



# Results for the 1st half of the fiscal year ending March 31, 2021

1. This fiscal year results cover period from April to September 2020 of Ferrotec, and period from January to June 2020 of consolidated subsidiaries and companies accounted for using the equity method.
2. This presentation was prepared for the purpose of providing information regarding the company's results of operations for the first half of the fiscal year ending March 31, 2021 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 November 25, 2020. 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.

# Consolidated Financial Summary

(Million yen)	Q2 FY3/20		Q2 FY3/21		YoY	
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Amount	Pct. change (%)
Net sales	41,849	100.0	41,595	100.0	- 254	- 0.6%
Cost of sales	27,941	66.8	27,497	66.1	- 444	- 1.6%
Gross income	13,908	33.2	14,099	33.9	191	1.4%
SG&A expenses	10,342	24.7	10,185	24.5	- 157	- 1.5%
Operating income	3,566	8.5	3,913	9.4	347	9.7%
Non-operating income	786	1.9	1,053	2.5	267	34.0%
Non-operating expenses	1,880	4.5	2,142	5.1	262	13.9%
Ordinary income	2,472	5.9	2,825	6.8	353	14.3%
Extraordinary income	67	0.2	-	-	- 67	-100%
Extraordinary loss	12	0.0	1,079	2.6	1,067	8,891.67%
Net income attributable to owners of parent	1,540	3.7	71	0.2	- 1,469	- 95.4%
Depreciation	19,123	-	10,136	-	- 8,987	- 47.0%
EBITDA	3,435	-	4,605	-	1,170	34.1%

Note: Exchange rate FY3/20⇒FY3/21: US\$ \109.97 → ¥108.24; RMB \16.23 → \15.82 (Avg. during period)

# Sales and Operating Income by Segment

Net sales (¥ in millions)	Q2 FY3/20		Q2 FY3/21		YoY	
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	27,182	65.0	28,784	69.2	1,602	5.9
Electronic device	6,991	16.7	7,116	17.1	125	1.8
Others	7,676	18.3	5,693	13.7	- 1,982	- 25.8
Total	41,849	100.0	41,595	100.0	- 254	- 0.6

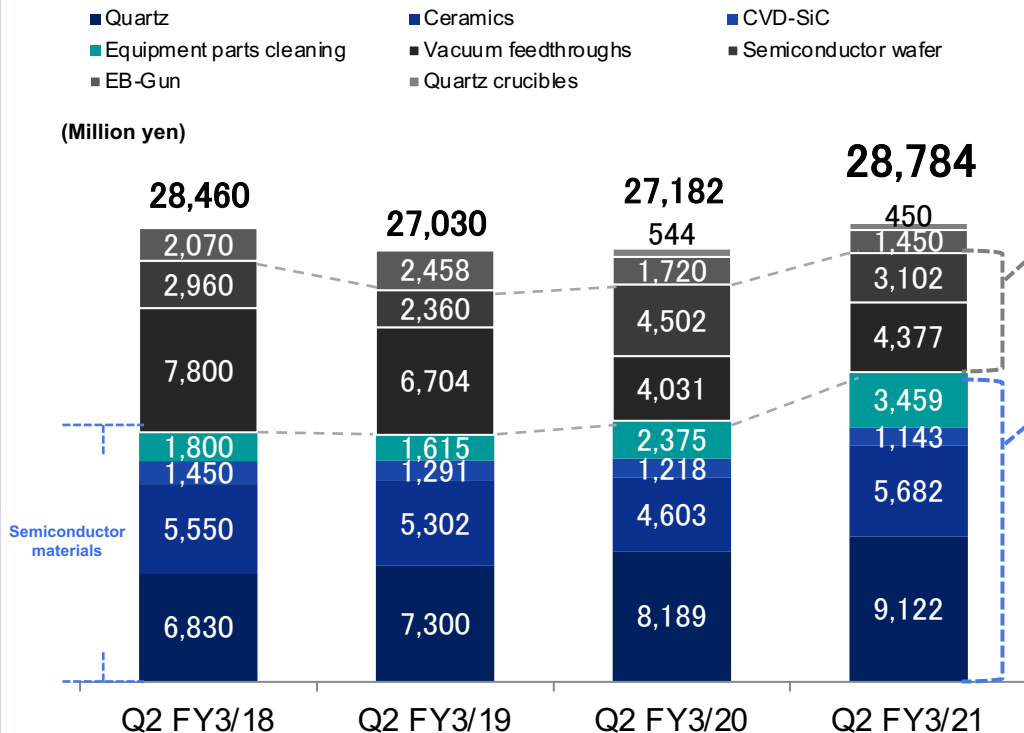
Operating income (¥ in millions)	Q2 FY3/20		Q2 FY3/21		YoY	
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	2,681	9.9	2,177	7.6	- 504	- 18.8
Electronic device	1,320	18.9	1,868	26.2	548	41.5
Others	191	2.5	345	6.1	154	80.6
Corporate & elimination	- 626	-	- 477	-	149	-
Total	3,566	8.5	3,913	9.4	347	9.7

\*Due to the segment changes, the Photovoltaic-related business has been included in the Other segment from FY3/19.

# Sales by Product

(Million yen)	Q2 FY3/20	Q2 FY3/21	YoY Pct. change
Semiconductor and other equipment-related	27,182	28,784	5.9
Vacuum feedthroughs	4,031	4,377	8.6
Quartz	8,189	9,122	11.4
Ceramics	4,603	5,682	23.4
CVD-SiC	1,218	1,143	- 6.2
EB-Gun, LED	1,720	1,450	- 15.7
Semiconductor wafer	4,502	3,102	- 31.1
Equipment parts cleaning	2,375	3,459	45.6
Quartz crucibles (segment changed from FY3/20)	544	450	- 17.3
Electronic device	6,991	7,116	1.8
Thermo-electric module	6,651	6,814	2.5
Ferrofluid, others	340	302	- 11.2
Others	7,676	5,693	- 25.8
<b>Total</b>	<b>41,849</b>	<b>41,595</b>	<b>- 0.6</b>

## Transition of sales



### Overview of this segment

- Semiconductor materials and cleaning business showed steady growth.
- Customer approvals for the new wafer factory in Hangzhou progressed, but the start-up expenses affected the revenue of this segment.

### Vacuum feedthroughs and semiconductor wafer

- Sales of vacuum feedthroughs recovered thanks to the regaining orders for semiconductor / organic EL manufacturing equipment.
- Sales of semiconductor wafer declined due to no full-fledged recovery in demand for 8-inch wafers, and increased start-up expenses for new factory in Hangzhou, despite the progress in customer approval.

### Semiconductor materials and cleaning business

[Semiconductor materials (quartz, ceramics, and CVD-SiC)]

- While the utilization rate of semiconductor manufacturers improved, sales of quartz are on a steady upward trend thanks to the contribution of the Chang Shan and Dongtai factories, and demand for silicon parts in the film forming and etching processes is also strong.
- Sales of ceramics increased as sales of film forming and etching equipment components expanded steadily, and sales of materials for semiconductor inspection jig also increased.
- Sales of CVD-SiC increased in China, despite the decline in Europe and the U.S.

[Cleaning business]

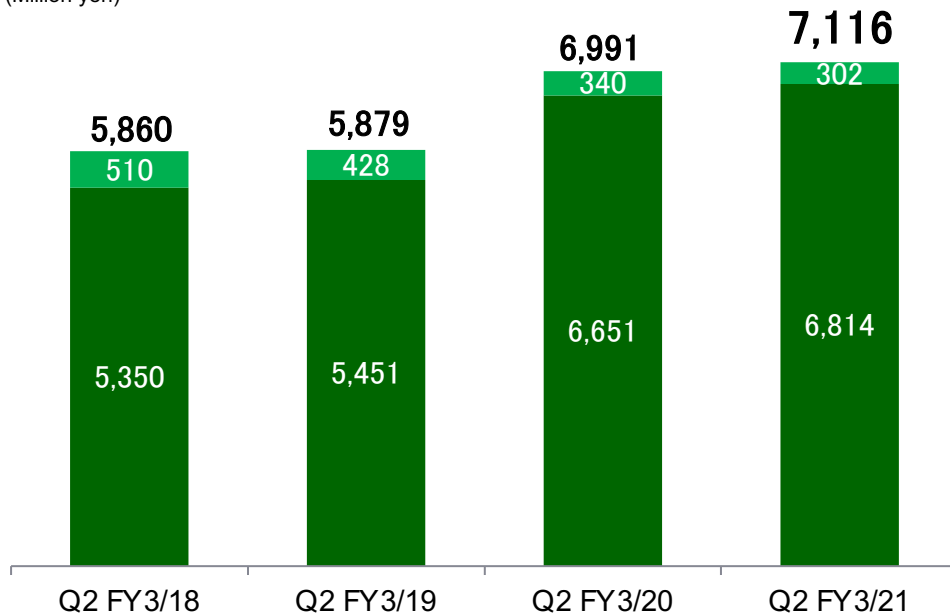
- The demand from Chinese semiconductor manufacturers and FPD makers increased, resulting in a significant 46% increase in sales.

\*Quartz crucibles are added in FY3/19 and FY3/20 due to reallocation of segments.

## Transition of sales

■ Thermo-electric module    ■ Ferrofluid, others

(Million yen)



## Overview of this segment

### [Thermo-electric module]

- Investment in communication equipment related to 5G infrastructure grew principally in China, and demand for wearable devices and IoT-related products increased.
- Segment sales and profits increased despite a decrease in sales of seat temperature controllers for automobiles.
- Weakness in demand for power semiconductor substrates for industrial equipment and other applications in the first half.

# Consolidated Balance Sheet –Assets-

(Million yen)	End-FY3/20	End-Q2 FY3/21	Difference
Current assets	71,452	97,791	26,339
Cash & deposits	23,709	34,881	11,172
Note & accounts receivable	20,435	23,136	2,701
Inventory	17,269	19,128	1,859
Fixed assets	118,558	119,899	1,341
Tangible fixed assets	110,817	112,214	1,397
Buildings and structures	27,346	26,252	- 1,094
Equipment and machinery	30,113	27,430	- 2,683
Tools, furniture, and fixture	7,022	6,216	- 806
Land	1,892	1,891	- 1
Leased assets (net)	5,551	5,303	- 248
Construction in progress	38,894	45,123	6,229
Intangible fixed assets	500	431	- 69
Goodwill	26	-	-
Investments & other assets	7,242	7,254	12
Total assets	190,010	217,690	27,680

**[Main reason for increase in current assets]**  
 Increase due to sale of shares of semiconductor wafer subsidiary owned by FTTHD\*1.  
 •Cash and cash equivalents: +11,355 million yen  
 •Accounts receivable\*2: +11,338 million yen  
 \*1: Ferrotec Holdings Corporation  
 \*2: Posted as Investments & other assets

**[Main reason for increase in tangible fixed assets]**  
 • The increase in construction in progress is mainly due to capital investment in the wafer and recyclable wafers businesses.  
 • The decrease in buildings and structures and machinery, equipment and vehicles is due to depreciation and amortization.

# Consolidated Balance Sheet -Liabilities and Net Assets-

(Million yen)	End-FY3/20	End-Q2 FY3/21	Difference
Current liabilities	61,443	62,704	1,261
Notes and accounts payable	18,252	17,091	- 1,161
Short-term debt	12,510	11,597	- 913
Current portion of long-term borrowings + bonds	13,507	15,911	2,404
Fixed liabilities	78,419	83,156	4,737
Bonds	19,282	17,998	- 1,284
Convertible bond-type bonds with share acquisition rights	3,735	3,735	0
Long-term debt	29,440	33,275	3,835
Total liabilities	139,862	145,861	5,999
Net assets	50,148	71,830	21,682
Shareholder's equity	46,943	51,227	4,284
Total accumulated other comprehensive income	1,453	1,142	- 311
Non-controlling interests	1,679	19,365	17,686
Total liabilities & shareholder's equity	190,010	217,690	27,680

## [Balance of interest-bearing debt, etc.]

\*The parenthesis represents the change from the end of FY3/20

Increased mainly due to increase in long-term debt of semiconductor wafer subsidiary

Short-term debt + current portion of long-term debt and bonds:  
27,508 million yen (+1,491)

Long-term debt + bonds and convertible bond:  
55,008 million yen (+2,551)

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Total interest-bearing debt: 82,515 million yen (+4,041)

[Net interest-bearing debt: 47,635 million yen (-7,130)]

\*The subsidy for large-diameter wafers amounting to 9,157 million yen (+2,429) was posted as long-term deferred revenue (other fixed liabilities).

## [Major factors in change in net assets]

Increased due to sale of shares of semiconductor wafer subsidiary owned by FTHD

Capital surplus : +4,626 million yen

Non-controlling interests: +16,926 million yen

Foreign currency translation adjustments: +1,156 million yen

Note: Exchange rate FY3/20⇒FY3/21: US\$ \109.56 → ¥107.74; RMB \15.67 → \15.23 (Avg. during period)



# Consolidated Cash Flow

(Million yen)	Q2 FY3/20	Q2 FY3/21
<b>Cash flow from operating activities</b>	<b>933</b>	<b>5,530</b>
Income before income tax	2,527	1,745
Depreciation	3,435	4,605
Impairment loss	-	1,079
Exchange gain & loss (-: gain)	405	715
Changes in notes & accounts receivable (-: increase)	936	- 3,853
Changes in inventories (-: increase)	- 2,131	- 2,242
Changes in accounts payable (-: decrease)	- 2,768	66
Others	- 1,471	3,414
<b>Cash flow from investing activities</b>	<b>- 19,229</b>	<b>- 9,967</b>
Payments for purchase of tangible fixed assets	- 19,057	- 10,108
Proceeds from sales of tangible fixed assets	18	171
Payments for purchase of intangible fixed assets	- 66	- 28
Others	- 124	- 1
<b>Cash flow from financing activities</b>	<b>14,909</b>	<b>15,875</b>
Changes in short-term debt	2,757	1,682
Proceeds from long-term borrowings	6,637	9,488
Payments of long-term borrowings	- 4,197	- 5,615
Proceeds from the issuance of bonds	11,154	493
Proceeds from sales of investments in subsidiaries resulting in change in scope of consolidation	-	11,354
Others	- 1,442	- 1,529
<b>Changes in cash &amp; cash equivalents</b>	<b>- 3,591</b>	<b>11,172</b>
Cash and cash equivalents, beginning of year	<b>31,556</b>	<b>23,709</b>
Cash and cash equivalents, end of year	<b>28,087</b>	<b>34,881</b>

## [Operating cash flow]

**Income before income tax + Depreciation:**  
6,351 million yen

**Changes in notes & accounts receivable,  
inventories and accounts payable:**  
-6,029 million yen

## [Investing cash flow]

**Purchase of tangible and intangible fixed  
assets:**  
-10,136 million yen

## [Financial cash flow]

**Proceeds from long-term borrowings and bonds**

- Proceeds from long-term borrowings: 9,488 million yen
- Proceeds from issuance of bonds: 493 million yen

**Total: 9,981 million yen**

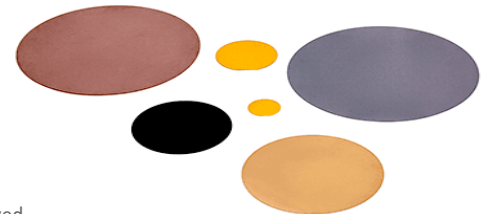
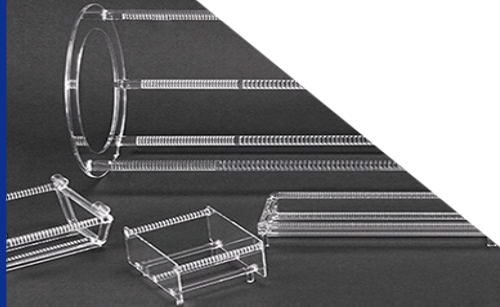
**Sales of shares of subsidiary: 11,354 million yen**



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## Business Forecasts for FY3/21



# FY3/21 Full-year Business Forecasts

- The full-year forecasts remain unchanged from the figures announced on August 14, with net sales of 85 billion yen, operating income of 6.5 billion yen, and net income of 1.5 billion yen.

(Million yen)	FY3/20	FY3/21 (Est.)	YoY (%)
Net sales	<b>81,614</b>	<b>85,000</b>	<b>4.1</b>
Operating income	<b>6,012</b>	<b>6,500</b>	<b>8.1</b>
Ordinary income	<b>4,263</b>	<b>5,500</b>	<b>29.0</b>
Net income attributable to owners of parent	<b>1,784</b>	<b>1,500</b>	<b>- 16.0</b>
Depreciation	<b>7,600</b>	<b>10,000</b>	<b>31.6</b>
EBITDA	<b>13,613</b>	<b>16,500</b>	<b>21.2</b>

Note: Exchange rate FY3/20⇒FY3/21: US\$ \109.24 → ¥108.24; RMB ¥15.82 → ¥15.32 (Avg. during period)

\*EBITDA = operating income + depreciation and amortization

# FY3/21 Full-year Business Forecasts by Business (YoY)

(Million yen)	FY3/20	FY3/21 (Est.)	YoY Pct. change
Semiconductor and other equipment-related	52,881	58,754	11.1
Vacuum feedthroughs	8,136	8,072	- 0.8
Quartz	16,373	19,402	18.5
Ceramics	9,048	10,670	17.9
CVD-SiC	2,036	2,263	11.1
EB-Gun, LED	3,973	3,567	- 10.2
Semiconductor wafer	6,754	6,445	- 4.6
Equipment parts cleaning	5,606	7,398	32.0
Quartz crucibles (segment changed from FY3/20)	955	937	- 1.9
Electronic device	13,489	14,565	8.0
Thermo-electric module	12,701	13,795	8.6
Ferrofluid, others	789	770	- 2.4
Others	15,243	11,681	- 23.4
<b>Total</b>	<b>81,614</b>	<b>85,000</b>	<b>4.1</b>

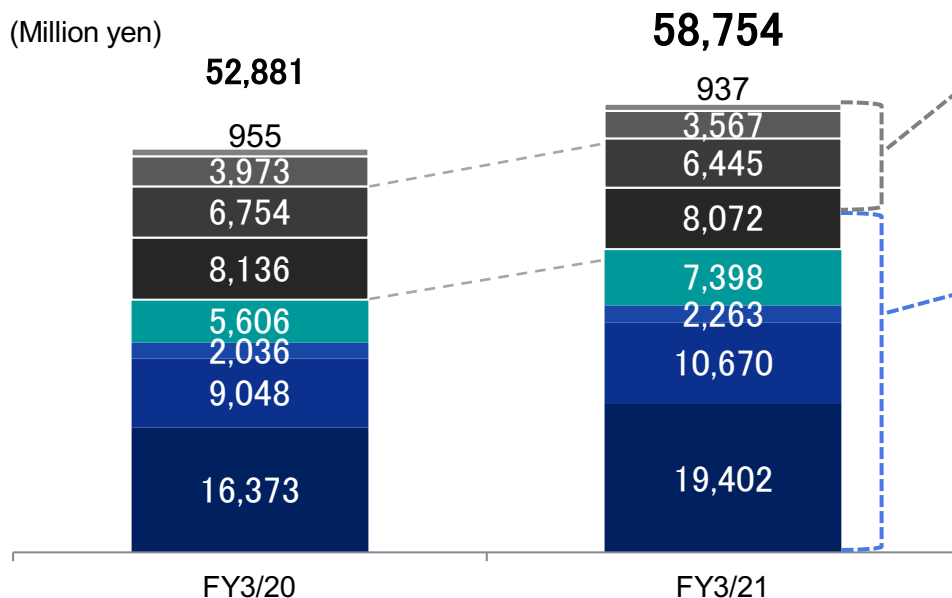
Note: Exchange rate FY3/20⇒FY3/21: US\$ \109.24 → ¥108.24; RMB ¥15.82 → ¥15.32 (Avg. during period)

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## Transition of sales

- Quartz
- Ceramics
- CVD-SiC
- Equipment parts cleaning
- Vacuum feedthroughs
- Semiconductor wafer
- EB-Gun
- Quartz crucibles

(Million yen)



## Overview of this segment

- Semiconductor materials and cleaning businesses to remain strong.
- Start-up expenses for new wafer factory in Hangzhou will continue to affect its segment profit.

## Vacuum feedthroughs and semiconductor wafer

- Vacuum feedthroughs: sales are expected to decline due to a pause in sales growth of organic EL production equipment.
- 8-inch wafers: sales are expected to be flat in the first half, aiming to increase production of 12-inch wafers. The start-up expenses for new factory in Hangzhou are expected to continue to affect the performance.

## Cleaning business and semiconductor materials

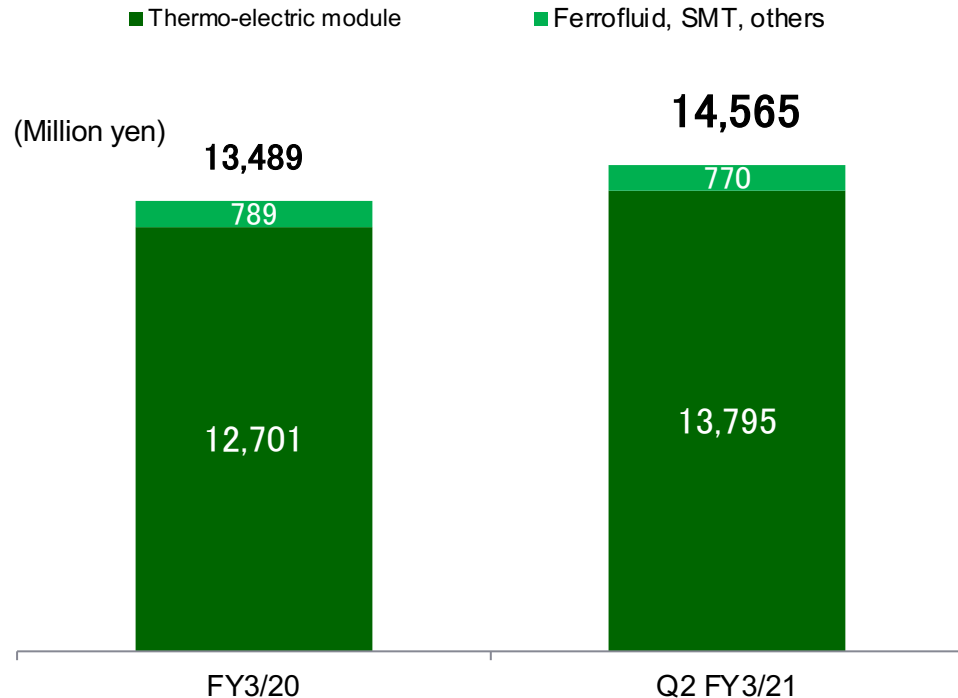
[Semiconductor materials (quartz, ceramics, and CVD-SiC)]

- Quartz: sales are expected to continue to increase thanks to the strong semiconductor manufacturing and replacement demand for jig material consumables. Demand for silicon parts is also expected to rise, especially in the etching process.
- Ceramics: strong sales of parts for etching equipment are expected to continue. Sales of semiconductor inspection jig materials in overseas markets are also expected to be firm.
- CVD-SiC: sales to China are expected to decrease temporarily reflecting a change in sales method

[Cleaning business]

- Sales continue to grow steadily along with the growing production at Chinese semiconductor manufacturers, etc.

## Transition of sales



### Overview of this segment

#### [Thermo-electric module]

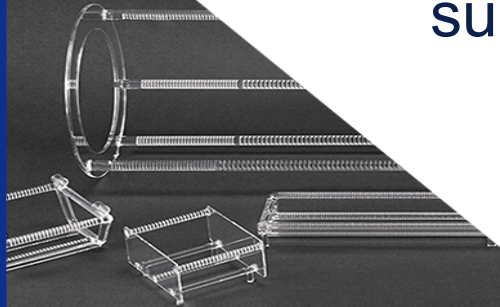
- There are signs of recovery in seat temperature controllers for automobiles. Sales of communication equipment are expected to be in line with the first half and to increase year-on-year.
- Substrates for power semiconductor are expected to be in line with the first half.



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Capital increase, etc. and funding for subsidiaries by the second quarter



- There has been no change in the financial policy since the last announcement (July 8, 2020).

## Results briefing in July 8, 2020

### [Recognition of the current situation]

Business environment	There are plenty of business opportunities, as the semiconductor market is expanding; especially the Chinese market is advancing.
Our strengths	Business portfolio with a stable business base, including semiconductor materials, thermo- electric modules, and vacuum feedthroughs.
Our issues to be solved	Expansion of assets and interest-bearing debt through active investment in large-diameter semiconductor wafers, etc.

### [Financial measures] To secure an appropriate balance between business/investment opportunities and financial standing

Investment/ liabilities	Control and manage the level of investment in equipment, etc. and the level of interest-bearing debt.
Fund procurement	Diversify fund procurement methods and secure the stability of fund procurement. Discuss the utilization of partners and capital in China.



- To ensure a balance between business opportunities and finance, we transferred a part of the wafer subsidiary and increased the capital of subsidiary.

[Outline of the capital increase of subsidiary and its financial impact (planned)] \*1 yuan = 15.36 yen

Announcement date	Details	Major financial impact (planned)
Sep. 15	<p><b>(1) Partial transfer of shares of semiconductor wafer subsidiary (FTHW)</b>                      Transfer price: 1.97 billion yuan (about 30.3 billion yen)</p> <ul style="list-style-type: none"> <li>➤ Held by FTHD: 1.48 billion yuan (about 22.7 billion yen)</li> <li>➤ Held by a Chinese subsidiary: 490 million yuan (about 7.6 billion yen)</li> </ul>	<ul style="list-style-type: none"> <li>➤ The transfer to FTHD holdings reflected in 2Q, with net assets increasing by +22.7 billion yen</li> <li>➤ The transfer to the Chinese subsidiary (Fiscal year end: December) will be reflected in 3Q</li> <li>➤ The investment ratio after the capital increase will be 29.5%. The equity method is expected to be applied, but this is as yet undecided and is currently undergoing careful examination.</li> </ul> <p>In the case of consolidation: Increase in non-controlling interest in B/S, Increase in non-controlling profit/loss in P/L.</p>
Oct.16	<p><b>(2) Capital increase of semiconductor wafer subsidiary: 1.60 billion yuan (about 24.6 billion yen)</b></p>	<p>In the case of equity method: Accounting for internal transactions such as investment recorded outside the scope of both B/S consolidation and of P/L consolidation range, negative equity investment profit/loss.</p>
Oct. 16	<p><b>(3) Capital increase of wafer recycling subsidiary: 410 million yuan (about 6.3 billion yen)</b></p>	<ul style="list-style-type: none"> <li>➤ To be reflected in 4Q with final investment ratio of 41.3%; to become consolidated subsidiary</li> <li>Net assets (non-controlling interests) to increase</li> </ul>
Oct. 16	<p><b>(4) Established SiC (silicon carbide) company with capital of 890 million yuan (about 13.7 billion yen)</b></p>	<ul style="list-style-type: none"> <li>➤ Our investment ratio is 31.5%, 280 million yuan (4.3 billion yen)</li> </ul>
Aug. 14	<p><b>(5) Preparation for listing of cleaning business subsidiary with capital increase (160 million yuan, about 2.5 billion yen)</b></p>	<ul style="list-style-type: none"> <li>➤ Our investment ratio is 67.0%, increase in net assets (non-controlling interests)</li> </ul>

- We plan to implement the capital investment of 29.4 billion yen and financing of 26 billion yen as initially planned.
- Of the approximately 30.3 billion yen in the transfer price of the semiconductor wafer subsidiary, it is anticipated that about 24.5 billion yen will be allocated to repay interest-bearing debt.
- A total of approximately 33.4 billion yen for the capital increase by way of third-party allotment is scheduled to be allocated for investment, mainly from the next fiscal year.

## [Initial plan and additional funding]

Outline of the initial plan			
	Items	Amount	Use of funds, etc.
	<b>* Details of financing at the time of results briefing on July 8</b>	About 26 billion yen	1) Funding from financial institutions: 9.5 billion yen 2) Borrowing for a Chinese subsidiary that produces semiconductor wafers: 9.5 billion yen 3) Investment subsidy for Chinese wafer business: 3 billion yen 4) Increase of the capital of a Chinese recyclable wafer business: 4 billion yen
Details of additional funding			
	Items	Amount	Use of funds, etc.
1	Transfer of shares in semiconductor wafer subsidiary	About 30.3 billion yen	Repayment of interest-bearing debt: about 24.5 billion yen Investment in SiC: about 4.3 billion yen, etc.
2	Increase in shares of semiconductor wafer subsidiary	About 24.6 billion yen	Capital investment (mainly for the next fiscal year)
3	Increase of the capital of a Chinese company that produces recyclable wafers:	About 6.3 billion yen	Capital investment (mainly for the next fiscal year)
4	Increase in the capital of a Chinese company that conducts the cleaning business:	About 2.5 billion yen	Capital investment (mainly for the next fiscal year)

- Expect to repay interest-bearing debt and improve financial balance through transfer of shares in wafer subsidiary of 30.3 billion yen and capital increase of 24.6 billion yen.
- Owing to the strong demand for semiconductor material products, etc, there are abundant business and investment opportunities to capture market growth.
- We maintain an appropriate balance between business opportunities and finances for further growth and higher corporate value.

Key Indicators (100 million yen)	FY3/20	Q2 FY3/21	Forecasted impact of additional share transfer and capital increase compared to the end of the previous fiscal year	Key Indicators (100 million yen)
Total assets	1,900	2,177	Decrease in total assets at the time of deconsolidation of the wafer company	Decrease factor
Interest-bearing debt (Net interest-bearing debt)	784 (547)	825 (476)	Repayment of approx. 24.5 billion yen due to transfer of shares in the wafer company When the wafer company is not consolidated, the company's borrowing is not consolidated.	Decrease factor
Net assets (Non-controlling interests)	501 (17)	718 (194)	Increase in non-controlling interests, etc. at the time of consolidation of the wafer company Increase due to about 8.8 billion yen in capital increase from wafer recycling and cleaning businesses	Increase factor
Capital-to-asset ratio (deduction of non-controlling interests *) Capital-to-asset ratio (denominator: net assets)	25.5% 26.4%	24.1% 33.0%	If the wafer company is deconsolidated, total assets will decrease. If the wafer company is consolidated, non-controlling interests will increase.	Improvement factor
D/E ratio (denominator: net assets)	1.56	1.13	Decrease in interest-bearing debt, increase in net assets	Improvement factor
ROIC	3.1%	3.8%	If the wafer company is deconsolidated, total assets will decrease.	Improvement factor

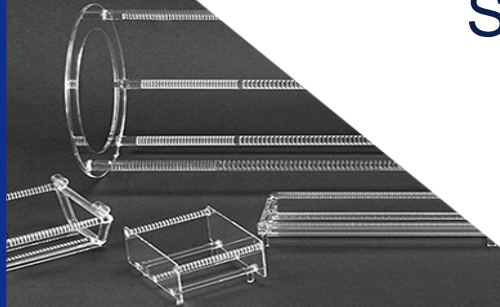
- Denominator: Equity: Net assets - Noncontrolling interests - Stock acquisition rights



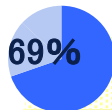
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## Q2 FY3/21 Status by Segment and Outlook



# Products by Segment

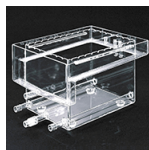


Semiconductor and other equipment-related

Vacuum feedthroughs



Quartz



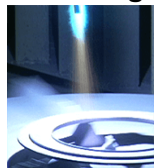
Ceramics



CVD-SiC



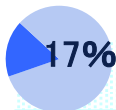
Equipment parts cleaning



Silicon wafer



etc...

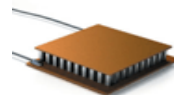


Electronic device

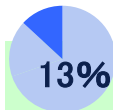
Ferrofluid



Thermo-electric module



Substrates for power semiconductor



Others

Industrial blade Contract assembly



Commercial washing machine

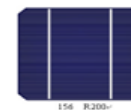


Photovoltaic (OEM)

PV wafer



PV cell

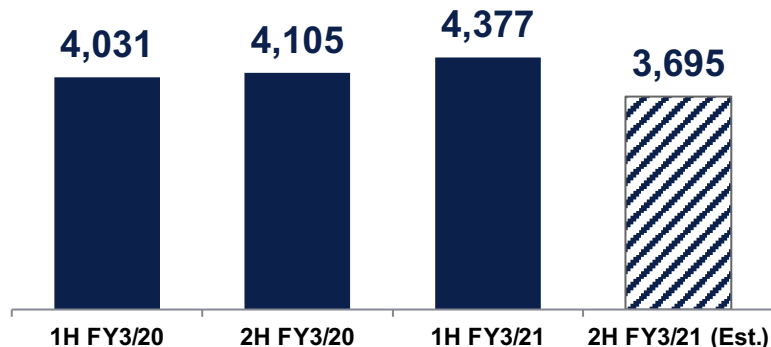


etc...

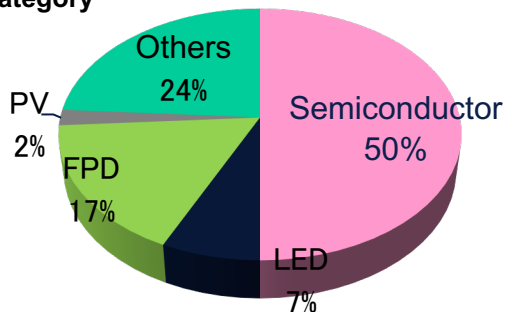
\*The circle graph represents the proportion of each segment to net sales as of Q2 FY3/21.

## Transition of sales

(million yen)



## Sales by category



## 1. Status for FY3/21 1H

- Since the second half of 2019, the number of orders for equipment for manufacturing semiconductors and organic EL rebounded, and 1H sales are estimated to grow year on year, although the installation by clients is slightly delayed due to the COVID-19 pandemic.
- The number of orders for contract processing also picked up in semiconductors and other fields, and it remains firm.

## 2. Outlook for 2H of FY3/21

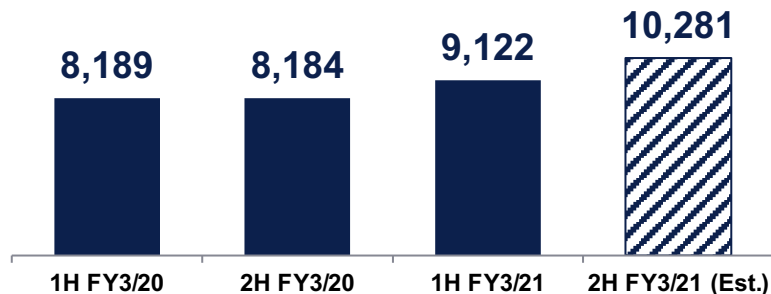
- Sales are expected to decline in the second half compared to the first half, as new orders for organic EL manufacturing equipment seem to have been slowed.
- Contract processing is expected to expand from the first half.

## <Measures>

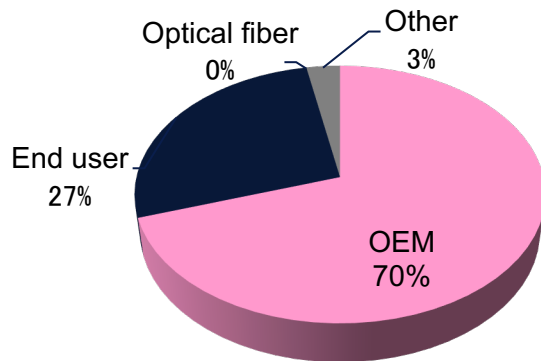
- Continue joint development projects with manufacturers of semiconductor manufacturing equipment
- Capital investments for large processing machinery
- Strengthen ties among Ferrotec Group companies to generate synergies
- Strengthen sales in the Chinese market, utilizing Group companies' existing channels and brands

## Transition of sales

(million yen)



Share of quartz products by industry



### 1. Status for FY3/21 1H

- Although there were some delays in the introduction of equipment due to COVID-19, sales of quartz products increased due to new investments in logic and memory systems and higher utilization rates by semiconductor manufacturers, supported by strong demand for 5G and data center applications worldwide and remarkable growth in the Chinese semiconductor market.
- The demand for Si parts for the film forming process and the etching process was strong in China, Taiwan and Japan.

### 2. Outlook for 2H of FY3/21

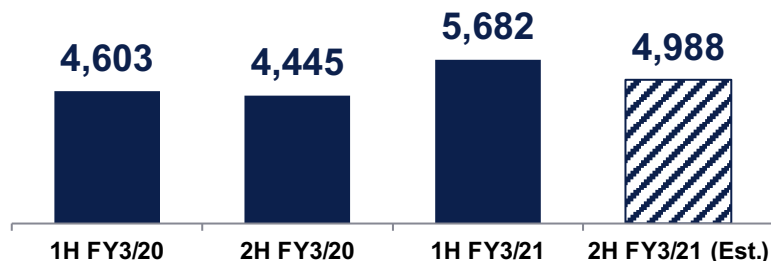
- Demand for new capital investment in logic systems and memory systems, especially NAND, is expected to remain strong. In addition, sales of quartz, which has a high ratio of repeat demand due to jig wear, are expected to increase in the second half due to the high occupancy of semiconductor manufacturers.
- Sales of Si parts are expected to be firm, with a particular increase in demand for etching processes.

### <Measures>

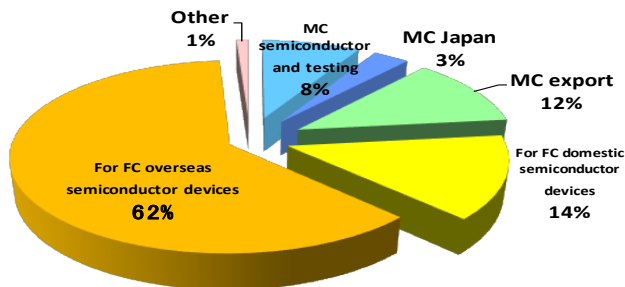
- We are preparing a system to further increase production as the demand from major OEMs will continue to increase in 2019 and beyond. (China: Considering the expansion of facilities for machined products at the Dongtai Factory and investment in a processing plant at the Changshan Factory)
- Japan: Development and prototyping of products for next-generation cutting-edge equipment at Yamagata Factory. (The scale of mass production will shift from small scale to medium scale from 2021)

## Transition of sales

(million yen)



## Sales by category



### 1. Status for FY3/21 (Jan. - Jun.)

<Machinable ceramics "Photoveel">

- Strong overseas sales of materials for semiconductor inspection jigs.
- The conventional and new jigs for inspecting semiconductors performed well inside and outside Japan. Sales of both conventional and new semiconductor inspection jigs were strong.

<Fine ceramics>

- Overseas sales of parts for film forming and etching equipment were very strong.
- Overall domestic semiconductor equipment components performed well due to increased data communication-related demand.

### 2. Outlook for 2H of FY3/21 (Jul. - Dec.)

<Machinable ceramics "Photoveel">

- Overseas sales of materials for semiconductor inspection jigs are expected to continue to be strong.
- Demand for semiconductor inspection jigs in Japan are expected to slow in the second half

<Fine ceramics>

- Overseas sales of parts for etching equipment will continue to be strong.
- Domestic sales of parts for semiconductor equipment to slow down due to inventory clearance in the first half.

### 3. Continuous sales policy

<Machinable ceramics>

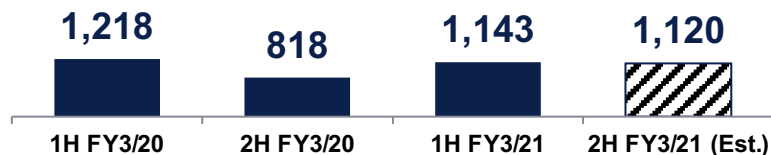
- Focus on sale promotion of new inspection jigs as further miniaturization will progress.
- Aim to expand sales by mass production of high functional property machinable ceramic materials
- Expand into new fields such as parts for medical and analytics fields.

<Fine ceramics>

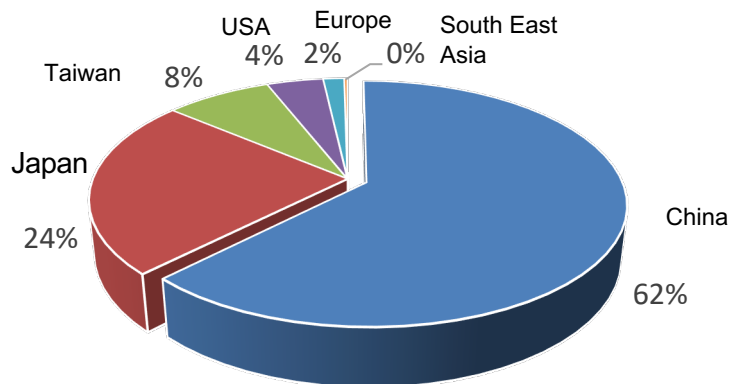
- Aim to adopt alumina materials with excellent dielectric properties for new semiconductor equipment parts.
- Aim to expand sales of general industrial machinery parts with various ceramic materials.



## Transition of sales (million yen)



### Sales by region



### 1. Status for 1H of FY3/21 (Jan. – Jun.)

- Demand for parts and materials related to capital investment by Chinese equipment manufacturers remained strong.
- Demand from Europe and the U.S. declined.

### 2. Outlook for 2Q of FY3/21 (Jul. - Dec.)

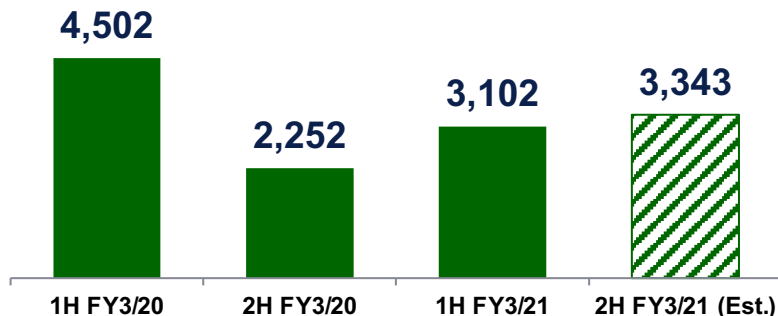
- Temporary decrease in sales due to change in sales method for Chinese equipment manufacturers.
- Shift the timing of mass production of consumables for semiconductor etching systems to Q1 of 2021.

### <Measures>

- Increase sales of consumable materials for semiconductor etcher equipment and maintain production system.
- Maintain development and trial production systems in the SiC semiconductor field.
- Make our products adopted by semiconductor manufacturing equipment and device manufacturers.

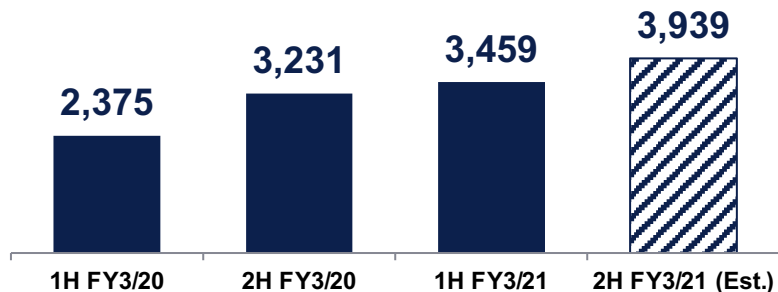
## Semiconductor wafer

### Transition of sales (million yen)



## Parts Cleaning\*

### Transition of sales (million yen)



### Semiconductor wafers:

#### 1. Status for 1H of FY3/21

- Compared to the second half, demand for 6-inch wafers recovered, but there was no full-scale recovery in demand for 8-inch wafers, resulting in a 31.0% year-on-year decline in total wafer sales.

#### 2. Outlook for 2H of FY3/21

- Compared to 1H, sales of 6-inch wafers to grow and 8-inch wafers to be flat. Mass production of 12-inch wafers is scheduled to start in 4Q.

#### <Measures>

- In the 8-inch wafer business, we are strengthening the certification of new customers at the new Hangzhou factory (full-scale production will start in 2021).
- Considering further increase in production of 12-inch wafers (30,000 units/month) from FY3/22 onward. Investment funds will be allocated from third-party allotment of capital from Chinese government and multiple Chinese private funds.

### Parts Cleaning:

#### 1. Status for 1H of FY3/21

- Continue to increase production at five bases and six factories in China. Sales increased significantly by 45.6% YoY due to growth in demand from Chinese semiconductor and FPD (Organic EL/LCD) customers.

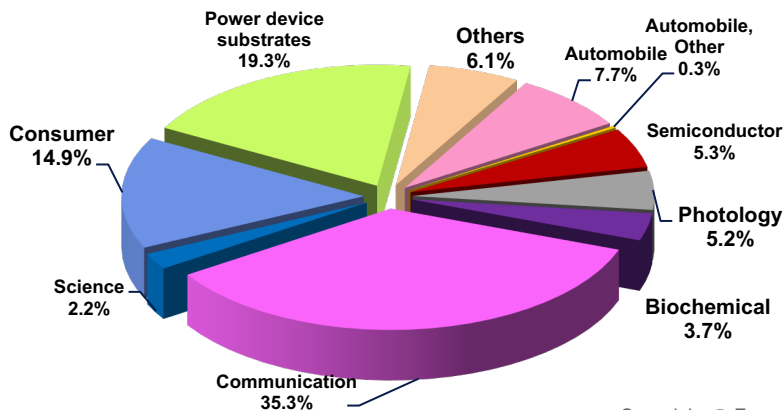
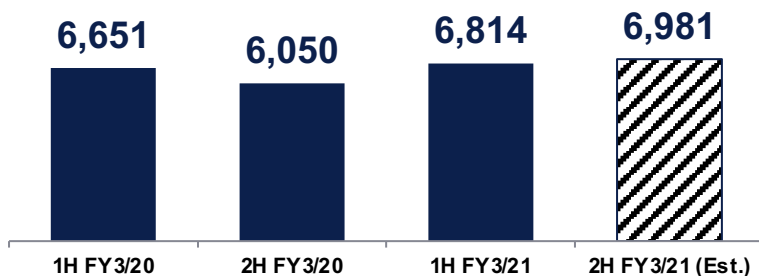
#### 2. Outlook for 2H of FY3/21

- Parts cleaning is a stock-type business that is linked to the production level at each customer company. Sales are expected to increase by 11.5% in the second half from the first half of the year due to the limited impact of the COVID-19 pandemic on the Chinese market.

#### <Measures>

Following the transition to local production in China and with investment into the Anhui province subsidiary by a government-affiliated fund, we will be in an environment where medium-to-long-term growth can be anticipated. Going forward, we will make preparations for a listing on the Shanghai Stock Exchange's Start Market. Investment will be financed by raising funds locally in China.

## Transition of sales (million yen)



## 1. Status for 1H of FY3/21

### Modules for Automobiles

- Due to the impact of COVID-19, as the sales volume of automobiles decreased, the sales of modules for seat temperature controllers decreased.

### Other applications

- Steady demand for communication equipment applications linked to 5G infrastructure investment, especially in China.
- In the consumer market, demand for wearables and IoT-related applications expanded.
- Sales of power substrates decreased compared to the second half of the previous fiscal year due to weakness in demand for automobiles and industrial equipment.

## 2. Outlook for 2H of FY3/21

### Modules for Automobiles

- Some signs of recovery in seat temperature controllers for automobiles in the second half.

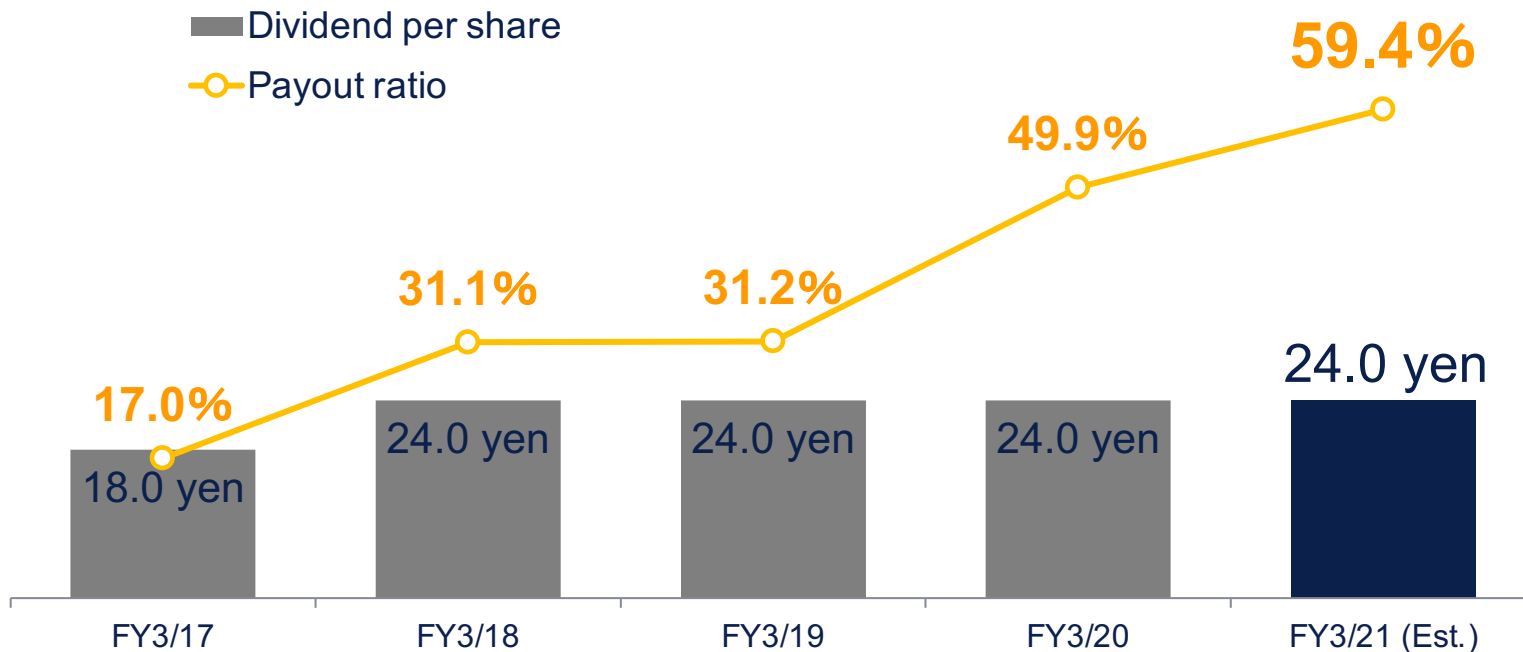
### Other applications

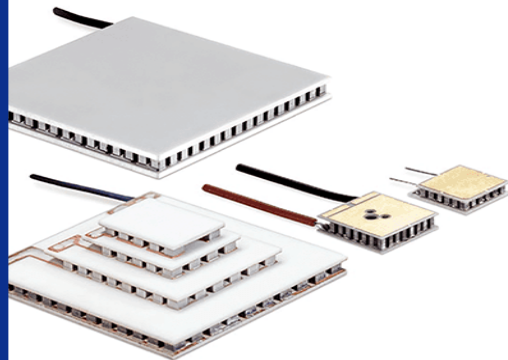
- Sales for communication equipment are expected to decrease slightly from the first half.
- Demand for power substrates is expected to remain almost flat compared to the first half.

### <Measures>

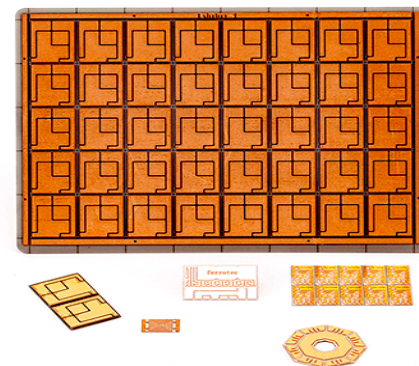
- Expand sales activities worldwide for thermo-electric module subassembly.
- Further strengthen sales of modules used in automobiles, aiming for mass production in 3-5 years.
- As for power substrate, strengthen sales of silicon nitride (AMB substrate) for automobiles.

- Due to the undisclosed business forecasts, the dividend forecast is also undetermined at this time.
- The basic policy is to pay stable dividends, and consider increasing dividends as business performance improves.

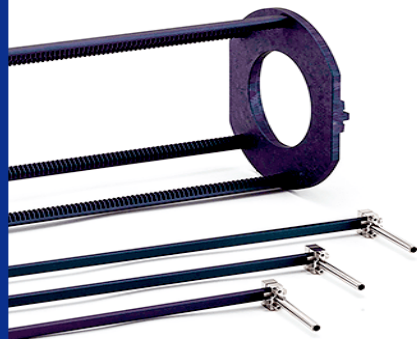




**Ferrotec**  
Ferrotec Holdings Corporation

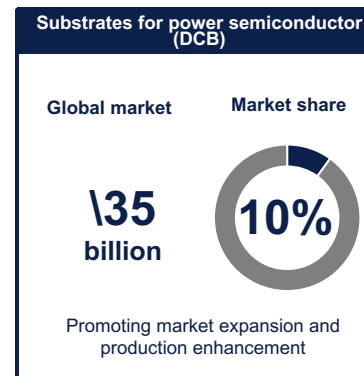
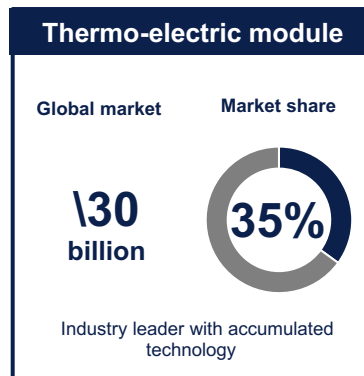
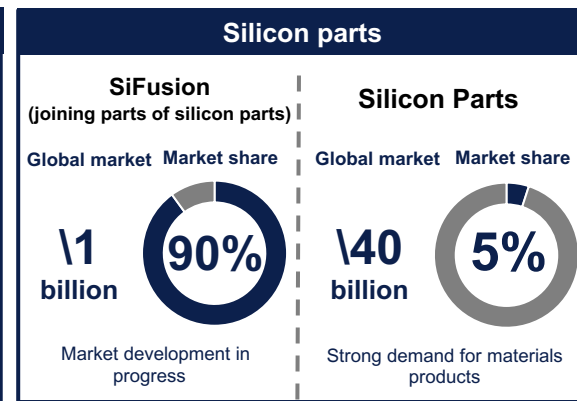
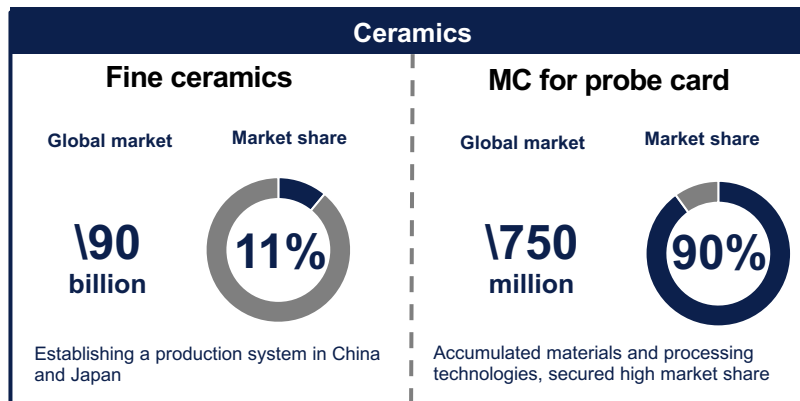


## Appendix



Corporate Name	Ferrotec Holdings Corporation
Date of Foundation	September 27, 1980
Address	5 <sup>th</sup> floor of Nihonbashi Plaza Building, 2-3-4 Nihonbashi, Chuo-ku, Tokyo Japan
Listed on	JASDAQ (Listed Code: 6890)
President	He Xian Han (Group CEO)
Business Segment	Business management and R&D operations of group companies
Capital	17,664 million yen
Issued Stock	37,251,702 shares (including 93,568 shares of treasury stock)
Related Company	[46 consolidated subsidiary] [6 companies accounted for by the equity method]
Employees	[Consolidated] 7,775, [Non-consolidated] 66

# Characteristics and Market Share by Product



# Business Performance (FY3/21 1H Results vs. Plan)



(million yen)	Q2 FY3/21 Plan		Q2 FY3/21 Results			
	Amount	Pct. of sales(%)	Amount	Pct. of sales(%)	Amount	Pct. change(%)
Semiconductor and other equipment-related	28,140	70.3	28,784	69.2	645	2.3
Vacuum feedthroughs	4,390	11.0	4,377	10.5	- 13	- 0.3
Quartz	9,210	23.0	9,122	21.9	- 88	- 1.0
Ceramics	5,380	13.4	5,682	13.7	302	5.6
CVD-SiC	1,080	2.7	1,143	2.7	63	5.8
EB-Gun, LED	1,460	3.6	1,450	3.5	- 10	- 0.7
Semiconductor wafer	2,810	7.0	3,102	7.5	292	10.4
Parts cleaning	3,380	8.4	3,459	8.3	79	2.3
Quartz crucible	430	1.1	450	1.1	20	4.7
Electronic device	6,770	16.9	7,116	17.1	346	5.1
Thermo-electric module	6,480	16.2	6,814	16.4	334	5.2
Ferrofluid, others	290	0.7	302	0.7	12	4.1
Others	5,090	12.7	5,693	13.7	603	11.8
<b>Total</b>	<b>40,000</b>	<b>100.0</b>	<b>41,595</b>	<b>100.0</b>	<b>1,594</b>	<b>4.0</b>

Gross income	13,320	33.3	14,098	33.9	778	5.8
SG&A expenses	10,320	25.8	10,185	24.5	- 135	- 1.3
Operating income	3,000	7.5	3,913	9.4	913	30.4
Ordinary income	2,500	6.2	2,824	6.8	324	13.0
Net income	0	-	70	0.2	70	-



# Business Performance (FY3/21 1H Results vs. 2H Plan)



(million yen)	Q2 FY3/21 Results		Q2 FY3/21 2H Plan			
	Amount	Pct. of sales(%)	Amount	Pct. of sales(%)	Amount	Pct. change(%)
Semiconductor and other equipment-related	28,784	69.2	29,969	69.0	1,185	4.1
Vacuum feedthroughs	4,377	10.5	3,695	8.5	- 682	- 15.6
Quartz	9,122	21.9	10,281	23.7	1,159	12.7
Ceramics	5,682	13.7	4,988	11.5	- 694	- 12.2
CVD-SiC	1,143	2.7	1,120	2.6	- 23	- 2.0
EB-Gun, LED	1,450	3.5	2,117	4.9	667	46.0
Semiconductor wafer	3,102	7.5	3,343	7.7	241	7.8
Parts cleaning	3,459	8.3	3,939	9.1	480	13.9
Quartz crucible	450	1.1	487	1.1	37	8.2
Electronic device	7,116	17.1	7,449	17.2	333	4.7
Thermo-electric module	6,814	16.4	6,981	16.1	167	2.4
Ferrofluid, others	302	0.7	468	1.1	166	55.0
Others	5,693	13.7	5,987	13.8	294	5.2
<b>Total</b>	<b>41,595</b>	<b>100.0</b>	<b>43,405</b>	<b>100.0</b>	<b>1,811</b>	<b>4.4</b>
Gross income	14,098	33.9	13,843	31.9	- 255	- 1.8
SG&A expenses	10,185	24.5	11,007	25.4	822	8.1
Operating income	3,913	9.4	2,587	6.0	- 1,326	- 33.9
Ordinary income	2,824	6.8	2,676	6.2	- 148	- 5.2
Net income	70	0.2	1,430	3.3	1,360	-

# Business Performance (FY3/20 vs. FY3/21)



(million yen)	FY3/20 Results		FY3/21 Plan			
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Amount	Pct. change (%)
Semiconductor and other equipment-related	52,881	64.8	58,754	69.1	5,873	11.1
Vacuum feedthroughs	8,136	10.0	8,072	9.5	- 64	- 0.8
Quartz	16,373	20.1	19,402	22.8	3,029	18.5
Ceramics	9,048	11.1	10,670	12.6	1,622	17.9
CVD-SiC	2,036	2.5	2,263	2.7	227	11.1
EB-Gun, LED	3,973	4.9	3,567	4.2	- 406	- 10.2
Semiconductor wafer	6,754	8.3	6,445	7.6	- 309	- 4.6
Parts cleaning	5,606	6.9	7,398	8.7	1,792	32.0
Quartz crucible	955	1.2	937	1.1	- 18	- 1.9
Electronic device	13,489	16.5	14,565	17.1	1,076	8.0
Thermo-electric module	12,701	15.6	13,795	16.2	1,094	8.6
Ferrofluid, others	789	1.0	770	0.9	- 19	- 2.4
Others	15,243	18.7	11,681	13.7	- 3,563	- 23.4
<b>Total</b>	<b>81,614</b>	<b>100.0</b>	<b>85,000</b>	<b>100.0</b>	<b>3,386</b>	<b>4.1</b>
Gross income	26,928	33.0	27,942	32.9	1,014	3.8
SG&A expenses	20,915	25.6	21,192	24.9	277	1.3
Operating income	6,013	7.4	6,500	7.6	487	8.1
Ordinary income	4,264	5.2	5,500	6.5	1,236	29.0
Net income	1,785	2.2	1,500	1.8	- 285	- 16.0
Capital investment	33,920	41.6	29,400	34.6	-4,520	-13.3
Depreciation	7,600	9.3	10,000	11.8	2,400	31.6

- The forward-looking statements in this document are based on information available as of the date of publication of this document and assumptions concerning uncertain factors affecting future results.
- Actual results may differ materially from these forecasts due to various factors. Such factors include, but are not limited to, international conditions, economic conditions, product supply and demand trends, raw material prices, market conditions, and exchange rates.
- Quantitative targets and capital investments in these materials represent medium-to long-term strategies and visions, and are not performance forecasts. We undertake no obligation to update any information with respect to these matters.
- For official forecasts, please refer to the disclosure of financial results based on the Tokyo Stock Exchange Regulations.

<Inquiries>

IR Office: 03-3281-8186