8.0	4,360	6.9	△281	△6.1
Electronic device	6,917	12.0	5,280	8.4	△1,637	△23.7
Thermo-electric module	6,442	11.1	4,900	7.8	△1,542	△23.9
Ferrofluid, others	475	0.8	380	0.6	△95	△20.0
Photovoltaic-related	21,151	36.5	30,110	47.8	8,959	42.4
Quartz crucibles	3,654	6.3	5,380	8.5	1,726	47.2
Solar silicon	6,185	10.7	7,630	12.1	1,445	23.4
PV manufacturing Epuip.	9,801	16.9	15,160	24.1	5,359	54.7
Others	1,510	2.6	1,940	3.1	430	28.5
Others	2,117	3.7	2,250	3.6	133	6.3
<b>Total</b>	<b>57,880</b>	<b>100.0</b>	<b>63,000</b>	<b>100.0</b>	<b>5,120</b>	<b>8.8</b>

Gross income	18,520	32.0	17,385	27.6	△1,135	△6.1
SG&A expenses	11,588	20.0	12,185	19.3	597	5.2
Operating income	6,931	12.0	5,200	8.3	△1,731	△25.0
Ordinary income	6,290	10.9	4,200	6.7	△2,090	△33.2
Net income	4,483	7.7	2,700	4.3	△1,783	△39.8
Capital Investment	5,036	8.7	7,000	11.1	1,964	39.0
Depreciation	2,655	4.6	3,000	4.8	345	13.0