



Second Quarter FY2019 Financial Results

USHIO INC.
October 31, 2019

This report contains forward-looking statements, including earnings forecasts, which are based on information currently available to the Company and on certain assumptions deemed to be reasonable. Please be advised that actual results may differ substantially from those forward-looking statements due to various factors.

- * All figures in the material have been rounded down to the nearest billion yen.
- * FY2019 starts from April 1st, 2019 through March 31st, 2020.

- YoY 1H for FY2019 (Result):
Causal Analysis on **Net Sales and Earnings are Progressing Comparable** to 1H FY2018

- YoY for FY2019 (Full-year Forecast) :
Reasons on **Financial Result Forecast Remained Unchanged**

I. Financial Results for 2Q FY2019

II. Forecasts for FY2019

III. Topics

IV. Supplementary Information

Net Sales : 82.0 billion yen (▲0.5 billion yen YoY, ▲0.7%)

Achievement Rate to Initial Plan 48.2%

Decline in sales	Light Source Business:	Slowdown in related markets and decreasing lamp demand due to conversion to solid-state light sources
Increase in sales	Imaging Equipment:	RGB projector sales increased
	Optical Equipment:	LCD-related equipment sales increased

Operating Income : 4.8 billion yen (▲0.4 billion yen YoY, ▲9.2%)

Achievement Rate to Initial Plan 48.6%

Decline in profit	Light Source Business:	Profitability decrease
	Optical Equipment:	Increase in R&D expenses and change in product mix
Increase in profit	Imaging Equipment:	Increase in sales and profit resulted from structural reform

Profit Attributable to Owner of Parent : 3.0 billion yen
(▲0.4 billion yen YoY, 13.8%)

Achievement Rate to Initial Plan 26.3%

※FOREX (FY19_1H) : 1US\$ = 109 yen

Summary of Financial Results

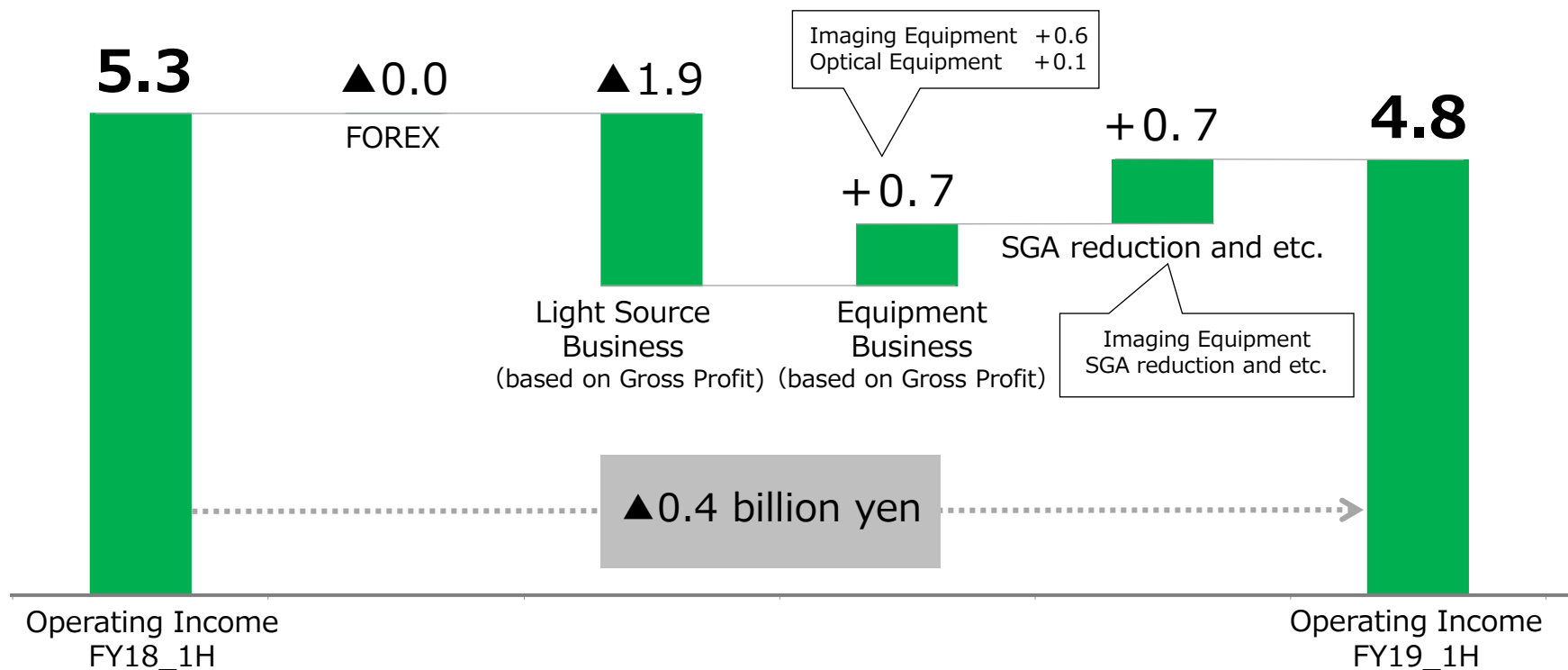
(billion yen)		FY18 1H	FY19 1H	YoY	
				Changes	%
Net Sales		82.6	82.0	▲0.5	▲0.7
Operating Income		5.3	4.8	▲0.4	▲9.2
Operating Income (%)		6.5	5.9	▲0.6P	—
Ordinary Income		7.2	5.8	▲1.3	▲18.9
Profit Attributable to Owners of Parent		3.5	3.0	▲0.4	▲13.8
EPS (yen)		27.46	24.41	▲3.1	▲11.1
FOREX (yen)	USD	109	109	▲0	-
	EUR	130	122	▲8	-

FOREX sensitivity: Amount of impact from 1 yen fluctuations (full-year)

	Net Sales	Operating Income
against USD	Approx. ¥ 1.0 billion	Approx. ¥ 0.15 billion

YoY Variation Analysis of Operating Income

(billion yen)



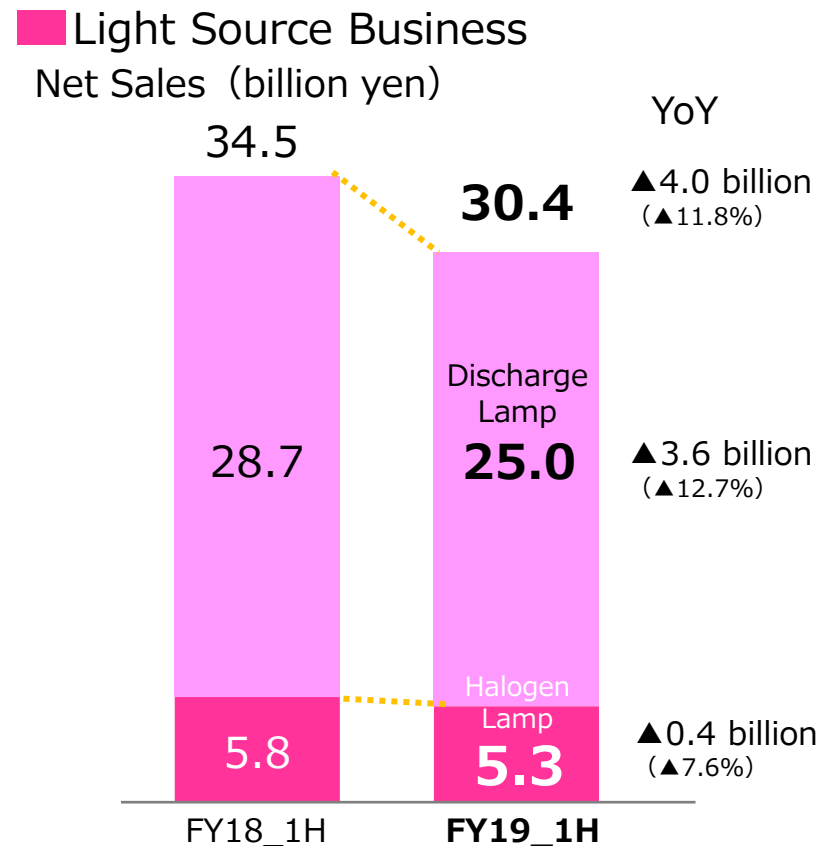
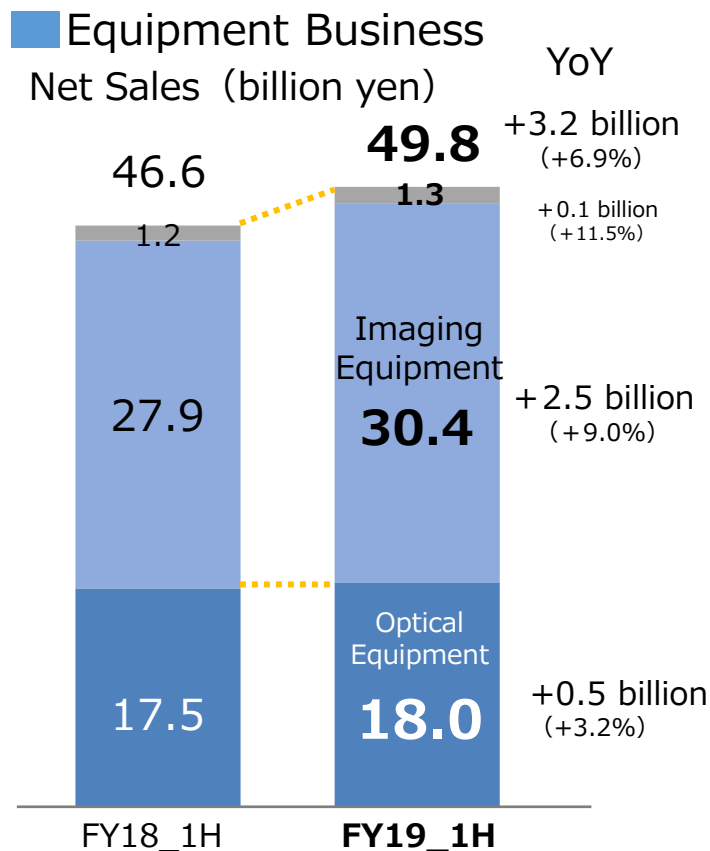
Note: Figures other than "FOREX" exclude forex impact.

Financial Results by Business Segments

		(billion yen)	FY18 1H	FY19 1H	YoY	
					Changes	%
Equipment	Net Sales		46.6	49.8	+3.2	+6.9
	Operating Income		0.1	1.0	+0.8	+451.0
	Operating Income (%)		0.4	2.1	+1.7P	–
Light Sources	Net Sales		34.5	30.4	▲4.0	▲11.8
	Operating Income		4.8	3.6	▲1.2	▲25.7
	Operating Income (%)		14.1	11.9	▲2.2P	–
Others	Net Sales		1.4	1.7	+0.2	+19.9
	Operating Income		0.0	0.0	▲0.0	▲61.2
	Operating Income (%)		3.3	1.1	▲2.2P	–
Elimination and corporate	Operating Income		0.2	0.1	▲0	▲22.2

Note : Net Sales indicates sales to unaffiliated customers. Operating income ratio indicates the ratio of operating income against sales to unaffiliated customers.

Business Segment Overview



Note : Net sales indicates sales to unaffiliated customers.

Business Environment and Business Segment Overview

Business Field	Business Environment	Equipment Business (YoY : ■ Optical equipment +3.2% ■ Imaging equipment +9.0%)	Light Source Business (YoY : ■ Discharge Lamp ▲12.7% ■ Halogen Lamp ▲7.6%)
Electronics Field	Semiconductors- and Electrical components-related markets <ul style="list-style-type: none"> •Solid demand for electronic devices (Smartphone, automotive application, etc.) •Investment and operation slowdown in semiconductor and printed circuit boards •New demand increased for next generation packaging 	■ UV Equipment: ▲20% <ul style="list-style-type: none"> •Recorded high sales in previous 2Q due to specific projects •Sales increased for COF, decreased for electronic devices 	■ UV Lamps: ▲17% <ul style="list-style-type: none"> •Solid sales for large size LCD panels •Downturn lamp sales for middle-size FPD· semiconductor·print circuit board
	FPD-related markets <ul style="list-style-type: none"> •Large-size panel: continuous investments in LCD market in China •OLED: continuous control on equipment investment •Middle-size panel (LCD·OLED): operation slowdown 	■ Cure Equipment: +73% <ul style="list-style-type: none"> •Sales increased for LCD-related equipment for large-size panel •Sales decreased for photo-alignment equipment 	■ Others (Heater lamps etc.): ▲12% <ul style="list-style-type: none"> •Demand slowdown for heater lamps in semiconductor
Visual Imaging Field	Cinema field <ul style="list-style-type: none"> •Installation slowdown of new movie theaters •Expansion of laser projectors 	■ Cinema: +18% <ul style="list-style-type: none"> •Sales expansion of RGB laser projectors 	■ Lamps for cinema: ▲19% <ul style="list-style-type: none"> •Price drop-down due to intensified competition •Expansion of lamp usage extension
	General Imaging field <ul style="list-style-type: none"> •Solid demand for pro AV equipment •Expansion of laser projectors 	■ General Imaging: +0% <ul style="list-style-type: none"> •Sales expansion of RGB laser projectors •Sales decreased by the amount of businesses sold to previous FY 	■ Lamps for data projectors: ▲15% <ul style="list-style-type: none"> •Lamp demand decreased due to conversion to solid-state light sources
	OA field <ul style="list-style-type: none"> •Downtrend demand for OA products 	—	■ Lamps for OA: +0% <ul style="list-style-type: none"> •Sales increased for value added environment-friendly lamps
Overall	Impact of U.S.-China trade friction		Minor Impact in 1H

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Full-year Forecasts

Remain unchanged

(billion yen)	FY19 1 H	FY19 Initial Forecast	Achievement Rate (%)
Net Sales	82.0	170.0	48.2
Operating Income	4.8	10.0	48.6
Operating Income (%)	5.9	5.9	-
Ordinary Income	5.8	12.0	48.9
Profit Attributable to Owners of Parent	3.0	11.5	26.3
EPS (yen)	24.41	94.17	25.9
Dividend per share (yen)	-	50	-
Payout Ratio (%)	-	53.1	-
FOREX (yen) USD	109	110	-
EUR	122	125	-

Net Sales by Sub-Segment / FY2020 2H Business Environment

(billion yen)		FY19 Initial plan	FY19 1 H	Achievement Rate (%)	2H Business Environment (Arrow indicates 2H environment compared to 1H)	
Net Sales	Equipment	Imaging-equipment	59.0	30.4	51.6	Cinema: Maintain same sales level as 1H for RGB laser projectors because of several large projects General Imaging: Solid demand of RGB laser projector for amusement parks
		Optical-equipment	40.0	18.0	45.2	Large Field Stepper for latest IC package: Sales Expansion DI exposure systems for printed circuit boards: Gradual increase due to 5G and other applications EUV light source for mask inspection: Sales Increasing
		Illumination and others	2.0	1.3	67.1	
		Sub-total	101.0	49.8	49.4	
	Light Sources	Discharge- lamps	54.0	25.0	46.4	Lamps for cinema: Sales slowdown due to intensified competition UV lamps: Improving demand and will contribute to sales from FY20
		Halogen lamps	11.5	5.3	46.7	Lamps for OA: Demand slowdown in related markets but stable sales by environment-friendly lamps Heater use: Demand slowdown affected by semiconductor market slowdown
		Sub-total	65.5	30.4	46.5	
	Others	Machinery for industrial use and other	3.5	1.7	48.7	
	Total		170.0	82.0	48.2	U.S.-China trade friction: Subject to 4 th round of tariffs and take measures to minimize the impact

Structural Reform

FY18

- Fixed Cost Reduction by production transfer to China
- Divestitures of unprofitable businesses

FY19 (1H)

- Reorganize business bases
- Productivity improvement
- Control SGA level

Measurement

Sales Increase by New Product

Cinema

- Improved product performance
- Launched a wide range of RGB projectors



RGB laser projector lineup to adjust to various screen size

General Imaging

- Lineup expansion of laser projectors (RGB, LaPH)



- Released Industry's first-lightest & high quality RGB laser projector
- Added high luminance LaPH model

Result

- Production transfer to China → Completed as planned
- Divestitures of unprofitable businesses → Completed
- Consolidation and closure of business bases → Completed

SGA (vs FY18_1H) → ▲ > 10%

Headcount (vs FY17 end) → ▲ > 10%

• Major order

HuaxiaFilm : 200 units
Cineworld : 1,000 units
Cinema21 : 100 units etc.

• RGB ratio among all DCPs

FY19_1H : about **40%**
(YoY: about 10%)

• Major order

Expo 2020 Dubai : 250 units etc.

• RGB + LaPH ratio among all projectors

FY19_1H : about **90%**
(YoY: about 50%)

Sales Expansion of Exposure Equipment for Latest IC Package Substrates

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Large Field Stepper (UX-5)
Production and sales
(For wiring formation on latest IC package substrates)

Equipment
Sales

Cutting-edge & Next generation
package demand expansion

**Package substrate
manufacturer**

Chip Mounting
Server Installed

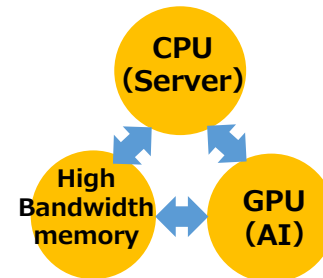
With IoT evolution, demand increased for servers for data centers processing high capacity and high speed data processing

Data center market
>20% growth per year (self-survey)
⇒ Expanding Adoption of
next-generation package substrates

● **World wide share 95%**
High-end BGA substrate exposure market (self-survey)

● **UX-5 Strength (Feature)**

1. Large-area projection
→ **High productivity & low CoO**
2. Non-contact mask work
→ **Yield enhancement**
3. Deep focal depth
→ **Process margin & substrate warping**
4. High Resolution/alignment accuracy
→ **Pitch miniaturization & process margin**



● **Increasing production capacity of lithography equipment (two times compared to conventional capacity)**



Large Field Stepper (UX-5)
Sales Trend

FY19

Contributing to sales from 2H

After FY20

Sales unit expanding



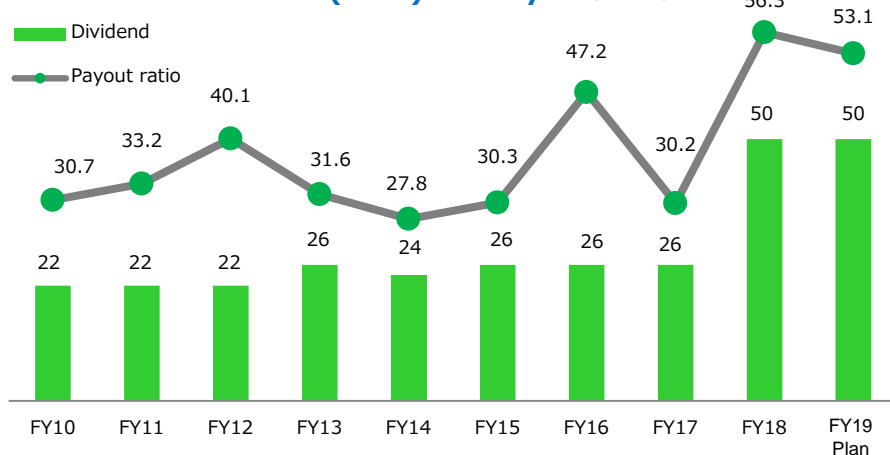
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Shareholders Return

Dividend per share and payout ratio

FY2018 (Result) : 50 yen (56.3%)

FY2019 (Plan) : 50 yen (53.1%)



Share Buyback

As per notice concerning status of purchase of treasury shares in December 2018

Max 10 billion yen

(Max 8 million shares)

From Dec. 21st, 2018 to Dec. 20th, 2019

Progress

(As of Sep. 30th, 2019)

Total amount of shares purchased :

7.94 billion yen

Progress : about 80%

Shareholders Return Policy

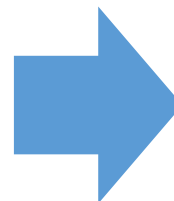
Ushio always recognized that profit return to shareholders is one the most important duties as a listed company. The basic policy is **to return profits to shareholders in a stable and consistent manner**. Ushio purchases own treasury shares, taking flexible approach. We **retain our treasury shares of approximately 5% of the total number of issued shares at maximum and cancel the excess portion of the treasury shares in each year**.

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EUV light source for next-generation semiconductor mass-production process
Development, Production, Sales



**Mask Inspection equipment manufacturer/
Research & development institution**



Semiconductor device manufacturers

Next-generation semiconductor mass-production needs with EUV lithography technology evolution

Increase EUV light source needs for inspection and development

Contribution of Ushio's EUV light source

Expect to expand business opportunities of EUV light source for mask inspection

● Ushio EUV Light Source Development History

- 2000 EUV light source development started
- 2001 Established EUVA*
*Extreme Ultraviolet Lithography System Development Association
- 2013 Withdrew from Lithography related development
- 2016 Delivered EUV light source to TNO
- 2018 Delivered first EUV light source for inspection (for test purpose)
- 2019 Delivered and received first acceptance for mass production process

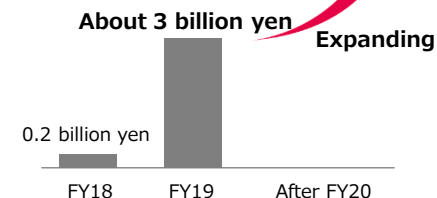
● Ushio Strength

Long business experience in semiconductor industry

+

Many years' experience in EUV technology (Compact/High-brightness/High Power)

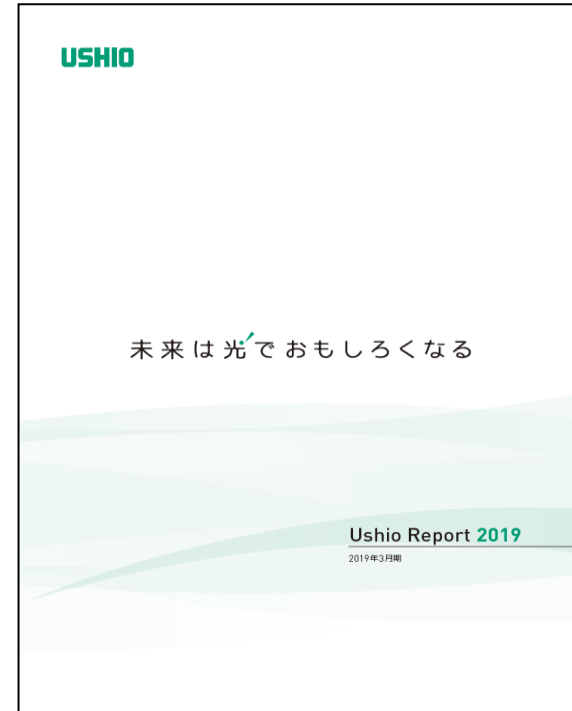
● Sales Forecast



Ushio Report 2019 (Integrated Report) Publication

Ushio Report has been produced with an emphasis on what Ushio considers to be “importance,” “conciseness” and “sustainability” to enable it to become a new communication tool for the wide of stakeholders Ushio group encompasses. Since its founding in 1964, Ushio has been focusing on the key concept of Lighting Edge Technologies and on the characteristics of “light.” We use light not only as illumination but also as energy through ultraviolet rays and infrared rays, contributing to innovative technologies being used widely throughout society. We hope that you can feel the attractiveness of Ushio which as achieved growth through its unique value creation model, the source of Ushio’s innovative technologies. Moreover, we would be delighted to raise further expectations of Ushio going onward.

※English version will be released in the middle of November



https://www.ushio.co.jp/documents/ir/library/ushioreport/ushioreport_2019_j.pdf (only in Japanese, released on Sep. 13th, 2019)



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Projector Comparison

Light Source	Laser		Lamp	
	RGB Laser	LaPH	Xenon Lamp	Super High-Pressure UV Lamp
Cinema	 <p>CP4330-RGB CP2320-RGB CP2309-RGB</p> <p>Lumen (lm) <40,000</p>	<p>No Lineup</p>	 <p>CP2308</p> <p>Lumen (lm) <45,000</p>	<p>No lineup</p>
General Imaging	 <p>D4K40-RGB</p> <p>Lumen (lm) <40,000</p>	 <p>Crimson GS series</p> <p>Lumen (lm) <30,000</p>	 <p>Roadie</p> <p>Lumen (lm) <45,000</p>	 <p>Boxer</p> <p>Lumen (lm) <30,000</p>
Price	★★★★★	★★	★★	★
Life	★★★★★	★★★★	★★★★★ (Lamp replacement is necessary)	★★★★★ (Lamp replacement is necessary)
Color	★★★★★	★★	★★★	★★

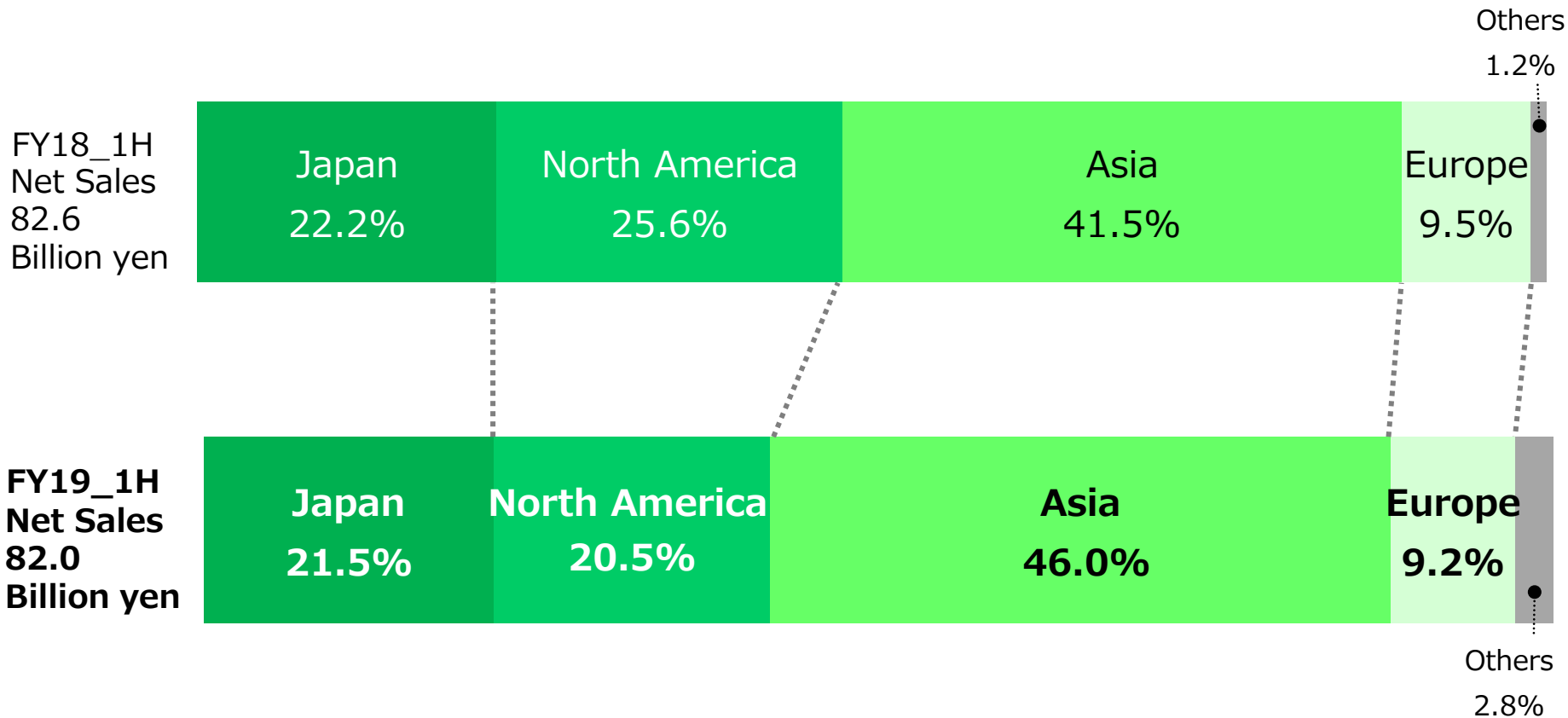
Reference: Summary of Quarterly Financial Results

(billion yen)		FY18				FY19		FY19 2Q - 2Q		FY19 2Q - 1Q	
		1Q	2Q	3Q	4Q	1Q	2Q	増減	%	増減	%
Net Sales		39.9	42.6	39.7	42.7	38.9	43.0	+0.4	+1.0	+4.1	+10.8
Operating Income		2.5	2.8	1.5	1.6	2.1	2.7	▲0.1	▲3.7	+0.5	+26.0
Operating Income Ratio (%)		6.4	6.6	3.9	3.8	5.5	6.3	▲0.3P	-	+0.8P	-
Ordinary Income		3.9	3.2	2.2	1.9	2.9	2.8	▲0.3	▲12.0	▲0.0	▲3.0
Profit Attributable to Owners of Parent		2.2	1.2	2.1	5.6	1.2	1.7	+0.5	+41.7	+0.5	+41.4
EPS (Yen)		17.67	9.79	16.97	44.54	10.02	14.43	+4.64	+47.4	+4.41	+44.0
Forex (Yen)	USD	108	111	113	110	111	108	▲3	-	▲3	-
	EUR	130	129	130	126	124	120	▲9	-	▲4	-

Reference: Summary of Quarterly Financial Results by Business Segments

(billion yen)	FY18				FY19		FY19 2Q - FY18 2Q		FY19 2Q - FY19 1Q	
	1Q	2Q	3Q	4Q	1Q	2Q	増減	%	増減	%
Equipment Business										
Net Sales	218	248	219	260	227	271	+23	+9.4	+44	+19.6
Operating Income	0	1	▲4	▲0	0	9	+7	+426.3	+8	+930.9
Operating Income Ratio (%)	0.0	0.7	▲2.1	▲0.1	0.4	3.5	+2.7P	-	+3.1P	-
Light Source Business										
Net Sales	173	172	171	155	154	149	▲22	▲13.1	▲5	▲3.4
Operating Income	25	23	18	16	19	16	▲6	▲27.3	▲2	▲13.5
Operating Income Ratio (%)	14.8	13.4	10.8	10.6	12.5	11.2	▲2.2P	-	▲1.3P	-
Others										
Net Sales	7	6	7	11	7	9	+3	+56.9	+2	+36.9
Operating Income	0	0	0	0	0	▲0	▲0	▲100.3	▲0	▲100.4
Operating Income Ratio (%)	3.0	3.6	3.6	2.4	2.5	▲0.0	▲3.6P	-	▲2.5P	-

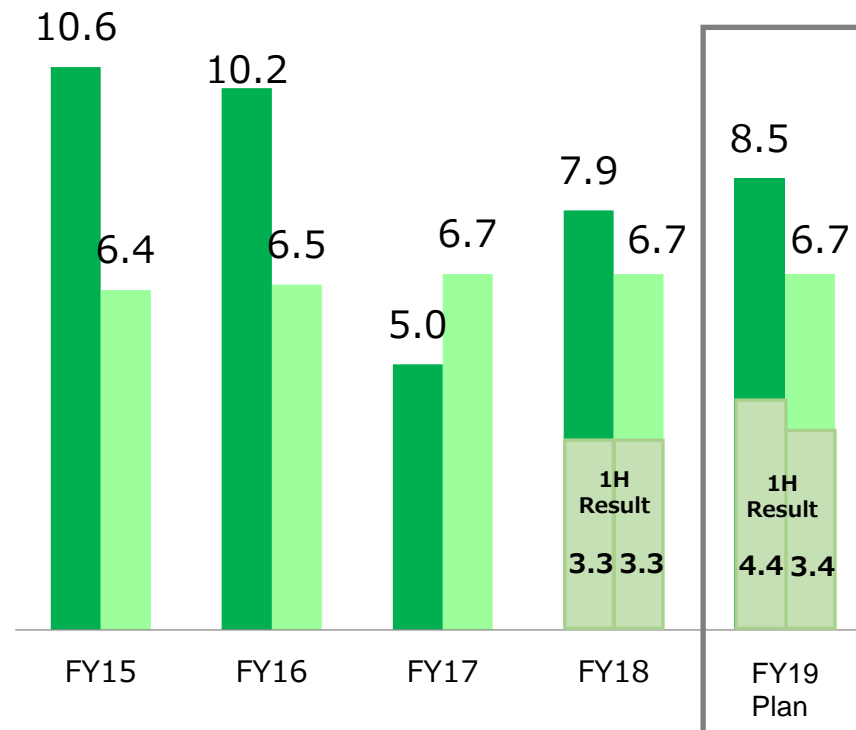
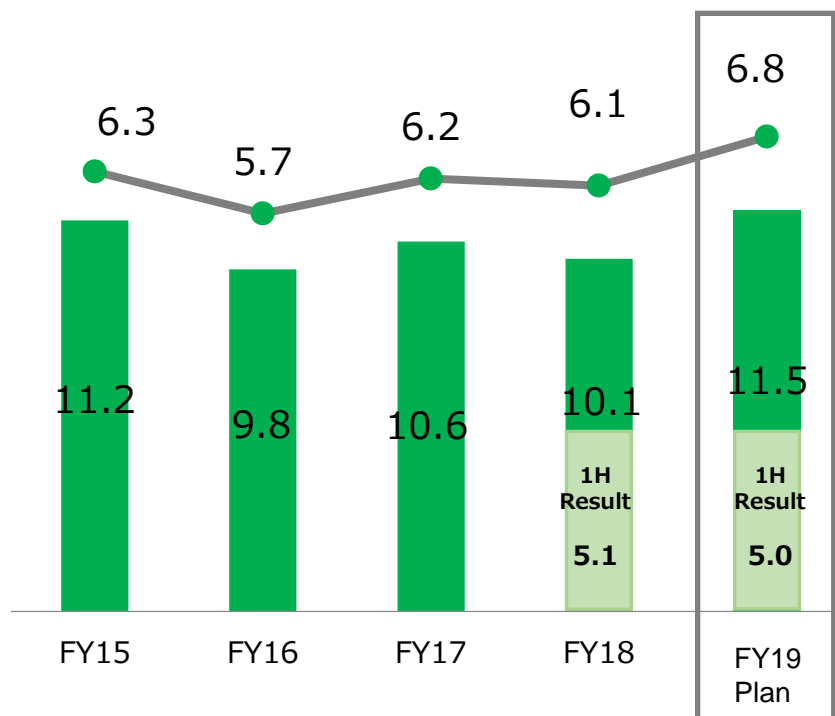
Reference: Sales Ratio by Region



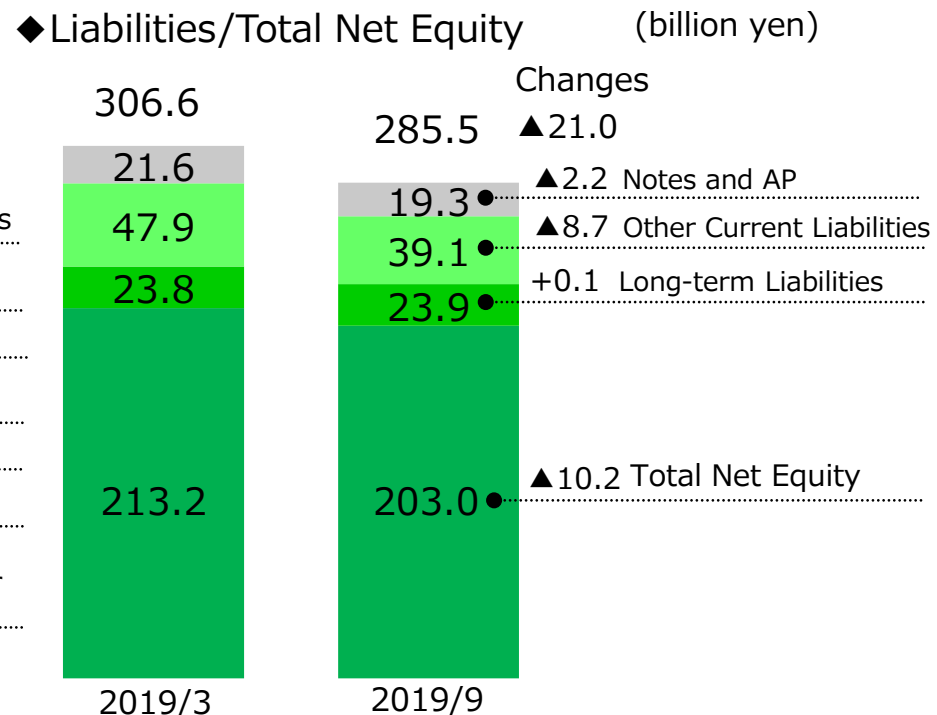
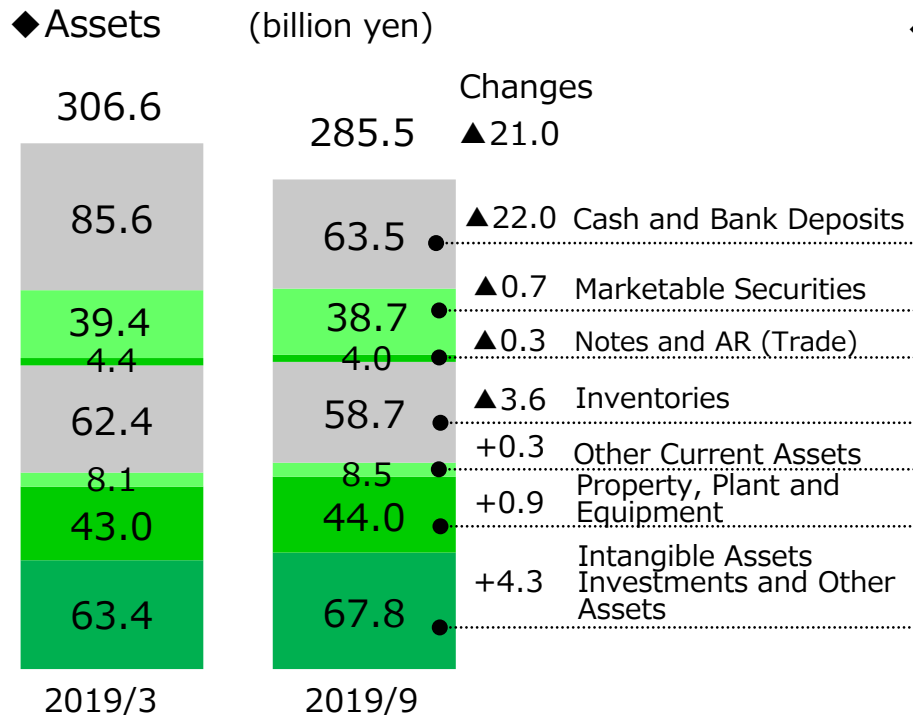
Reference : R&D Expenses/ Capital Expenditures and Depreciation

■ R&D Expenses (billion yen)
— Ratio of R&D Expenses to net sales (%)

■ Capital Expenditures (billion yen)
■ Depreciation (billion yen)



Reference: Balance Sheet

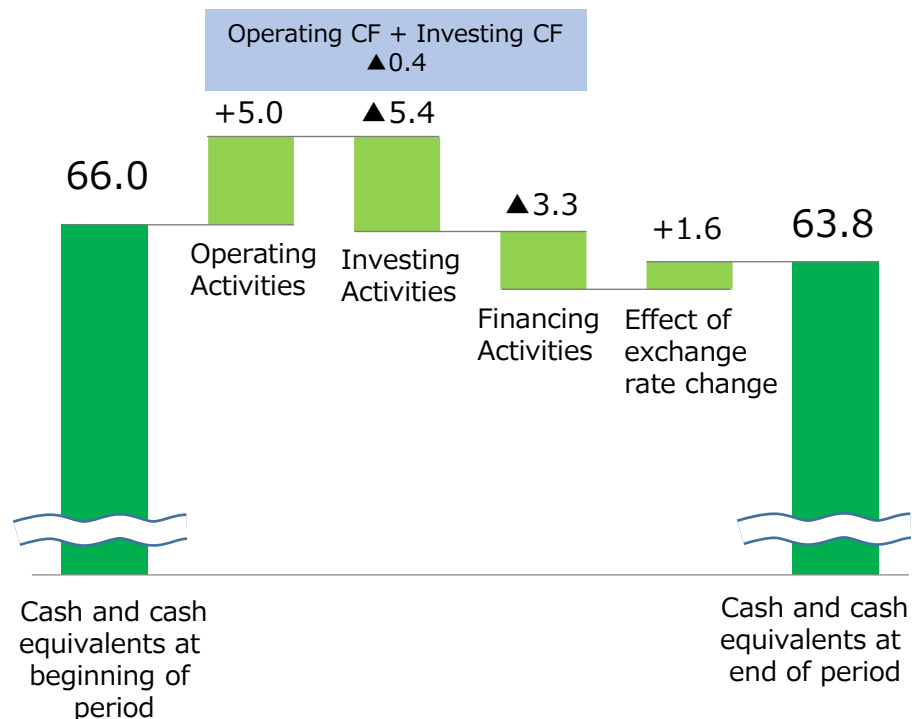


● Turnover (month)	2019/3	2019/9
Receivable-trade	3.0	2.9
Inventories	4.2	4.4

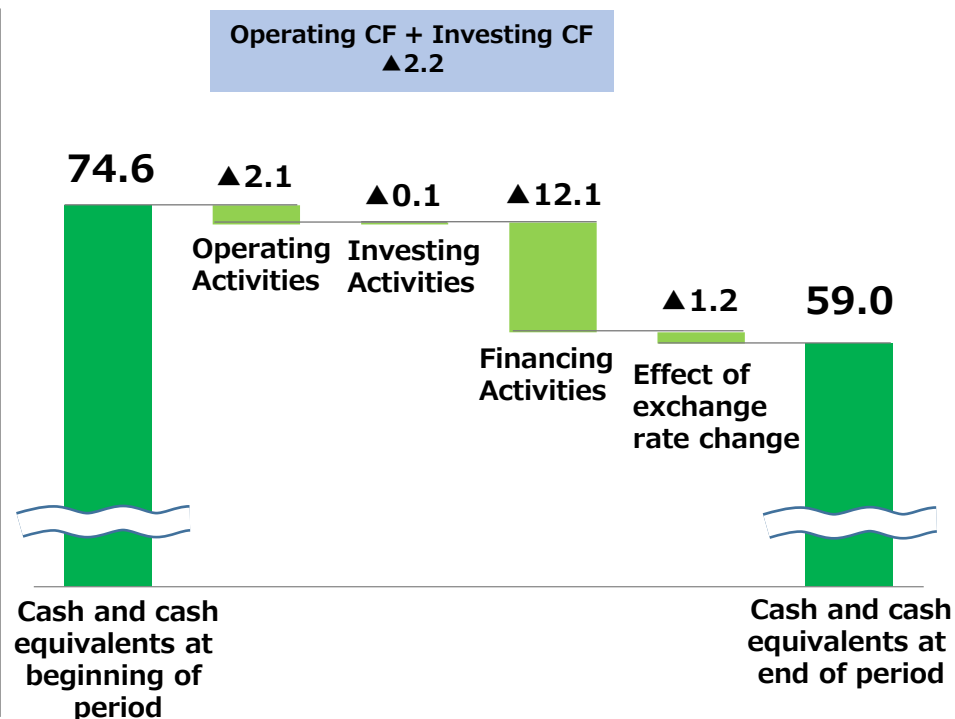
● Equity Ratio (%)	2019/3	2019/9
	69.5	71.1

Reference: Cash Flow

(billion yen)



FY18_1H



FY19_1H

AI	Artificial Intelligence
BGA	Ball Grid Array
COF	Chip on Film
CoO	Cost of Ownership
CPU	Central Processing Unit
DI	Direct Imaging
EUV	Extreme Ultraviolet Radiation
FPD	Flat Panel Display
GPU	Graphic Processing Unit
IoT	Internet of Things
LaPH	Laser Phosphor
OA	Office Automation
OLED	Organic Light Emitting Diode
RGB	Red Green Blue
SGA	Selling and General Administrative Expenses
TNO	The Netherlands Organization of Applied Scientific Research
UV	Ultraviolet
5G	5 th Generation

USHIO

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