



**HAMAMATSU**

PHOTON IS OUR BUSINESS

## Hamamatsu Third Quarter Databook

Fiscal Year ending September 30, 2018



August 2018

Hamamatsu Photonics K.K.

Tokyo Stock Exchange: 6965

[www.hamamatsu.com](http://www.hamamatsu.com)

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## Notes

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# Consolidated income statements for the first 9 months and the year

## Fiscal years ending September 30

Unit :Million Yen

Consolidated	FYE2016 (2015/10-2016/9)				FYE2017 (2016/10-2017/9)				FYE2018 (2017/10-2018/9)			
	First 9 months		Year		First 9 months		Year		First 9 months		Year(Proj.)	
	Y16/6	%	Y16/9	%	Y17/6	%	Y16/9	%	Y18/6	%	Y18/9	%
Net Sales	91,157	100.0	121,852	100.0	95,945	100.0	130,495	100.0	107,642	100.0	144,300	100.0
Cost of Sales	44,580	48.9	60,807	49.9	48,242	50.3	65,670	50.3	51,809	48.1	71,100	49.3
Gross Profit	46,577	51.1	61,044	50.1	47,702	49.7	64,825	49.7	55,833	51.9	73,200	50.7
Selling, G & A Expenses	22,023	24.2	28,627	23.5	22,512	23.5	30,199	23.1	25,164	23.4	33,200	23.0
R & D Expense	8,825	9.7	11,873	9.7	8,707	9.1	11,776	9.0	9,151	8.5	13,400	9.3
Operating Profit	15,727	17.3	20,544	16.9	16,483	17.2	22,849	17.5	21,518	20.0	26,600	18.4
Non-Operating Income	634	0.7	821	0.7	1,164	1.2	1,407	1.1	811	0.8	700	0.5
Non-Operating Expense	922	1.0	1,314	1.1	187	0.2	219	0.2	322	0.3	400	0.3
Ordinary Income	15,439	16.9	20,050	16.5	17,459	18.2	24,037	18.4	22,007	20.4	26,900	18.6
Extraordinary Income	811	0.9	813	0.7	231	0.2	234	0.2	306	0.3	0	0.0
Extraordinary Expense	732	0.8	783	0.6	261	0.3	701	0.5	1,088	1.0	800	0.6
Pre-Tax Income	15,518	17.0	20,080	16.5	17,430	18.2	23,570	18.1	21,225	19.7	26,100	18.1
Income taxes etc.	4,393	4.8	5,660	4.6	4,292	4.5	5,793	4.4	5,494	5.1	6,900	4.7
Net Income	11,124	12.2	14,419	11.8	13,138	13.7	17,777	13.6	15,730	14.6	19,200	13.3
Exchange rate US\$	114.94		111.77		111.37		111.27		110.13		107.50	
Exchange rate EU€	127.33		124.02		120.40		122.91		132.05		131.50	
Exchange rate RMB	18.62		18.09		15.96		16.03		16.92		16.50	

# Consolidated income statements for the first 9 months and the year

## Fiscal years ending September 30

Unit : Million Yen

Consolidated	FYE2017 (2016/10-2017/9)				FYE2018 (2017/10-2018/9)									
	First 9 months		Year		1Q		2Q		3Q		First 9 months		Year(Proj.)	
	Y17/6	%	Y17/9	%	Y17/12	%	Y18/3	%	Y18/6	%	Y18/6	%	Y18/9	%
Net Sales	95,945	100.0	130,495	100.0	34,282	100.0	38,792	100.0	34,568	100.0	107,642	100.0	144,300	100.0
Cost of Sales	48,242	50.3	65,670	50.3	16,631	48.5	18,752	48.3	16,426	47.5	51,809	48.1	71,100	49.3
Gross Profit	47,702	49.7	64,825	49.7	17,650	51.5	20,040	51.7	18,143	52.5	55,833	51.9	73,200	50.7
Selling, G & A Expenses	22,512	23.5	30,199	23.1	8,470	24.7	8,168	21.1	8,526	24.7	25,164	23.4	33,200	23.0
R & D Expense	8,707	9.1	11,776	9.0	3,012	8.8	3,045	7.8	3,094	9.0	9,151	8.5	13,400	9.3
Operating Profit	16,483	17.2	22,849	17.5	6,168	18.0	8,827	22.8	6,523	18.9	21,518	20.0	26,600	18.4
Non-Operating Income	1,164	1.2	1,407	1.1	226	0.7	260	0.7	325	0.9	811	0.8	700	0.5
Non-Operating Expense	187	0.2	219	0.2	53	0.2	211	0.5	58	0.2	322	0.3	400	0.3
Ordinary Income	17,459	18.2	24,037	18.4	6,341	18.5	8,876	22.9	6,790	19.6	22,007	20.4	26,900	18.6
Extraordinary Income	231	0.2	234	0.2	2	0.0	9	0.0	295	0.9	306	0.3	0	0.0
Extraordinary Expense	261	0.3	701	0.5	539	1.6	261	0.7	288	0.8	1,088	1.0	800	0.6
Pre-Tax Income	17,430	18.2	23,570	18.1	5,804	16.9	8,624	22.2	6,797	19.7	21,225	19.7	26,100	18.1
Income taxes etc.	4,292	4.5	5,793	4.4	1,502	4.4	2,497	6.4	1,495	4.3	5,494	5.1	6,900	4.7
Net Income	13,138	13.7	17,777	13.6	4,301	12.5	6,128	15.8	5,301	15.3	15,730	14.6	19,200	13.3

# Consolidated sales by industry and application

## Fiscal years ending September 30

Unit : Million Yen

Industry	Application	FY2016 (2015/10-2016/9)			FY2017 (2016/10-2017/9)				FY2018 (2017/10-2018/9)			
		First 9 months	Year	%	First 9 months	%	Year	%	First 9 months	%	Year (Proj.)	%
Medical Instrument	Rad Med. Diag. Inst. (X-CT, PET, Dental Imaging)	26,601	35,656	29.3	28,108	29.3	37,538	28.8	28,249	26.2	37,963	26.3
	Med Inspection or Monit. Inst. (DNA, Blood Analyzer)	6,271	8,585	7.0	7,139	7.4	9,894	7.6	8,301	7.7	11,767	8.2
	Other Med. Inst.	1,190	1,445	1.2	970	1.0	1,339	1.0	1,326	1.2	1,692	1.2
	Sub Total	34,064	45,686	37.5	36,219	37.7	48,773	37.4	37,877	35.2	51,423	35.6
Industrial Instrument	Semicon. Inst. (Failure Analysis, Stealth Dicing)	11,642	15,470	12.7	12,211	12.7	17,238	13.2	15,341	14.3	20,168	14.0
	Non Destructive Testing	7,392	10,038	8.2	7,827	8.2	10,590	8.1	8,845	8.2	12,038	8.3
	Factory Auto. Inst. (UV Cure, Robotic Encoder)	3,262	4,537	3.7	4,428	4.6	6,178	4.7	5,305	4.9	7,180	5.0
	Other Industrial Inst. (Bank Note Identification)	1,612	1,992	1.6	1,468	1.5	2,148	1.6	1,716	1.6	2,279	1.6
	Sub Total	23,909	32,037	26.3	25,935	27.0	36,155	27.7	31,209	29.0	41,666	28.9
Analytical Instrument	Material, Water, Environment	11,537	14,967	12.3	11,895	12.4	15,986	12.3	13,566	12.6	17,784	12.3
Academic Research	Neutrino/ Dark Matter Detection	4,379	6,027	4.9	5,296	5.5	7,210	5.5	6,592	6.1	8,603	6.0
Measuring Instrument	Radiation Monitoring, Oil Well Logging	4,252	5,627	4.6	4,843	5.0	6,635	5.1	5,858	5.4	7,340	5.1
Transport Instrument	Automobile Sensor, Auto-LAN, ITS	3,717	4,961	4.1	3,622	3.8	4,968	3.8	3,952	3.7	5,262	3.6
Information/Communication	Optical Communication, Printer	1,251	1,784	1.5	1,358	1.4	1,800	1.4	1,275	1.2	1,687	1.2
Optical/Photographic Instrument	Auto Focus, LSM	1,652	2,238	1.8	1,534	1.6	2,055	1.6	1,623	1.5	2,094	1.5
Consumer Instrument	Audio Link & etc.	395	593	0.5	676	0.7	919	0.7	897	0.8	1,223	0.8
Others/Not Classified		6,001	7,932	6.5	4,562	4.8	5,990	4.6	4,790	4.4	7,214	5.0
Total		91,157	121,852	100.0	95,945	100.0	130,495	100.0	107,642	100.0	144,300	100.0

# Consolidated sales by industry and application

## Fiscal years ending September 30

Unit : Million Yen

Industry	Application	FY2017		FY2018				
		First 9 months Y17/6	Year	1Q Y17/12	2Q Y18/3	3Q Y18/6	First 9 months Y18/6	Year (Proj.)
Medical Instrument	Rad Med. Diag. Inst. (X-CT, PET, Dental Imaging)	28,108	37,538	9,466	9,443	9,340	28,249	37,963
	Med Inspection or Monit. Inst. (DNA, Blood Analyzer)	7,139	9,894	2,611	3,270	2,420	8,301	11,767
	Other Med. Inst.	970	1,339	423	518	385	1,326	1,692
	Sub Total	36,219	48,773	12,500	13,231	12,146	37,877	51,423
Industrial Instrument	Semicon. Inst. (Failure Analysis, Stealth Dicing)	12,211	17,238	4,320	5,594	5,427	15,341	20,168
	Non Destructive Testing	7,827	10,590	2,787	3,164	2,894	8,845	12,038
	Factory Auto. Inst. (UV Cure, Robotic Encoder)	4,428	6,178	1,570	1,818	1,917	5,305	7,180
	Other Industrial Inst. (Bank Note Identification)	1,468	2,148	522	556	638	1,716	2,279
	Sub Total	25,935	36,155	9,200	11,134	10,875	31,209	41,666
Analytical Instrument	Material, Water, Environment	11,895	15,986	4,555	4,847	4,164	13,566	17,784
Academic Research	Neutrino/ Dark Matter Detection	5,296	7,210	2,078	2,887	1,627	6,592	8,603
Measuring Instrument	Radiation Monitoring, Oil Well Logging	4,843	6,635	1,788	2,139	1,931	5,858	7,340
Transport Instrument	Automobile Sensor, Auto-LAN, ITS	3,622	4,968	1,288	1,350	1,314	3,952	5,262
Information/ Communication	Optical Communication, Printer	1,358	1,800	464	458	353	1,275	1,687
Optical/ Photographic Instrument	Auto Focus, LSM	1,534	2,055	550	519	554	1,623	2,094
Consumer Instrument	Audio Link & etc.	676	919	321	346	230	897	1,223
Others/Not Classified		4,562	5,990	1,533	1,882	1,375	4,790	7,214
Total		95,945	130,495	34,282	38,792	34,568	107,642	144,300

# Consolidated Sales by Business Segment

Unit : Million Yen

Fiscal Years ending September 30

Incl. inter-segment sales

Year / Segment	FY2017						FY2018				
	1Q Y16/12	2Q Y17/3	3Q Y17/6	First 9 Months Y17/6	4Q Y17/9	Year	1Q Y17/12	2Q Y18/3	3Q Y18/6	First 9 Months Y18/6	Year (Proj.)
Electron tube	11,580	13,451	12,292	37,323	13,126	50,449	13,356	15,369	14,137	42,862	56,900
Opto- semiconductor	14,235	16,089	14,677	45,001	16,525	61,526	16,487	18,073	16,651	51,211	67,900
Imaging and measurement instruments	3,808	5,026	3,789	12,623	4,619	17,242	4,136	4,550	3,357	12,043	17,200
Other (incl. laser and excl. internal sales)	358	406	233	997	280	1,277	302	799	424	1,525	2,300
<b>Total</b>	<b>29,981</b>	<b>34,972</b>	<b>30,992</b>	<b>95,945</b>	<b>34,550</b>	<b>130,495</b>	<b>34,282</b>	<b>38,792</b>	<b>34,568</b>	<b>107,642</b>	<b>144,300</b>

# Electron tube's consolidated performance

Unit : Million Yen

Fiscal Years ending September 30

Incl. inter-segment sales

	FY2017				FY2018							
	First 9 Months Y17/6	%	Year	%	1Q Y17/12	2Q Y18/3	3Q Y18/6	First 9 Months Y18/6	%	Year (Proj.)	%	
Net sales	37,323	100.0	50,449	100.0	13,356	15,369	14,137	42,862	100.0	56,900	100.0	
Cost of sales	16,793	45.0	22,762	45.1	5,867	6,693	6,236	18,796	43.9	25,050	44.0	
Gross profit	20,529	55.0	27,687	54.9	7,489	8,675	7,902	24,066	56.1	31,850	56.0	
Selling, G & A expense	6,229	16.7	8,413	16.7	2,343	2,498	2,433	7,274	17.0	9,750	17.1	
R & D expense	1,690	4.5	2,280	4.5	623	697	705	2,025	4.7	2,850	5.0	
Segment profit	12,609	33.8	16,992	33.7	4,522	5,481	4,763	14,766	34.5	19,250	33.8	



# Opto-semiconductor's consolidated performance

Unit :Million Yen

Fiscal Years ending September 30

Incl. inter-segment sales

	FY2017				FY2018							
	First 9 Months Y17/6	%	Year	%	1Q Y17/12	2Q Y18/3	3Q Y18/6	First 9 Months Y18/6	%	Year (Proj.)	%	
Net sales	45,001	100.0	61,526	100.0	16,487	18,073	16,651	51,211	100.0	67,900	100.0	
Cost of sales	24,241	53.9	33,264	54.1	8,516	9,509	8,271	26,296	51.3	36,200	53.3	
Gross profit	20,759	46.1	28,262	45.9	7,970	8,565	8,379	24,914	48.6	31,700	46.7	
Selling, G & A expense	5,043	11.2	6,905	11.2	1,857	2,003	2,020	5,880	11.5	7,450	11.0	
R & D expense	2,380	5.3	3,201	5.2	746	646	701	2,093	4.1	3,200	4.7	
Segment profit	13,336	29.6	18,155	29.5	5,366	5,916	5,658	16,940	33.1	21,050	31.0	

# Imaging & measurement instrument's consolidated performance

Unit : Million Yen

Fiscal Years ending September 30

Incl. inter-segment sales

	FY2017				FY2018							
	First 9 Months Y17/6	%	Year	%	1Q Y17/12	2Q Y18/3	3Q Y18/6	First 9 Months Y18/6	%	Year (Proj.)	%	
Net sales	12,623	100.0	17,242	100.0	4,136	4,550	3,357	12,043	100.0	17,200	100.0	
Cost of sales	6,458	51.2	8,764	50.8	1,985	2,190	1,576	5,751	47.8	8,450	49.1	
Gross profit	6,164	48.8	8,477	49.2	2,150	2,361	1,781	6,292	52.2	8,750	50.9	
Selling, G & A expense	3,155	25.0	4,268	24.8	1,134	1,056	1,056	3,246	27.0	4,300	25.0	
R & D expense	475	3.8	664	3.9	315	124	148	587	4.9	850	4.9	
Segment profit	2,533	20.1	3,544	20.6	700	1,180	577	2,457	20.4	3,600	20.9	

# Sales by product line 1/2

Fiscal Years ending September 30

in million yen

Consolidated	Product	FY2014 (2013/10-2014/9)		FY2015 (2014/10-2015/9)		FY2016 (2015/10-2016/9)		FY2017 (2016/10-2017/9)		FY2018 (2017/10-2018/9)	
		First 9 months	Year	First 9 months	Year	First 9 months	Year	First 9 months	Year	First 9 months	Year (Proj.)
Electron tube segment	PMT for medical inspection	4,270	5,771	5,125	6,829	4,573	6,142	4,567	6,401	5,338	7,422
	PMT for PET	2,534	3,402	2,940	3,855	2,828	3,702	2,757	3,532	2,405	3,234
	PMT for gamma-ray camera	1,079	1,391	1,142	1,489	1,124	1,483	1,169	1,514	1,116	1,379
	PMT for oil-well logging	2,003	2,490	1,358	1,615	441	511	602	978	1,178	1,276
	PMT for semi-con. & NDT	1,027	1,381	1,145	1,517	1,249	1,556	1,364	1,752	1,451	1,890
	PMT for high-energy physics	1,555	2,108	1,433	1,915	1,266	1,744	1,868	2,810	2,731	3,548
	PMT for radiation monitoring	372	488	566	795	367	506	396	574	383	544
	PMT for analysis	2,647	3,706	3,004	4,064	3,062	3,968	2,731	3,658	3,026	3,845
	Stealth dicing	1,561	2,253	2,066	2,791	1,812	2,375	1,975	2,602	1,982	2,631
	Xe lamp	1,841	2,471	1,976	2,581	1,988	2,703	2,285	3,046	2,590	3,422
	Deuterium lamp	2,570	3,395	2,754	3,635	2,861	3,772	3,008	4,002	3,184	4,285
	Micro-focus X-ray light source	2,219	3,151	2,772	3,761	2,679	3,668	2,912	4,037	3,428	4,554
	Photoionizer	303	380	380	490	353	457	433	562	488	576
	Scintillator (FOS, ACS, ALS)	3,912	4,925	3,959	5,092	3,647	4,823	3,754	5,030	3,890	5,243
	Microchannel plate, fiber optic plate	484	618	411	563	359	476	413	571	481	696
Image intensifier(I.I.)	851	1,088	761	1,091	1,138	1,549	847	1,224	942	1,453	

# Sales by product line 2/2

Fiscal Years ending September 30

in million yen

Consolidated	Product	FY2014 (2013/10-2014/9)		FY2015 (2014/10-2015/9)		FY2016 (2015/10-2016/9)		FY2017 (2016/10-2017/9)		FY2018 (2017/10-2018/9)	
		First 9 months	Year	First 9 months	Year	First 9 months	Year	First 9 months	Year	First 9 months	Year (Proj.)
Opto-semiconductor segment	Si photodiode for medical instrument	6,949	9,022	9,142	12,037	9,898	13,195	9,429	12,286	9,113	12,375
	Photo IC	4,147	5,698	4,612	6,103	4,711	6,417	5,051	7,021	6,222	8,246
	Si photodiode for FA	2,321	3,216	2,505	3,313	2,136	2,998	3,083	4,397	4,029	5,419
	Linear area image sensor	9,576	12,537	8,417	11,023	8,557	11,322	9,485	13,409	11,712	14,997
	Flat panel image sensor	4,618	6,279	4,928	6,628	5,232	7,077	6,952	9,548	6,720	9,307
	Compound semi-conductor	3,155	4,321	3,282	4,360	2,709	3,752	2,797	3,766	3,151	4,162
	Applied products & modules	1,892	2,762	2,282	3,130	2,304	3,223	2,800	3,885	3,462	4,775
	Device for optical communication	331	443	203	279	147	184	136	210	131	212
Imaging and measurement instruments segment	Digital camera device	3,213	4,431	3,836	5,330	3,571	4,440	3,654	4,812	3,631	4,979
	Spectroscopy measurement	1,320	1,887	1,483	1,976	1,151	1,660	1,050	1,502	1,310	1,824
	Measurement for FA	1,428	1,948	1,547	2,027	1,649	2,192	2,197	2,703	1,673	2,250
	System for life science	1,203	1,720	1,343	1,838	1,363	1,831	1,608	2,119	1,717	2,487
	Semi-con. failure analysis	1,699	2,627	2,474	3,962	3,636	4,996	2,964	4,692	2,723	4,365
	Drug screening system	561	793	306	606	577	687	770	895	576	792
	Medical system	408	564	361	454	467	544	358	490	390	503

# Consolidated capital investment, R & D expense and depreciation

Unit :Million Yen

Fiscal Years ending September 30

Consolidated		FY2014		FY2015		FY2016		FY2017		FY2018	
		Amount	Proportion of sales	Amount	Proportion of sales	Amount	Proportion of sales	Amount	Proportion of sales	Amount	Proportion of sales
Capital investment	1Q	4,961	19.0	3,122	10.9	1,441	4.8	4,441	14.8	4,235	12.4
	2Q	7,957	14.0	7,283	11.7	3,888	6.2	6,901	10.6	7,939	10.9
	3Q	12,745	15.4	11,787	13.1	6,513	7.1	11,026	11.5	10,467	9.7
	Year	15,499	13.8	14,338	11.9	9,315	7.6	13,572	10.4	17,200 (Proj.)	11.9
R & D Expense	1Q	2,525	9.7	2,717	9.5	2,748	9.2	2,872	9.6	3,012	8.8
	2Q	5,308	9.4	5,479	8.8	5,862	9.3	5,824	9.0	6,057	8.3
	3Q	8,057	9.7	8,510	9.4	8,825	9.7	8,707	9.1	9,151	8.5
	Year	10,977	9.8	11,615	9.6	11,873	9.7	11,776	9.0	13,400 (Proj.)	9.3
Depreciation	1Q	1,645	6.3	1,633	5.7	2,262	7.6	2,132	7.1	2,184	6.4
	2Q	3,434	6.1	3,585	5.8	4,704	7.5	4,413	6.8	4,566	6.2
	3Q	5,332	6.4	5,902	6.5	7,184	7.9	6,822	7.1	7,151	6.6
	Year	7,396	6.6	8,561	7.1	9,888	8.1	9,441	7.2	10,700 (Proj.)	7.4

## Asia

HAMAMATSU PHOTONICS K.K.

Headquarters

HAMAMATSU PHOTONICS (CHINA) Co., Ltd.

Head Office / Shanghai Branch  
/ Shenzhen Branch

BEIJING HAMAMATSU PHOTON TECHNIQUES INC.

Head Office / Langfang Factory

HAMAMATSU PHOTONICS TAIWAN Co., Ltd.

Hsinchu Office / Kaohsiung Office

## North America

HAMAMATSU CORPORATION

Main Office / California Office / Chicago Office  
/ Boston Office

PHOTONICS MANAGEMENT Corp.

ENERGETIQ TECHNOLOGY, Inc.

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