

## **AIXTRON SE**

### **Analyst Earnings Conference Call**

**9M and Q3/2019 Results**

**October 24th, 2019**

Prepared Remarks

#### **Executive Board**

Dr. Bernd Schulte, President

Dr. Felix Grawert, President

#### **Finance & Administration**

Charles Russell

#### **Conference Call Participants**

Janardan Menon - Liberum

Uwe Schupp - Deutsche Bank

Veysel Taze - Bankhaus Lampe

Charlotte Friedrich – Berenberg

Jürgen Wagner – MainFirst

Malte Schaumann - Warburg Research

The spoken word applies

## **Slide 1, 2 – Operator & Forward-Looking Statements**

### **Operator**

Good morning, ladies and gentlemen, and welcome to AIXTRON's first nine months and third quarter 2019 results conference call. Please note that today's call is being recorded. Let me now hand you over to Mr. Guido Pickert, VP of IR & Corporate Communications at AIXTRON, for opening remarks and introductions.

### **Guido Pickert**

*Investor Relations & Corporate Communications*

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Thank you, operator. Let me start by welcoming you all to AIXTRON's presentation of our nine months and Q3 2019 results. I'd like to welcome our Executive Board represented by Dr. Felix Grawert and Dr. Bernd Schulte, as well as our VP of Finance and Administration, Charles Russell.

As the operator indicated, this call is being recorded by AIXTRON and is considered copyright material. As such, it cannot be recorded or rebroadcasted without permission. Your participation in this call implies your consent to this recording.

As with previous results conference calls, I trust that all participants have our results presentation slide deck, page 2 of which contains the usual Safe Harbor statement. I would like to point out that this applies throughout the conference call.

You may also wish to have a look at our latest IR Master Presentation with additional information on AIXTRON's markets and its technologies. It's also available on our website.

This call is not being immediately presented via webcast or any other medium. However, we will place an audio file of the recording or a transcript on our website at some point after the call.

I would now like to hand you over to Bernd Schulte for opening remarks. Bernd?

## **Slide 3 – 9M/2019 Highlights & Operational Performance**

### **Dr. Bernd Schulte**

*Executive Board*

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Many thanks, Guido, and a warm welcome from my side as well. As usual I will give you an overview of AIXTRON's key developments in the first nine months of 2019. Charles Russell will then go into more detail on the financials. This will then be followed by Felix Grawert who will give an update on OLEDs and Power Electronics as well as a wrap-up.

In Q3, revenues came in at 52 million Euros which meant that we generated 185 million Euros in the first nine months of the year. We also generated solid gross margins of 42% in Q3 and 40% in the first nine months of the year with EBIT in the first nine months totaling EUR 25 million Euros and net income of 20 million Euros.

Q3 revenues have been low mainly due to a longer than expected duration of the process required to obtain export licenses for some of our customers. We are supporting the respective administrative bodies to expedite this process as much as possible.

Due to the uncertain timing of granting the export licenses as well as the potential OLED order and respective revenues having been shifted into next year, we have set our expectation on orders and revenues and - as a consequence of that also on free cash flow - to the low end of the respective original ranges. At the same time, we remain confident to reach our Gross and EBIT margin expectations. We will give you more details on our updated guidance at the end of this presentation.

Orders in the third quarter have picked up from the Q2 trough levels as expected due to demand mainly for Datacom lasers as well as SiC and GaN power electronics. As suggested by our order guidance for the year, we expect order levels to pick up further during Q4. Based on customer agreed shipment schedules and despite the issues with the export licenses, we expect Q4 Revenues to increase to the highest level for this year.

Based on an accelerating adoption of laser based sensing or Time of Flight solutions for smartphones, we believe demand for capacity expansions will increase again accordingly. However, the industry is still absorbing overcapacities. The trend towards faster optical data communication continues so we see healthy demand in this space.

In the development area of MicroLEDs we see good progress being made in the industry towards the commercialization of MicroLED displays – either very large displays or very small displays for wearables.

In any case – we are very well positioned to benefit from this development.

To reiterate what we have said before – we continue to benefit of strong growth drivers in the areas of lasers, power electronics and specialty LEDs. It is important to note that our equipment enables the development and production of key end products and components for major global mega trends such as next generation 5G mobile networks, 3D sensing for mobile phones and power electronics for EVs and renewables as well as next generation MicroLED displays.

In order to secure our positions in these end-markets, I would like to use this opportunity to inform you about our new MOCVD product developments. After we have recently presented our new tool for SiC Power Device manufacturing, we are working

on the development of new MOCVD tools for the key applications of compound semiconductors, including lasers, MicroLED and GaN based power electronics. These developments are an evolution of our leading products and are based on our established platform. All these new products will be fully automated with improved yield and throughput. This will help our customers to improve their cost of ownership further and consequently reduce their production cost and will enable them to address larger markets and broaden the demand for their products.

We will launch our new MOCVD products in the course of 2020 with the target to consolidate our strong positions in our addressed markets.

Felix will elaborate later on the current status of the OLED and Power business.

At this point; let me now hand you over to Charles for a more detailed overview on the 9M/2019 numbers.

## **Slides 4-6 – H1/2019 P&L, Balance Sheet, Cash Flow**

### **Charles Russell**

*Finance and Administration*

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Thanks, Bernd, and hello to everyone.

Starting on Slide 4, our income statement. Total revenues for Q3 2019 were 53 million Euros compared with 63 million Euros in the previous quarter. Gross margin was 42% in the quarter compared to 41% in Q2.

Despite the effect of the low level of sales in relation to fixed costs, margins improved because of the continuing strong dollar, a good sales mix, with a lower proportion of shipments into the display market and continuing cost improvements.

Overall Operating Expense in the quarter remained level at 17 million Euros.

S, G & A expense quarter on quarter was also stable at 7 million Euros.

R&D expense of 15 million Euros was higher than the previous quarters. This was due to higher project related expenses.

Other Operating Income of 5 million Euros in Q3 was mainly R&D grant income of 2.2 million Euros, and currency gains.

EBIT for Q3 was 5 million Euros compared with 9 million Euros in Q2 and Net profit for Q3 was 4 million Euros compared with 7 million Euros in Q2.

Turning to the balance sheet on the next slide.

Inventories of 88 million Euros include around 15 million Euros of prototype systems and Brexit related inventory.

Receivables stand at 33 million Euros which is 44 Days Sales Outstanding.

Advance payments from customers are 44 million Euros, up from the 39 million Euros at the end of Q2. The change is a reflection of the higher order intake in Q3. Advance payments are 41% of the order backlog.

We ended the quarter with 260 million Euros in cash.

Moving to slide 6, which shows our cash flow statement.

We had a free cash flow of 2 million Euros in the quarter. In Q4, assuming no further export delays, we expect to meet our guidance of a positive free cash flow of around 15 million Euros.

With that, let me hand you over to Felix.

## **Slide 7, 8 – Development Projects and Guidance**

### **Dr. Felix Grawert**

*Executive Board*

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Thank you, Charles.

I would like to give you some perspective on recent developments in OLED and Power Electronics before concluding with the outlook for the rest of the year.

Turning to the update on our development projects on slide 7.

With regards to OLED, our Gen2 tool is jointly being operated by a team of engineers of our customer and of our subsidiary APEVA. Together, they are optimizing OLEDs produced with our OVPD Technology as well as the deposition tool. This is an iterative process meaning an OLED is produced, measured and analyzed. Then, the process parameters are adapted and changes to the tool are being made. Finally, the next batch of OLEDs is being produced, insights are gained and used for the next iteration, and so on. With this process, we enhance the performance of our OVPD technology which the customer then evaluates versus the incumbent VTE technology. As this procedure is still ongoing, we do not expect our customer to place a follow up order for a larger tool by the end of this year. We therefore now expect such order to be placed during H1 of 2020.

In the Power Electronics area, we continue to gain momentum. In Gallium Nitride power electronics, we continue to see solid momentum driven by the need of more efficient power management devices, both from consumer electronics and from IT infrastructure. We also continue to see orders driven by the 5G buildup in GaN RF Devices.

In Silicon Carbide, we make very good progress with our fully automated high-throughput system. The tool is running stable in fully automated mode in our laboratory and at customer sites. We continue to further fine-tune the process performance which is already very good. We have obtained orders for this platform from several customers already and have made performance demonstrations to additional customers. We are confident to be on track to successfully address the multi-year market opportunity in power electronics ahead of us.

Let me now come to our outlook for 2019 on slide 8.

We have had a slow start to 2019 in terms of orders, revenues and profitability but we have seen orders picking up again from the trough level in Q3. And as we see broad customer interest in our technology offerings across all applications, we are confident that we will reach the lower ends of our guided ranges for Orders, Revenues and Free Cash Flow. Our profitability targets i.e. gross margin and EBIT margin will remain the same.

Therefore, we today firm up our guidance for orders, revenues and free cash flow. For the reasons given before on Export licenses and OLED as well as customer investment behavior still affected by the geopolitical environment, we now expect to secure total orders for the year of around 220 million Euros and to achieve revenues of around 260 million Euros. Mainly due to the revenue level at the lower end of the range, we now also see total free cash flow for the year at around 15 million Euros. Thanks to our cost control and the strength of the US Dollar, we continue to expect achieving a gross margin of around 40% and an EBIT margin of around 13% - both being at the top end of the originally guided ranges.

Finally, let me assure you that although there is weakness in some of our markets, we have an excellent product portfolio which will be completely renewed in the course of 2020 further enhancing our customers' productivity supporting them to address higher volume market opportunities more efficiently.

With that, I'll pass it back to Guido before we take questions.

**Guido Pickert**

*Investor Relations & Corporate Communications*

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Thank you very much, Felix, Bernd and Charles. Operator, we will now take the questions, please.

## **Question-and-Answer Session**

### **Operator**

Thank you. [Operator Instructions]

And the first question comes from Janardan Menon calling from Liberum. Please go ahead.

### **Janardan Menon**

Hi. Good afternoon. Thanks for taking the question. I just want to dive a little bit more into the silicon carbide side. So you've been qualifying your new platform since late last year and you've said that you're starting to take some orders. But when I look at the market itself, the silicon carbide market seems to be seeing quite a lot of activity in terms of investment, increasing of CapEx by many of the large players, mainly to serve the needs of the automotive market, the electric vehicle market, but also quite a lot into the industrial, solar, et cetera.

I'm just wondering when do we see your orders and revenues now begin to pick up significantly? Is that something that we can expect in the next couple of quarters because your platform is pretty much ready and qualified and the market is quite hot, or is it that it's likely to take more time because there is more qualification to be done, et cetera?

### **Felix Grawert**

Thank you very much for the question. Let me first comment on the timing of our tool and then later on the timing of potential CapEx investment by our customer. Related to the timing of our tool, we brought it in spring this year to customers, not really at the end of last year. So it's not that there's anything wrong or not working. Everything is really on track.

Coming to the second part of the question: it's true that all of the very large player in the power electronics industry are currently announcing plans to build factories, to increase CapEx and to participate in the silicon carbide opportunity. Over the last weeks, we heard multiple announcements from players in Europe and from US players. And all those customers are currently in the process to decide which tools to take. We expect that this decision process is running throughout the fourth quarter of this and the first quarter of next year.

We are part of that. In some cases, we have already been selected, in some other cases the tool evaluation is ongoing. And I think unlike the LED opportunity a couple of years ago, this will translate into orders in stages. Typically, in the power electronics industry, a customer orders one or two tools, qualifies the tools, gains first experience, then orders a second batch, let's say, a larger, single-digit number of tools, and then gradually builds out the factory as real orders are coming from their customers.

So we do not expect to very soon see orders in the magnitude of many tens or even hundreds of tools. We would rather expect orders to come in investment waves of our customers. And I think we will see that picking up and beginning throughout the year of 2020 and to be a multiyear opportunity 2021, 2022, 2023 as the overall silicon carbide market is expected to grow. I think we all know the electrical automotive market analysis and how this market is going to grow.

**Janardan Menon**

So if you look at your order expectation – I'm not asking for guidance here, but for 2020, clearly, two areas which should be, at least on paper today, materially higher than this year would be silicon carbide and, if you get the APEVA order, then that will be also increased year-on-year. Would that be a fair representation?

**Felix Grawert**

Absolutely correct.

**Janardan Menon**

Okay. And then on the OLED side - this I think has been delayed to a certain extent through the course of this year because, initially, the order was expected earlier in the year. And you've said that it's because there is this iterative process going on with the customer where some OLED panels are being produced, et cetera. What is the confidence that it can happen in the first half of next year? What I'm trying to get at is, are you getting a feeling, looking at the kind of changes that you asked, et cetera, that we are reaching the end of that process, or is this something where you don't really have visibility when the end is because the customer may keep on tweaking the requirements for a lot more time to come?

**Felix Grawert**

Very good question from your side. Yes, it's true that we are delayed on the OLED project with respect to the initial schedule. And second, it is exactly as you have outlined, we do expect to reach the end of this qualification process. We have a perspective that this is going to happen throughout the first half of 2020. We do not expect this to be dragging on forever.

**Janardan Menon**

Okay. Because the delay is also costing you as you are continuing to spend a significant amount on R&D on this project as it drags on, right?

**Felix Grawert**

That is absolutely correct.

**Janardan Menon**

Thank you. Just a small last question about your new MOCVD tools – is it one platform across 3D sensing, specialty LED, et cetera, that you're going to launch next year or is it different platform for each of them?

**Bernd Schulte**



We have a platform concept, so we have a high degree of synergies in between the different applications. But we want to have a new product for all the key markets we're addressing, meaning for lasers including indium phosphide, including VCSEL market; but also for MicroLED both for gallium nitride for blue and green, for gallium arsenide or red; as well as for power electronics.

So, this is based pretty much on material system. So, we have a high degree of synergy. Although I'm speaking now a lot of applications, there's a high degree of synergies amongst those platforms. But basically, we address all markets we are currently leading in. And I think the motivation is very clear. We want to stay ahead of the market.

### **Janardan Menon**

Understood. Thank you very much.

### **Operator**

Thank you. The next question for today comes from Uwe Schupp who's calling from Deutsche Bank. Over to you.

### **Uwe Schupp**

Yes. Good afternoon, gentlemen. Two questions also from my side. Firstly, on the export licenses and then secondly a follow-up on OLED. Firstly, regarding the export licenses, I guess the big question is how concerned should we be really? The reason I'm asking is that your tools or some of them have been dual use for ages, but in the past, this was never mentioned as a big issue as far as I can remember. So, I was wondering what has changed here. Does this have to do with the big Chinese customer that is kind of in the newspaper every day, or is something else in the making and do we expect this to be resolved in Q4?

Secondly, on OLED, just on the numbers, how much was the impact from removing OLED from the guidance, particularly on orders I guess or maybe even on revenue? And then maybe also following up on Janardan's question, how should we imagine the process with your customer? Are you working with the customer and, at the same point in time, telling that by 30th of June next year, we need an order or otherwise the project will be dying? Because I remember we have been here before a few quarters ago, where you already said that this will be the last time we will be delayed, and now, it actually keeps on dragging. Thank you.

### **Bernd Schulte**

Thank you Herr Schupp. Let me start with the export license topic. You're perfectly right. Our products are dual use and we require export licenses to most of the countries we serve. The only exception is the European Union, the US, and Japan. For all other countries, we require export licenses.

I think what we're currently seeing is that the process of getting an export license seems to take longer, more or less like a general theme. And we heard from other players in the market that they have similar observations. With that, we do not think it is a fundamental issue. It's more a timing issue. But in general, every customer is an individual case and will be decided by the authorities on an individual basis.

So it is very difficult to comment on because we do not have the visibility into that process. But in general, I would say it is our understanding that it's a timing issue.

**Uwe Schupp**

And that will be mostly related to China, I would guess?

**Bernd Schulte**

We see this, as I mentioned, for every country. I mean, certainly, the process of checking out customers, in particular if you have new customers from China, is typically taking longer than if you have an old established customer from other Asian countries. Like a big company from Korea also, you can imagine that it's a different process.

**Uwe Schupp**

Thank you.

**Felix Grawert**

Let me come to your two questions on the OLED side. So, your first question was how big the impact on the guidance was. The impact on the order intake guidance was a *few tens of millions* that we took out in 2019 and have moved into 2020.

To your second question: Is OLED a never-ending story? The answer to that is, that it clearly has taken us longer than we had expected. This is why we now corrected our expectations. But we clearly do see light at the end of the tunnel and we plan to get there. So, I would say no, it's not a never-ending story but we have a viewpoint where we want to get to and come out of the tunnel the positive way.

**Uwe Schupp**

That's very clear. Thank you.

**Operator**

Thank you. The next question comes from Veysel Taze who's calling from Bankhaus Lampe. Over to you.

**Veysel Taze**

Thank you. Just – I'm not sure if I got that correct, with the export licenses. I mean, is it specific to one product group or is it in general?

**Bernd Schulte**

No. It has not to do with the product, it is related to the customer and the applications he is targeting. So what the authority is checking is what use case the application of the customer has and what the end product is doing.

**Veysel Taze**

And which type of application are you talking about? Maybe I'm missing here something but...

**Bernd Schulte**

As I mentioned, because it is basically going through various applications, that makes us believe it is a timing issue. It's not that we're seeing that a specific application is affected.

**Felix Grawert**

Let me add to what Bernd has said. We do not need an export license for Europe, the US and Japan. For all other countries, we do need an export license for our MOCVD

products. That is, for example, for MOCVD going to Korea or going to Taiwan, we do need it. And for us it is a normal process to apply for that. Within this process, the authorities are checking what the end user is doing with the tool. Then the question is, how fast the authorities are granting the license. That's the standard process.

**Veysel Taze**

Okay. And assuming that would have been on time, what was the impact then in Q3?

**Bernd Schulte**

I would say the impact in Q3 is on a handful of customers.

**Veysel Taze**

And revenue wise?

**Bernd Schulte**

You know our ASPs so you can calculate.

**Veysel Taze**

Okay. And then on OLED, I didn't catch the exact number. Did you say €10 million as value of the OLED order?

**Felix Grawert**

I said a *few tens of million*, it's more than just *ten million*.

**Veysel Taze**

A few tens – okay. Okay. So basically, your base business in terms of order entry, was doing not bad if you strip that out as you can still deliver on the low end of your guidance. Can you tell which parts of the business were doing better in Q3, can you provide a split of the order backlog for Q3 for the different business areas?

**Felix Grawert**

Yes, thank you. We actually fully concur with your statement that our MOCVD business is doing actually quite well, given that OLED order was a significant contribution which has been taken out.

Let me comment to the second part of your question. Equipment Orders in Q3 were roughly about a third for power and we see the power fraction increasing due to the larger megatrend drivers that we discussed earlier already in this call. About 20%-30% came from the LED and MicroLED area, so again there a quite strong momentum. The majority of the total orders came in from the laser area - be it lasers for the telecom/Datacom space, be it lasers for 3D sensing or lasers even for high energy welding or metal cutting applications. A very diverse field, and thus a very healthy mix across different and uncorrelated segments.

**Veysel Taze**

Okay. And then on silicon carbide. You had this five customers. I think you mentioned in the call or in your presentation that you onboarded more customers. Still, if you look at your top five customers, et cetera, what are we talking about in terms of a potential project size that could come through over the next three to five years, let's say? What is the potential? Have you ever made a calculation for that?

**Felix Grawert**

So, let me first comment on the number of customers. You just mentioned the number of five. It's actually quite a bit more than five customers that we have on board for our new tool. And I don't speak for all the legacy customers that we have over the last decade. For our new tool it's clearly more than five customers that we have on board. That shows we are really getting nice and healthy traction.

With respect to the size of the market or the potential, I think in the near-term, it can be somewhere around 40, 50, 60 tools per year for the market. But once again, such a number heavily depends on the exact schedule of our customers to build up their factory. In the power electronics industry, that's typically done step by step rather than setting up, let's say, one big factory with 100 or 200 tools and then dealing with idle capacity for a couple of years. That gives you an idea about the potential.

So, it can be a very healthy and very substantial fraction of our revenue going forward, and that's what we expect.

### **Veysel Taze**

Quick follow-up, you mentioned different phases before. I guess for the top five customers let's say, are you beyond this initial step maybe 1-2 tools to test the process? Would it be fair to assume that most of your top customers are past this process and next step would be rather ordering tools for real production?

### **Felix Grawert**

Our customers are in different stages. So, we do have first customers who are completing the device qualification and moving to the next step, as you were just indicating in your question.

We have other customers who, at this moment, get the first tool installed in their factory, the tool getting hooked up to the gases and electricity, etc. and get started with it. And we have other customers who have made the decision and placed the order – so the piece of paper with the signature just arrived. And others, as I just mentioned, who are in the decision process and make the decision throughout Q4 and Q1, meaning within the next six months. So, it varies really across the board.

### **Veysel Taze**

Okay.

### **Felix Grawert**

And that reflects very much the stage in which the different players of the industry are making their factory buildup which of course is not perfectly synchronized to the quarter. But I would say that you can see the very big momentum. It is very unusual that an investment wave in the power electronics industry over so many players of such an order of magnitude is being so well synchronized means would happen within a small number of quarters.

**Veysel Taze**

Okay. And then on your outlook. In your Q4 expectations for sales and orders, what are the expectations for the different business areas? Which parts are going to drive Q4 in your view?

**Felix Grawert**

Similar to Q3, but exact details I can only tell you in our next quarterly call.

**Veysel Taze**

And then final one. I was wondering on your EBIT outlook, I mean, on a €10 million sales drop, your gross margin improved. And now for Q4, you're expecting roughly €75 million sales. We know that the LED product mix, the LED business, with lower margins will have a smaller impact, but you kind of guide a decline in your Q4 margin. I was wondering what's the background for this?

**Bernd Schulte**

Veysel, you know that in the future we're only forecasting with our budget rates for the Euro at \$1.20.

**Guido Pickert**

And Veysel, can we have the next question here please. We'll clarify more questions in a one-to-one call if you like. Thanks.

**Veysel Taze**

Thank you.

**Operator**

The next question comes from Charlotte Friedrichs who's calling from Berenberg. Over to you.

**Charlotte Friedrichs**

Hello. Thank you for taking my question. First one would be kind of tagging along from the previous question onto order intake in the fourth quarter. You guide for roughly €70 million, which is a material increase from last quarter. Is there any sort of big particular order in there or is this across sort of the end markets that we would normally expect for the fourth quarter now?

**Felix Grawert**

It's across the end markets and different customers. It's not one single big order.

**Charlotte Friedrichs**

Okay. Perfect. And in terms of sort of recent commentary from VCSEL players such as AMS were more optimistic about the demand and also the progress that we've seen with MicroLED, how would you say has your outlook on those end markets changed? Is there more positive sentiment from your customers or how do you see that?

**Bernd Schulte**

I think for MicroLED, let me describe the situation that in the last 12 months, the customer activities and projects have been very much focused on the technical feasibility of the MicroLED device which has now been moving to the manufacturing feasibility. So, it's clearly a step-up in terms of the development of the MicroLED devices and we also see this in discussions with customers. Besides talking about a

single R&D tool, they are now talking about smaller and multiple amounts of tools in order to test productivity and production capability for MicroLED.

With AMS, I guess you're targeting more to the 3D sensing application. I mentioned in my speech briefly that we're seeing that the market still has some overcapacity and the demand for end products needs to further raise that customers need additional capacity. But we are quite confident that this business will regain into order intake in the course of next year.

**Charlotte Friedrichs**

Okay. And then if we look at your order guidance and we strip out OLED that is obviously one big factor, would you also say that any of your end markets remain behind your expectations and that you came down a little bit or would you say excluding the OLED order, your expectations regarding order intake were pretty much satisfied?

**Felix Grawert**

More would always be better, that is clear. So we are not satisfied with the €220 million, that upfront. But there's no specific market that is particularly weak. Well noted nevertheless - the VCSEL market is currently digesting some capacity. But we knew that upfront.

**Charlotte Friedrichs**

Okay. And final question would be around the export licenses. I appreciate you don't necessarily have a lot of visibility on the timing here but sort of very roughly about the sales that didn't come in Q3 - would they now come in Q4 or is this something that would rather slip into Q1, Q2?

**Bernd Schulte**

As I mentioned, it's very difficult to say. We are hopeful that we can clarify the situation in the course of this year, but we can't give a guarantee.

**Charlotte Friedrichs**

No. No. I understand. Thank you very much.

**Operator**

The next question will be from Jürgen Wagner who's calling from MainFirst Bank. Please go ahead.

**Jürgen Wagner**

Good afternoon. Thank you for taking my question. Actually, it's a follow-up to a previous question where you mentioned, 3D sensing still has overcapacity. In your current order book - how much is still related to 3D Sensing or VCSEL production?

And you mentioned also you expect the market to come back next year. When would you expect this market for you to become more competitive while you so far enjoyed more or less a very strong market position?

Thank you.

**Bernd Schulte**

Talking about 3D sensing, I think we still have some orders in the backlog, but obviously, it's not very big. I would say it's a high single-digit million euro number.

Talking about the competitive landscape here. I mentioned our new product initiatives. One motivation here is that we want to stay ahead of the game by coming with products, which allow our customers to produce at lower cost, because that's what they are expecting. Our customers will get more and more pressure to reduce cost also on these high-end devices such as VCSEL, and we have to enable them to do so. And with that, we started already maybe one-and-a-half years ago to develop a new platform based on the current technology which enables our customers to offer products for these end markets at lower cost. And with that, we hope that this opens the possibility to further increase the market opportunity, by lowering the cost. So, in terms of competitive situation, we believe that the new products will be clearly ahead of our current products, which are already leading. And with that, I think the competitive situation should be similar.

**Jürgen Wagner**

So, you would expect when the market comes back, to retain a similar share as you had before?

**Felix Grawert**

That's our expectation. Yes.

**Jürgen Wagner**

Okay. Thank you.

**Operator**

And the last question for today comes from Malte Schaumann, who's calling from Warburg Research.

Over to you.

**Malte Schaumann**

Good afternoon. The first one is again on the Q4 order levels - how strong is your confidence or visibility you have into your pipeline going then into 2020? Obviously, silicon carbide will be an additional driver at one point in time. But would you say that maybe an elevated level around €70 million give or take, would be kind of a base expectation then for Q1 next year already or is it too early to really see a more sustained recovery?

**Felix Grawert**

I would not want to comment yet on 2020. So, we put full focus on our fourth quarter right now and we clearly expect a further recovery towards the fourth quarter and in the next call we'll then discuss the full-year 2020.

**Bernd Schulte**

But as Felix has mentioned, silicon carbide clearly is one of the growth drivers. But also MicroLED, we see definitely as an opportunity going forward. This market is now taking the next step of product development.

**Malte Schaumann**

Okay. With respect to MicroLED – which products are customers actually putting most efforts in? Is it potentially still some smaller displays like watches, et cetera or are first



players already starting to target larger displays, high resolution displays like smartphones, et cetera?

**Bernd Schulte**

I think the markets and the application you can basically see in two camps. One is the camp you mentioned of small displays like watches, et cetera. And the opposite camp is large displays for high-end TV applications. And I'm very confident that you will see big progress in product announcements at next years' CES in January in Las Vegas.

**Malte Schaumann**

Yeah. Okay. Then on your tool renewal, your upgraded platform. What's the focus point that supports capacity? Is it quality? Is it production efficiency? You mentioned lower production cost clearly. What are the driving factors into where you put most effort in?

**Bernd Schulte**

It's mostly yield and throughput. Yield is becoming increasingly important as a cost driver. And what really drives the yield levels up is the automation because automation leads to lower defects. Instead of a manual handling you have an automated handling and that significantly reduces the defects caused by human beings. And secondly, it is certainly the process in the chamber itself always can be improved and improved and improved. And in throughput, of course automation helps you. But the area, we also pay close attention to is to reduce the maintenance cycles. So to reduce the cost for the maintenance but also the time. And with that, I think the throughput can significantly increase.

**Malte Schaumann**

Okay. And would you see them because of that kind of an increase in ASPs as well maybe kind of 30% increase in throughput and 15% increase in ASPs something like that along these lines?

**Bernd Schulte**

That certainly is our target. In particular automation adds a significant value to the tool and for our customers. We're seeing this with our automated tools today like the new tool in silicon carbide but also in gallium nitride, we're getting higher ASPs because the added automation has a significant value to the customer.

**Malte Schaumann**

Yeah. Okay. Good. Thanks.

**Guido Pickert**

With this, I would like to conclude today's call.

Thanks to all of you for attending. I hope to see some of you on the road soon. We are also happy to offer follow-up calls.

Please note that our next earnings call will be on February 24<sup>th</sup> 2020 for our 2019 full year results.

Bye bye.