

# First Quarter Report 2019

Key figures USD thousands (except earnings per share)	Q1 2019	Q1 2018	Q4 2018		
Revenues	390,232	418,206	489,053		
Gross margin in % (adjusted – see footnote 1)	32%	36%	35%		
Result from operations (adjusted – see footnote 1)	23,506	71,385	61,648		
Operating margin in % (adjusted – see footnote 1)	6%	17%	13%		
Net result (adjusted – see footnote 3)	-9,456	92,322	1,687		
Basic / diluted earnings per share in CHF <sup>2)</sup> (adjusted – see footnote 3)	-0.12 / -0.12	1.20 / 1.12	0.02 / 0.02		
Basic / diluted earnings per share in USD (adjusted – see footnote 3)	-0.12 / -0.12	1.15 / 1.08	0.02 / 0.02		
Total backlog (excluding consignment stocks)	288,370	319,598	331,368		

<sup>1)</sup> Excluding acquisition-related and share-based compensation costs.

<sup>2)</sup> Earnings per share in CHF were converted using the average currency exchange rate for the respective periods.

<sup>3)</sup> Net result and earnings per share excluding valuation effect of the option element of the USD convertible bond.

**First quarter revenues at top end of guidance range and operating profitability above guidance despite seasonality; signs of consumer market stabilizing, ongoing customer success in optical and 3D sensing; positive sequential development expected for the second quarter with revenues of USD 390-430 million and higher adjusted operating margin of around 10%**

Report to shareholders on the first quarter of 2019

**Ladies and Gentlemen**

Our first quarter results show an attractive development of revenues and profitability which was again driven by our consumer business. As consumer market demand appears to stabilize, new product ramps in the smartphone market supported our business in the first quarter.

**Financial results**

First quarter group revenues were USD 390.2 million, at the upper end of expectations, down 20% sequentially compared to the fourth quarter 2018 and down 7% from USD 418.2 million in the same quarter 2018. Adjusted gross margin for the first quarter was 32% (excluding acquisition-related and share-based compensation costs) with IFRS reported gross margin at 29% (including acquisition-related and share-based compensation costs), compared to 36% and 33% respectively in the same quarter 2018.

The adjusted result from operations (EBIT) for the first quarter was USD 23.5 million or 6% of revenues (excluding acquisition-related and share-based compensation costs, above previous guidance, while decreasing from USD 71.4 million in the same period 2018 (USD -4.5 million or -1% of revenues including acquisition-related and share-based compensation costs, down from USD 43.0 million in the same period 2018).

Adjusted net income for the first quarter was USD -9.5 million (excluding valuation effect of option element of foreign currency convertible bond), compared to USD 92.3 million for the same period 2018 (first quarter 2019 including valuation effect: USD -9.5 million). Adjusted basic/diluted earnings per share for the first quarter were CHF -0.12/-0.12 or USD -0.12/-0.12 based on 80,235,377/81,864,338 shares (weighted average; first quarter 2019 including valuation effect: CHF -0.12/-0.12 or USD -0.12/-0.12; first quarter 2018: CHF 1.20/1.12 or USD 1.15/1.08 based on 80,064,021/83,082,083 shares, weighted average).

Operating cash flow for the first quarter was USD 96.1 million, significantly up from USD 52.0 million in the same quarter last year. Total backlog on 31 March 2019 (excluding consignment stock agreements) was USD 288.4 million compared to USD 331.4 million at the end of the year 2018 and USD 319.6 million on 31 March 2018.

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### Business overview

Our business performed very well in the first quarter of 2019 with results at the top end or above our expectations. Driven largely by our consumer business we recorded this positive development despite generally more subdued end market environments in addition to typical strong seasonality in the consumer market.

Our consumer business once more provided the largest contribution to our overall results. As the leader in optical sensing our unmatched portfolio spans high performance solutions for 3D sensing including VCSEL (Vertical Cavity Surface-Emitting Laser)-based illumination, high quality display management including behind-OLED and TrueColor technologies, micro-scale proximity sensing, bio- and spectral sensing, and other optical applications.

We are a leading provider of 3D sensing technology supplying significant volumes of 3D sensing solutions to consumer OEMs. We leverage our extensive 3D sensing portfolio and system know-how including 3D hard- and software for all three approaches structured light (SL), time-of-flight (iToF), and active stereo vision (ASV). With a current focus on 3D illumination, we support both front-facing and world-facing 3D systems. As previously indicated, the market is moving along a multi-year adoption timeline for front-facing as well as world-facing 3D sensing where the adoption of front-facing 3D is expanding at a good pace and world-facing 3D sensing, as anticipated, is seeing instances of early adoption.

We are experiencing the anticipated positive momentum for wider adoption of 3D sensing this year. In line with previous comments we saw the start of expected Android smartphone launches that include ams 3D technology in the first quarter. The previously mentioned illumination solution for a world-facing 3D sensing system at a major Android OEM has started volume shipments as expected. As anticipated, we expect additional 3D sensing-enabled Android devices with ams 3D illumination to be launched over the course of 2019. The range of ams 3D solutions across Android devices either already launched or expected to be launched in 2019 comprises several front-facing 3D illumination systems including iToF solutions, the first world-facing illumination solution mentioned above and a first use of ASV. These successes are creating an expanded customer base for our 3D sensing portfolio that includes the world's leading smartphone OEMs. At the same time, they underscore our position as a leading provider of 3D sensing across technologies.

Our advanced high power VCSEL portfolio is a core driver of our market success in 3D sensing. Our VCSEL technology offers advantages for 3D sensing illumination in all technologies SL, iToF and ASV. Moreover and in contrast to VCSEL-focused vendors, we are able to provide full 3D illumination solutions to OEMs which incorporate VCSELs, VCSEL drivers, optics, module design and/or manufacturing. As these solutions offer high differentiation and fully optimized design for performance our capabilities create an additional meaningful competitive advantage. We therefore see ongoing customer traction in 3D sensing where our solution portfolio supports dot projection, pattern projection, different types of flood illumination and ToF proximity sensing. Based on this portfolio covering SL, iToF and ASV we are establishing a strong market position in 3D sensing illumination.

We recently launched an industry-leading long-distance 1D ToF solution which provides accurate distance measurement up to around 2.5 meters. Interest from consumer OEMs is already significant

looking at applications such as laser detect autofocus (LDAF) for smartphone backside cameras. In addition, we are seeing increasing interest from other markets such as IoT.

In display management, our innovative technology for high performance behind-OLED-display proximity and light sensing is a resounding success shortly after launch. We allow OEMs to place light and proximity sensing invisibly behind the OLED display and thus enable maximized screen-to-body ratio and bezel-less phone designs. Several major smartphone platforms launched by different Asian OEMs in the first quarter already use our behind-OLED sensing and shipment volumes are expanding. Removing bezel-placed elements from the front side has become a trend in smartphones. Customer traction therefore continues to be strong and we expect adoption to broaden further from this into next year. At the same time, we are shipping significant volumes of customized TrueColor sensing solutions for advanced display management. Another new area showing good momentum in customer adoption is flicker detection light sensing for smartphone cameras. We have started high volume shipments of these solutions to major Asian OEMs this year. Positioned next to world-facing picture cameras, the detection of artificial light flicker for later elimination enables even higher picture quality in all lighting conditions.

We continue focused development efforts for new optical sensing technologies and applications and see increasing customer traction for our highly differentiated biosensing solution. Here we offer fast high quality measurement of blood pressure, a very valuable health indicator, complemented by heart rate and a range of additional personal health parameters. Our solution provides a comprehensive set of personal health data and is able to support next generation wearables and other mobile devices. We are pursuing several OEM engagements in this area for the next years and expect to complete the certification for medical grade blood pressure measurement in the United States this year. Audio sensing showed a good performance in the first quarter and our other consumer product lines offered positive contributions. We are recording strong OEM interest in our latest active noise cancellation (ANC) innovation which enables high quality noise cancelling for smallest size wireless earbuds.

Our automotive, industrial and medical businesses performed in line with expectations in the first quarter. In automotive, we are seeing a less favorable market environment as demand trends continue to be mixed across world regions. However, focused on safety, driver assistance/autonomous driving, position sensing, and chassis control our sensing solutions cover a range of applications, Tier 1 suppliers, OEMs, and market segments. Significant R&D investments for the reported major 3D LIDAR program for a high power VCSEL illumination system continue this year, supporting advanced true solid-state LIDAR architectures. Our VCSEL illumination capabilities for LIDAR applications are attracting strong interest from a number of major automotive players and we are actively pursuing several engagements in different geographies. We also note increased traction for our VCSEL technology for alternative LIDAR architectures like macro-mechanical spinning solutions and MEMS micro-mirrors as we can help solve systemic challenges. New optical and 2D/3D sensing applications inside the vehicle are gaining momentum and we are engaged in multiple design activities in this field which appears to offer leverage opportunities for our technology portfolio. We also see potential to include global shutter image sensors in upcoming automotive optical sensing. In the growth area of automotive projected lighting, we are expanding our market position in safety and comfort applications such as light carpets outside the vehicle. Here we offer advanced illumination systems leveraging our optics and manufacturing expertise.

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Our industrial business showed an attractive performance in the first quarter, reflecting a limited impact from a less favorable demand situation in industrial end markets. As a leader in high performance industrial sensing we serve a wide range of applications in industrial and factory automation, HABA, other industrial sensing and industrial imaging. This extensive portfolio and application base is proving supportive to our business in the current environment. Industrial imaging where we hold a leading position in high performance global shutter solutions offers attractive growth opportunities for us going forward. Our medical business recorded another solid quarter focused on medical imaging for computed tomography (CT), digital X-ray, and mammography as well as miniature camera endoscopy. Our market penetration in Asia is expanding further as we added another program win at an Asian medical imaging OEM. We are the leader in micro cameras for next generation medical endoscopy and see continued growth in the market for high quality disposable endoscopes.

Implementing last year's strategic decision to de-emphasize our environmental sensing activities in order to focus on mid- and long-term growth opportunities particularly in optical sensing, we recently announced the creation of a joint venture for our environmental, flow and pressure sensor solutions with Wise Road Capital. We will transfer IP, sensor products and solutions, relevant customers and employees to the joint venture and expect the transaction to conclude in early fall 2019.

In operations, we have implemented a range of cost improvement measures in our Singapore operations since the beginning of the year and have started to recognize positive effects from these efforts. We see ongoing benefits from better cost efficiencies in our Singapore manufacturing including lower staffing levels, together with overall improvements in the utilization of these sites. As expected, the attractive VCSEL volumes we anticipate for this year will be fully supported by our outsourced supply chain. Our internal VCSEL production line for new highly differentiated designs is on track for completion and the planned front-end ramp from around the end of this year. Through the combination of scalable outsourced and internal VCSEL capacity we are very well positioned to support expected volume growth in the future. Capital expenditures are developing fully in line with expectations and we are on course for significantly lower capital expenditures that we expect for full year 2019 compared to 2018.

### Outlook

For the second quarter 2019, we expect a positive development of our business as the consumer market environment appears to have stabilized and smartphone demand is expected to show lower seasonal impacts. In addition, we have started to ramp design wins of the recent quarters which drive broadening engagements across our Android customer base. Our other end markets generally reflect a less favorable macro-economic environment and a higher level of cautiousness but are expected to continue their positive contributions.

Based on available information, we expect second quarter revenues of USD 390-430 million, showing attractive sequential growth at the midpoint and a very strong year-on-year increase of 62% at the midpoint. The adjusted operating (EBIT) margin for the second quarter is anticipated to increase strongly on a sequential and year-on-year basis to around 10%, benefitting from further improvements we expect in our manufacturing operations.

## Consolidated Income Statement

(unaudited)

USD thousands (except earnings per share)	Q1 2019	Q1 2018
Revenue Products	373,538	407,269
Revenue Foundry & Other	16,694	10,937
<b>Total revenues</b>	<b>390,232</b>	<b>418,206</b>
Cost of sales	-275,362	-281,580
<b>Gross profit</b>	<b>114,870</b>	<b>136,627</b>
Gross margin in %	29%	33%
Research and development	-79,025	-56,802
Selling, general and administrative	-44,265	-40,390
Other operating income	4,149	3,723
Other operating expense	-44	-106
Result from equity investments	-153	-83
<b>Result from operations</b>	<b>-4,467</b>	<b>42,969</b>
Net financing result	-2,822	29,675
<b>Result before tax</b>	<b>-7,289</b>	<b>72,644</b>
Income tax result	-2,177	-1,454
<b>Net result</b>	<b>-9,466</b>	<b>71,190</b>
Basic / diluted earnings per share in CHF <sup>1)</sup>	-0.12 / -0.12	0.92 / 0.86
Basic / diluted earnings per share in USD	-0.12 / -0.12	0.89 / 0.83

<sup>1)</sup> Earnings per share in CHF were converted using the average currency exchange rate for the respective period.

## Consolidated Balance Sheet

(unaudited)

USD thousands	March 31, 2019	December 31, 2018
<b>Assets</b>		
Cash and cash equivalents	646,619	709,929
Trade receivables	126,447	137,424
Inventories	324,741	351,950
Other receivables and assets	52,601	43,176
Assets held for sale	114,497	0
<b>Total current assets</b>	<b>1,264,904</b>	<b>1,242,479</b>
Property, plant and equipment	1,371,175	1,370,120
Intangible assets	1,380,274	1,387,289
Investments in associates	3,243	3,362
Deferred tax assets	18,568	18,548
Other long-term assets	8,309	8,320
Long-term financial assets	46,219	40,479
<b>Total non-current assets</b>	<b>2,827,787</b>	<b>2,828,117</b>
<b>Total assets</b>	<b>4,092,692</b>	<b>4,070,596</b>
<b>Liabilities and shareholders' equity</b>		
<b>Liabilities</b>		
Interest-bearing loans and borrowings	249,968	249,856
Trade liabilities	151,841	199,737
Tax liabilities	20,277	18,687
Provisions	95,243	91,612
Other liabilities	58,895	63,085
Liabilities associated with assets held for sale	1,161	0
<b>Total current liabilities</b>	<b>577,384</b>	<b>622,978</b>
Interest-bearing loans and borrowings	1,801,087	1,815,839
Employee benefits	46,055	45,786
Deferred tax liabilities	74,002	74,570
Other long-term liabilities	117,008	42,236
<b>Total non-current liabilities</b>	<b>2,038,152</b>	<b>1,978,432</b>
<b>Shareholders' equity</b>		
Issued capital	95,867	95,867
Additional paid-in capital	813,925	806,228
Treasury shares	-164,693	-134,525
Other reserves	21,292	-20,609
Retained earnings	710,764	722,225
<b>Total shareholders' equity and reserves</b>	<b>1,477,156</b>	<b>1,469,187</b>
<b>Total liabilities and shareholders' equity</b>	<b>4,092,692</b>	<b>4,070,596</b>

## Consolidated Statement of Cash Flows

(unaudited)

USD thousands	Q1 2019	Q1 2018
<b>Operating activities</b>		
Result before tax	-7,289	72,644
Depreciation (net of government grants)	76,509	54,653
Expense from stock option plan	8,807	5,390
Changes in other long-term liabilities	1,245	-1,319
Result from sale of plant and equipment	0	-20
Result from investments in associates	153	83
Net financing cost	2,822	-29,675
Change in inventories	22,326	4,205
Change in trade and other receivables	2,607	27,254
Change in trade and other payables	-14,957	-54,617
Change in provisions and employee benefits	5,115	-17,083
Change in deferred income	0	-4,021
Tax payments	-1,254	-5,457
<b>Cash flows from operating activities</b>	<b>96,083</b>	<b>52,036</b>
<b>Investing activities</b>		
Acquisition of intangibles, property, plant and equipment	-87,890	-160,700
Acquisition of subsidiaries net of cash acquired	-9,198	-25,809
Acquisition of other financial investments	0	-2,738
Proceeds from sale of plant and equipment	1	20
Interest received	1,645	700
<b>Cash flows from investing activities</b>	<b>-95,441</b>	<b>-188,527</b>
<b>Financing activities</b>		
Proceeds from borrowings	14,144	0
Repayment of debt	-40,310	-343,120
Repayment of finance lease liabilities	-4,004	-22
Proceeds from issue of convertible notes	0	694,703
Acquisition of treasury shares	-31,382	-122,450
Sale of treasury shares	1,214	11,572
Interest paid	-6,356	-4,597
<b>Cash flows from financing activities</b>	<b>-66,694</b>	<b>236,086</b>
Net increase in cash and cash equivalents	-66,052	99,595
Effects of changes in foreign exchange rates on cash and cash equivalents	2,742	-4,754
Cash and cash equivalents pledged as security	0	36,311
Cash and cash equivalents at begin of period	709,929	327,457
<b>Cash and cash equivalents at end of period</b>	<b>646,619</b>	<b>458,608</b>

## Reconciliation from adjusted figures to reported figures

USD thousands	Q1 2019	Q1 2018
<b>Gross profit – adjusted</b>	<b>126,174</b>	<b>149,951</b>
Acquisition-related costs	-10,535	-12,767
Share-based compensation costs	-769	-558
<b>Gross profit – reported</b>	<b>114,870</b>	<b>136,627</b>
Gross margin in % – adjusted	32%	36%
Gross margin in % – reported	29%	33%
<b>Operating expenses – adjusted</b>	<b>-102,668</b>	<b>-78,566</b>
Acquisition-related costs	-8,605	-7,935
Share-based compensation costs	-8,064	-7,157
<b>Operating expenses – reported</b>	<b>-119,337</b>	<b>-93,658</b>
<b>Result from operations – adjusted</b>	<b>23,506</b>	<b>71,385</b>
Acquisition-related costs	-19,140	-20,701
Share-based compensation costs	-8,833	-7,715
<b>Result from operations – reported</b>	<b>-4,467</b>	<b>42,969</b>
Operating margin in % – adjusted	6%	17%
Operating margin in % – reported	-1%	10%

**First Quarter Report**  
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**Financial statements in EUR**

## Consolidated Income Statement

(unaudited)

EUR thousands (except earnings per share)	Q1 2019	Q1 2018
Revenue Products	328,934	358,638
Revenue Foundry & Other	14,701	9,631
<b>Total revenues</b>	<b>343,635</b>	<b>368,269</b>
Cost of sales	-242,482	-247,957
<b>Gross profit</b>	<b>101,154</b>	<b>120,312</b>
Gross margin in %	29%	33%
Research and development	-69,588	-50,020
Selling, general and administrative	-38,979	-35,567
Other operating income	3,654	3,278
Other operating expense	-39	-93
Result from Equity Investments	-135	-73
<b>Result from operations</b>	<b>-3,934</b>	<b>37,838</b>
Net financing result	-2,485	26,132
<b>Result before tax</b>	<b>-6,419</b>	<b>63,970</b>
Income tax result	-1,917	-1,280
<b>Net result</b>	<b>-8,336</b>	<b>62,690</b>
Basic / diluted earnings per share in CHF <sup>1)</sup>	-0.12 / -0.12	0.92 / 0.86
Basic / diluted earnings per share in EUR	-0.10 / -0.10	0.78 / 0.73

<sup>1)</sup> Earnings per share in CHF were converted using the average currency exchange rate for the respective periods.

## Consolidated Balance Sheet

(unaudited)

EUR thousands	March 31, 2019	December 31, 2018
<b>Assets</b>		
Cash and cash equivalents	569,407	625,158
Trade receivables	111,348	121,015
Inventories	285,964	309,924
Other receivables and assets	46,320	38,021
Assets held for sale	100,825	0
<b>Total current assets</b>	<b>1,113,864</b>	<b>1,094,117</b>
Property, plant and equipment	1,207,445	1,206,516
Intangible assets	1,215,458	1,221,635
Investments in associates	2,855	2,960
Deferred tax assets	16,351	16,333
Other long-term assets	7,317	7,327
Long-term financial assets	40,700	35,645
<b>Total non-current assets</b>	<b>2,490,126</b>	<b>2,490,416</b>
<b>Total assets</b>	<b>3,603,990</b>	<b>3,584,534</b>
<b>Liabilities and shareholders' equity</b>		
<b>Liabilities</b>		
Interest-bearing loans and borrowings	220,120	220,022
Trade liabilities	133,710	175,887
Tax liabilities	17,856	16,455
Provisions	83,870	80,673
Other liabilities	51,862	55,552
Liabilities associated with assets held for sale	1,022	0
<b>Total current liabilities</b>	<b>508,440</b>	<b>548,589</b>
Interest-bearing loans and borrowings	1,586,022	1,599,013
Employee benefits	40,556	40,319
Deferred tax liabilities	65,165	65,666
Other long-term liabilities	103,036	37,193
<b>Total non-current liabilities</b>	<b>1,794,780</b>	<b>1,742,191</b>
<b>Shareholders' equity</b>		
Issued capital	84,420	84,420
Additional paid-in capital	716,736	709,958
Treasury shares	-145,028	-118,462
Other reserves	18,750	-18,148
Retained earnings	625,893	635,986
<b>Total shareholders' equity and reserves</b>	<b>1,300,771</b>	<b>1,293,754</b>
<b>Total liabilities and shareholders' equity</b>	<b>3,603,990</b>	<b>3,584,534</b>

## Consolidated Statement of Cash Flows

(unaudited)

EUR thousands	Q1 2019	Q1 2018
<b>Operating activities</b>		
Result before tax	-6,419	63,970
Depreciation (net of government grants)	67,373	48,127
Expense from stock option plan (acc. to IFRS 2)	7,755	4,746
Changes in other long-term liabilities	1,096	-1,161
Result from sale of plant and equipment	0	-17
Result from investments in associates	135	73
Net financing cost	2,485	-26,132
Change in inventories	19,660	3,703
Change in trade and other receivables	2,296	24,000
Change in trade and other payables	-13,171	-48,095
Change in provisions and employee benefits	4,504	-15,044
Change in deferred income	0	-3,541
Tax payments	-1,105	-4,806
<b>Cash flows from operating activities</b>	<b>84,610</b>	<b>45,823</b>
<b>Investing activities</b>		
Acquisition of intangibles, property, plant and equipment	-77,395	-141,511
Acquisition of subsidiaries net of cash acquired	-8,099	-22,728
Acquisition of other financial investments	0	-2,411
Proceeds from sale of plant and equipment	1	17
Interest received	1,449	617
<b>Cash flows from investing activities</b>	<b>-84,045</b>	<b>-166,015</b>
<b>Financing activities</b>		
Proceeds from borrowings	12,455	0
Repayment of debt	-35,497	-302,149
Repayment of finance lease liabilities	-3,526	-19
Proceeds from issue of convertible notes	0	611,750
Acquisition of treasury shares	-27,635	-107,829
Sale of treasury shares	1,069	10,190
Interest paid	-5,597	-4,048
<b>Cash flows from financing activities</b>	<b>-58,731</b>	<b>207,895</b>
Net increase in cash and cash equivalents	-58,165	87,702
Effects of changes in foreign exchange rates on cash and cash equivalents	2,415	-4,186
Cash and cash equivalents pledged as security	0	31,975
Cash and cash equivalents at begin of period	625,158	288,356
<b>Cash and cash equivalents at end of period</b>	<b>569,407</b>	<b>403,847</b>

## Reconciliation from adjusted figures to IFRS reported figures

EUR thousands	Q1 2019	Q1 2018
<b>Gross profit – adjusted</b>	<b>111,108</b>	<b>132,046</b>
Acquisition-related costs	-9,277	-11,242
Share-based compensation costs	-677	-491
<b>Gross profit – IFRS reported</b>	<b>101,154</b>	<b>120,312</b>
Gross margin in % – adjusted	32%	36%
Gross margin in % – IFRS reported	29%	33%
<b>Operating expenses – adjusted</b>	<b>-90,409</b>	<b>-69,184</b>
Acquisition-related costs	-7,577	-6,987
Share-based compensation costs	-7,101	-6,303
<b>Operating expenses – IFRS reported</b>	<b>-105,087</b>	<b>-82,474</b>
<b>Result from operations – adjusted</b>	<b>20,699</b>	<b>62,861</b>
Acquisition-related costs	-16,855	-18,230
Share-based compensation costs	-7,778	-6,794
<b>Result from operations – IFRS reported</b>	<b>-3,934</b>	<b>37,838</b>
Operating margin in % – adjusted	6%	17%
Operating margin in % – IFRS reported	-1%	10%

# First Quarter Report 2019



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