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IIVI - Q4 2019 II-VI Inc Earnings Call

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PRESENTATION

Operator

Good day, ladies and gentlemen, and welcome to the II-VI Incorporated Q4 and Year-end FY '19 Earnings Conference Call. (Operator Instructions)
As a reminder, this call is being recorded.

I would now like to introduce your host for today's conference, Ms. Mary Jane Raymond, Chief Financial Officer. You may begin.

Mary Jane Raymond - II-VI Incorporated - CFO, Treasurer & Assistant Secretary

Thank you, Skyler, and good morning. I'm Mary Jane Raymond, the Chief Financial Officer here at II-VI Incorporated. Welcome to our fourth quarter and year-end earnings call for fiscal year 2019.

With me today on the call is Dr. Chuck Mattera, our Chief Executive Officer; and Dr. Giovanni Barbarossa, our Chief Technology Officer for fiscal year '19 and for fiscal year '20, our fiscal year -- our new Chief Strategy Officer as the President of our new segment to be called Compound Semiconductor segment.

This call is being recorded on Tuesday, August 13, 2019.

Just as a reminder, any forward-looking statements we may make today during this teleconference are given in the context of today only. We do not undertake any obligation to update these statements to reflect events subsequent to today.

With that, let me turn the call over to Dr. Chuck Mattera. Chuck?

Vincent D. Mattera - II-VI Incorporated - CEO, Principal Operating Officer & Director

Thanks, Mary Jane. Good morning, everyone, and thanks for joining our call to review some of the highlights of our fiscal year '19 and the prospective view of our first quarter fiscal year '20.



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Before we get into it, I want to thank the members of the investment community for engaging us so much since November 9 and getting to understand our value propositions core competencies, sources of sustainable competitive advantage and more about our company culture. I'd like to use a few minutes before I get into it to provide some context.

Fran Kramer and I transitioned to the President and CEO role 3 years ago. Since then, we have carried on in the II-VI tradition of building long-term shareholder value, employee value and customer value one day at a time. It's been a remarkable 3 years as we embarked on our current transformative growth phase.

Our fiscal year '19 was punctuated by growing markets underpinned by large and the irreversible megatrends that we believe will allow us to enable our growing list of customers to win in their markets. Up against this backdrop, we not only delivered solid results, we completed 2 acquisitions each in the optical communications and the aerospace and defense businesses. We completed a strategic collaboration to manufacture GaN on silicon carbide devices. We received many distinguished service awards from key customers, and we continued our leadership development and succession planning to be sure that II-VI maintains a top talent pool to oversee the strengthening of our enterprisewide culture. And we continued to be a company to which people want to dedicate their time and talent.

Our pending acquisition of Finisar has added a substantial engagement with the Finisar team around integration planning of another 30-plus-year industry leader who's engaged employees at the core, remarkably the same as those in II-VI. They care deeply about the positive impact that they can still have on the big challenges that the world is confronting.

As you listen this morning, it has become apparent that we are going to need more time to conclude the transaction. Good things take time, and I remain optimistic and enthusiastic about the combination and to get the company ready to substantially scale to its opportunities and aspirations and enable us to strike a sense of urgency to hit the ground running on day 1. We've organized II-VI on July 1 to get us into a more scalable structure. There were 2 operating segments and core functions that cut across the enterprise. These have the additional advantage that they are also ready to plug and play when Finisar arrives.

Joining me this morning are Mary Jane Raymond, our Chief Financial Officer; and Dr. Giovanni Barbarossa, the President of the Compound Semiconductor segment and first II-VI Chief Strategy Officer. Sunny Sun is the President of the photonics solutions segment. In the fullness of time, we will make these structural and executive leadership changes simple and clear for the investment community by way of subsequent communications. Among the changes, however, I want to acknowledge this morning Gary Kapusta, who served as the Chief Operating Officer during the last few years. Like many others, Gary has a new leadership role, in his case, the Chief Procurement Officer. We are lucky at II-VI to retain his talent as we grow.

Now let's turn to our report. Today, we will give you an overview of our quarterly and annual results and our Q1 FY '20 outlook. Regarding the transaction, as I noted and as noted in our press release, we plan to refile our application to SAMR to extend the time for a successful completion. Both II-VI and Finisar have extensive operations in China, some 12,000 employees in China between our 2 companies, and we serve a wide variety of customers in the China market. With the Phase 3 nearing conclusion, the SAMR process looks to need a little longer to complete. Both companies have a broad and deep footprint in China, and the SAMR process is very interactive with third parties and the companies. We now believe we will be able to conclude during the fall of 2019.

Turning to the results and the outlook. It was another record year for II-VI. For the fiscal year, our revenues grew to \$1.36 billion or 18% annual growth. Our GAAP EPS of \$1.63 per share grew 21% with non-GAAP EPS of \$2.54 a share growing 25%. For the quarter, revenue was a record at \$363 million and grew 13%, and non-GAAP EPS of \$0.67 per share grew 29% year-over-year.

Leading the growth were our optical communications and our military end markets, now called Aerospace and Defense beginning in FY '20. Our revenue in these markets grew 35% and 63%, respectively. We estimate customers accelerated between \$10 million to \$20 million of revenue of optical communications products in Q4 from Q1 to satisfy their strategic planning needs.

In industrial, including automotive, following 40% growth in Q4 FY '18 year-over-year, we experienced about a 20% decline compared to last year's fourth quarter and although it was about flat sequentially.



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For the full year FY '19, optical communications grew 36%. Aerospace and Defense grew 29%. Semiconductor capital equipment grew 12%. Consumer grew 9%, and the industrial market remained flat to the peak achieved in FY '18 when the market grew 20% overall annually. Silicon carbide substrate sales represented 6% of our total revenue and grew 51% compared to FY '18. Across our end markets, we had 26 customers that each bought over \$10 million and accounted for about 50% of our overall sales.

In optical communications, components for ROADM systems led the growth for FY '18 at 60% over -- I beg your pardon, led the growth for FY '19 at 60% over FY '18. Access, submarine and wireless all grew between 10% to 15%. Only Datacom declined for the year overall at about 15%, although we saw some nice growth of over 20% sequentially from Q3 to Q4.

In Aerospace and Defense, our work on new program qualifications in FY '17 and '18 are showing results. Of the 29% growth for the year, 21% was organic. 8% was from the acquisitions we completed during the year. We have begun to experience initial demand for our differentiated products in the high-energy laser systems applications. In semiconductor capital equipment, we have significantly expanded our CVD diamond growth capacity to serve the 27% EUV growth we have for FY '19. This method of advance photolithography is taking hold with customers as a broader number adopt multiple EUV systems due to increased investments in logic components.

The seasonal 3D Sensing ramp is well underway, and we expect record 3D Sensing revenue for fiscal year '20. We have a number of new designs in development and are excited for the expansion of functionality in calendar year 2020.

With respect to our China business, as we noted earlier in the year, we examined the rules and requirements carefully and we served our China -- Chinese customers to the fullest extent allowed under the current regulations. As we look towards the first quarter of FY '20, our guidance includes the potential for some ongoing geopolitical tension, though our customers have continued to engage with us on long-term supply planning -- supply chain planning. As is typical, we expect Q1 seasonality of about 10% revenue decline from Q4.

We believe that fiscal year 2020 will be another exciting and transformative year for II-VI, and we look forward to updating investors on our progress.

With that, I'd like to turn the call over to Giovanni to focus on some of the other highlights of the quarter. Giovanni?

Giovanni Barbarossa - II-VI Incorporated - Compound Semiconductors President & Chief Strategy Officer

Thank you, Chuck, and good morning. 2019 continued as a great year of growing demand for several of our engineered material platforms.

Silicon carbide substrates, CVD diamond optical windows and semiconductor lasers were in high demand, enabling the broad range of rapidly growing applications, such as data center communications, 5G wireless, EUV lithography, 3D sensing, electric vehicles and high-energy laser systems.

It's now been 20 years since we began working on silicon carbide, leading to the introduction in 2015 of the world's first 200-millimeter substrate. This year, we began to ship these large substrates under a program funded by the European Union tasked with developing an ecosystem for silicon carbide base power devices producing 200-millimeter wafers to serve various markets, including the electric vehicles. Revenue for silicon carbide substrates now constitute 6% of our total revenue and continues to grow rapidly.

Last quarter, we entered the second phase of the development of our 6-inch gallium nitride on silicon carbide wafer fabrication capability in Warren, New Jersey to serve the high-performance RF market. At the same time, this year, we're again expanding the manufacturing capacity of our semi-insulating silicon carbide substrate to meet the new internal and external demand. For all silicon carbide substrates production, we have doubled the capacity 3x in the last 5 years.

We've also begun to explore gallium nitride on diamond RF electronics for emerging applications, such as in satellite communications. As the demand for gallium nitride on diamond materializes, we will be able to leverage our diamond manufacturing capacity, which we perfected and scaled to fulfill a 5-year agreement that we announced this year with a major customer in the supply chain for EUV lithography equipment.



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Our CVD diamond technology platform demonstrates our preference for technology investments which will enable differentiated products for a number of market growth opportunities that will emerge over time.

In material processing, II-VI products enable manufacturers to make a lighter and, therefore, more fuel-efficient vehicles with advanced laser processing head that produce welds with minimal [excess] materials in vehicle chassis, closures and battery assemblies. We also expect the ultrahigh strength and lightweight pumps will increasingly be produced by laser additive manufacturing, a growing market for our products using industrial laser which in turn is driving the demand for scandium oxide for which we developed a patent-pending recovery process from waste streams.

Despite weakness in the memory chip market, the pull for EUV lithography systems continued driven by next-generation logic chipsets, which rely on EUV, therefore, creating demand for this technology, which includes significant content of II-VI products.

In 3D Sensing, we've been involved in production for 2 years on a vertically integrated 6-inch VCSEL manufacturing platform. We are in the early stages of a market that is growing rapidly and will continue to do so over multiple years. The convergence of computing, communication and sensing will enable consumers to experience high-quality and real-time augmented reality on smartphones, smart glasses and car windshields.

In addition to ramp of 3D Sensing that Chuck mentioned, we recently signed a partnership agreement with a high-volume optoelectronics packaging leader. This will leverage a new laser platform for LiDAR applications that we will announce in the future.

We have continued to invest in advanced driver assistance systems in self-driving vehicle markets as they continue to evolve and have made progress in developing custom solutions in lasers, optics and integrated modules that rely on our scalable technology platforms.

Our R&D spending in fiscal year '19 increased 19% compared to fiscal '18 from both organic and inorganic investments. About 32% of this growth came from our acquisitions, which added to our capabilities in differentiated components and subsystems for high-energy laser applications and low port-count wavelength selective switches, or WSS.

Our acquisition of CoAdna last September, for example, was very timely. It occurred just before a surge in demand for low port-count WSS in ROADM networks, particularly in China.

We have made significant investments in optical communications products which provide connectivity to the global crowd infrastructures, including between continents through undersea links. This year saw the first-ever deployment of multicore fiber technology in undersea communication systems, which were enabled by our new 800-milliwatt undersea pump lasers. Other undersea deployments included our low port-count WSS, which was the first for II-VI.

This year, we launched a new 400-megawatt version of our flagship uncooled micropump lasers, still the smallest on the market, to enable coherent transmission ranging from 100 gigabits per second to 1 terabit per second and beyond.

We also expanded our wavelength management and monitoring subsystem for the platforms, leveraging our vertically integrated ROADM and monitoring component portfolio, such as optical channel monitors and time -- optical time domain reflectometers. We are excited by the opportunity that our new intelligent subsystems for [current-class] optical monitoring and line transmission will present to our expanding customer base, including hyperscale data center operators particularly in China.

Notwithstanding that Datacom has been soft this year, we remain very confident in the secular growth of data centers driven by the cloud and 5G, and we believe the 5G deployments will boost our entire communications business. In fact, to meet the demand, we opened in November 2018 an additional 300,000 square feet campus in Fuzhou, China to expand our manufacturing capacity and host our new regional headquarters in Asia.

With that, let me turn it over to Mary Jane.



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Mary Jane Raymond - II-VI Incorporated - CFO, Treasurer & Assistant Secretary

Thank you, and good morning. Our press release follows our usual format with the total company numbers for the fourth quarter and the full year on the second page and then the segment information followed on the third page.

We have updated all the operating margins for the segments and the company to adjust for all non-GAAP elements, not just acquisition-related expenses. These are now all adjusted for stock comp and amortization also.

We are reporting our quarter and full year in our fiscal year '19 3 segments. The 10-K will be found in the slide as well. We will produce a historical results table for the new 2 segments by mid-September.

Revenue growth of 13% in the quarter was 8% on an organic basis. Revenue growth of 18% for the fiscal year '19 was 14% on an organic basis. Regionally, for FY '19, North America was about 40% of the total, Europe was 20%, China was 22%. Japan was 9%, and the rest of the world was 9%. All major regions grew in double digits during fiscal year '19. China led the growth regionally at 30% over fiscal year '18, Japan grew 28%, Europe grew 14% and North America grew 11%.

The company's overall gross margin for Q4 was 38.2% and 38.3% annually. The operating margin was 11.2% for the quarter on a GAAP basis and 10.9% for the year, whereas as the non-GAAP operating margin was 15.7% for the quarter and 15.4% for the year advancing 80 and 50 basis points, respectively, compared to their same period last year.

Regarding the segment-adjusted operating margins for fiscal year '19. Laser Solutions was 12.4%, slightly higher than last year. Photonics was 16.7%, 40 points lower than fiscal year '18. And Performance Products was 16.5%, 150 points ahead of last year. The main non-GAAP adjustments in the quarter are stock comp at \$6.8 million, amortization of \$4.6 million and costs associated with acquisitions and acquisition-related planning of \$4.8 million. Both stock comp and integration planning cost were lower in Q4 than we have forecasted.

For the year, these costs were \$25 million for stock comp, \$16.6 million for amortization and \$19.4 million for acquisition and acquisition-related planning. Costs for the planning of the Finisar acquisition was a large portion of the acquisition cost.

Our year-end backlog was \$500 million, consisting of \$221 million in Photonics, \$193 million in Performance Products and \$86 million in Laser Solutions. The backlog contains orders with first ship dates that will ship over the next 12 months. It's probably worth noting that in our specific arrangements for 3D sensing customers, bookings tend to be recorded in the quarter of shipment.

Our \$6.8 million of share-based compensation for Q4 and \$25 million for fiscal year '19 compares to the fiscal year '18 total of \$19.7 million and \$16 million for fiscal year '17. The company had other income for the full year of \$2.6 million, primarily from equity earnings from our investments and interest income on our excess cash reserves. Capital expenditures this quarter were \$29 million and \$137 million for the year.

Full year CapEx for Laser Solutions was \$44 million, for Photonics was \$45 million, for Performance Products is \$40 million, and the remainder was for corporate operations and infrastructure.

By end market and growth products, \$24 million was for silicon carbide, \$24 million for pumps and other key communications components, \$20 million for 3D sensing, \$10 million for the CVD diamond and \$9 million for precision ceramics. The remainder is across all other divisions for a combination of capacity expansion, maintenance capital and infrastructure upkeep.

With respect to amortization and interest expenses related to the convertible debt, the convert remains slightly anti-dilutive after considering the effect of equity compensation on the diluted share count. So the potential share count associated with the convert does not need to be added back to calculate EPS.

The tax rate for the year was 16.5% for fiscal year '19. The reported EPS in the quarter was \$0.43 a share and \$0.67 a share on a non-GAAP basis compared to \$0.42 GAAP in fiscal -- in Q4 fiscal year '18 and \$0.52 on a non-GAAP basis.



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Our cash is \$205 million, and our net debt position is \$262 million. During the year, our acquisitions and investments of \$88 million were completed with cash. We repurchased \$1.6 million of stock for 50,000 shares in the quarter. We have \$29.3 million remaining on our authorization.

Turning to the outlook. The outlook for the first quarter ending September 30, 2019, assuming no Finisar transaction, is revenue of \$320 million to \$345 million; and the EPS on a GAAP-diluted earnings per share basis is \$0.33 to \$0.43. On an adjusted basis, the EPS range is estimated at \$0.55 to \$0.65 to which we have -- we add back \$0.06 for onetime transactions, \$0.07 for amortization costs and \$0.09 for stock compensation. This is all at today's exchange rate. The weighted average share count is 65.7 million shares outstanding.

For the comparison period, results for the first quarter ended September 30, 2018, were revenues of \$314.4 million and GAAP-diluted earnings per share of \$0.40.

Now as we turn to the Q&A for the call, remember that our actual results may differ from these forecasts due to a variety of factors, including but not limited to changes in product mix, customer orders, competition, changes in trade and tariff regulations and general economic conditions. I'll also remind you that our answers to your questions today may contain certain forward-looking statements which are based on our best knowledge today and for which actual results may differ materially.

Skyler, you can go ahead and open the line for questions.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question comes from Samik Chatterjee with JPMorgan.

Samik Chatterjee - JP Morgan Chase & Co, Research Division - Analyst

Can we just start with a quick temperature check on the 2 key end markets that you referred, the industrial and around the fiber optics -- or wireless communication, as you referred to it? I mean you mentioned the strength that you're seeing in optical communication as well as aerospace and defense. I'm just wondering given the kind of some of the weaker industrial metrics we're seeing, where are you seeing maybe pockets of weakness in those 2?

Mary Jane Raymond - II-VI Incorporated - CFO, Treasurer & Assistant Secretary

So as we said, I think your question is to then illustrate industrial. So as we said, industrial was relatively flat for year. If you remember last year, during fiscal year '18, industrial saw some really serious unprecedented growth. I mean it is not typical for the industrial market to grow 20% for the year. And we -- basically, the market sort of hung out of that peak. Generally, I would say that, as you have heard perhaps from others, there is a little bit less demand for new machines in some geographies around the world. We are still seeing reasonably good laser usage, which in our case is typically the driver of the aftermarket sales. But I would say that probably if you think about the growth we saw in 2018, we have the world pretty much suggesting the use of those systems. Giovanni?

Samik Chatterjee - JP Morgan Chase & Co, Research Division - Analyst

Can you maybe give me some color on -- similarly on the wireless communication side? And we are seeing the strength led by kind of the infrastructure investments. Are you seeing any slowdown given the kind of the sanctions on Huawei? Are you seeing any slowdown on that side of things?



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Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

So with respect to just optical communications in general, when we talk about communications in general, first of all, it has been a very, very good year. And as we had noted back when the first restrictions on Huawei came out, the restrictions were a ruling. They weren't a ban, and we were very, very careful in looking at what we were able to do. We would have said that we are seeing with that sort of growth that we are really in the beginning of the 5G build-out. That looks to us to remain well on its way, whether that in the future, in the next few quarters starts to move downward for others geopolitical tensions, as what Chuck mentioned. But generally speaking, it's been a very, very good year in communications in general. Go ahead.

Giovanni Barbarossa - *II-VI Incorporated - Compound Semiconductors President & Chief Strategy Officer*

Yes. Samik, this is Giovanni here. Whether it's 4G or 5G, the drive for our technologies which play into those markets, I want to remind you, we have a semi-insulating silicon carbide substrate that are used for amplifiers that go in base stations. We obviously have all of the optical communication infrastructure that feeds into the 5G and 4G wireless infrastructures and so forth. So if you look at the entire demand for our products that feed into the 4G or 5G, those has been very, very strong.

Samik Chatterjee - *JP Morgan Chase & Co, Research Division - Analyst*

Got it. Can I just -- could I have a quick follow-up on the gross margins? I see on the slide deck you have a forecast for improvement in gross margins in fiscal '20, roughly to the 40% level. How much of that should we think about being kind of an improvement driven by utilization of 3D sensing and if there are other -- any other drivers that really are driving that improvement?

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Okay. Samik, this is Chuck. Thanks for joining us, Samik. I would say you hit it. 3D sensing, the utilization of our fab and our 3D sensing infrastructure will be a major contributor to the margin improvement.

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

I would also make one note for the benefit of the -- of those on the call. From a gross margin point of view, one of the things we noted was the very, very nice growth we're seeing in aerospace and defense. Some of that, particularly for newer systems, particularly high-energy laser systems, some of those arrangements are costs-plus. That does have the benefit that -- the effect of a little bit of downward pressure on the margin because they're cost-plus versus fixed price. But generally speaking, Chuck's answers still stands, which is that the largest driver of the gross margin is 3D sensing.

Operator

Our next question comes from Meta Marshall with Morgan Stanley.

Meta A. Marshall - *Morgan Stanley, Research Division - VP*

First question, just any change in kind of the makeup of the order that you are receiving from China customers? I think we had heard from other market participants perhaps move lower speeds or seen perhaps slowdown in orders from not being able to get the full package. Anything that you were able to note kind of along what the makeup of the orders were?

And then second question, just given the departure of the Finisar CEO, like, was that expected? Or kind of any change to your kind of plans with Finisar post acquisition given management changes?

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Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

This is Chuck. Let me say on the first one, yes, we are as steady as we go in terms of the mix, the demand and the supply chain managers that we interact with in China. So we were worried that we might see a little bit of an interruption based on other people's reports of having suspended their sales, our sales crews right along through the fourth quarter. I think what we're expecting is that we might see a shift to new products beginning in FY '20 for various reasons so we're stepping up our investments to be able to assure that we have a new product platforms to welcome the customers as well.

And as far as Michael Hurlston's departure, the -- I would say that we have been able to, thanks to the Finisar Board and the executive team and Michael himself -- they've all been extremely supportive of our engagement for the planning that we need to do. And I would say that the things on that front are going exceedingly well. Okay?

Operator

And our next question comes from Jim Ricchiuti with Needham and Company.

James Andrew Ricchiuti - *Needham & Company, LLC, Research Division - Senior Analyst*

Quick question. Chuck, I think you alluded to some acceleration from Q1 of \$10 million to \$20 million in -- I believe it was the optical communications area. I wonder if you could just expand on that a little bit.

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Well, we have a portfolio of products we can monitor. And with our interactions with the supply chain people and our customers, we have a good sense for how much they want from us, including for a few quarters out. Our sense is that we were asked to sprint a marathon for the last 3 or 4 weeks in June. And some of that -- because we could and because we had timely expanded our capacity, we were able to serve them. And we think that there was a little bit more that we were asked to do in the fourth quarter and then what we were expecting, and we think that, that probably came from simply a rebalancing on their side of demand from our Q1 to our Q4. In our judgment, it's just about \$10 million to \$20 million. That's the best I can say.

James Andrew Ricchiuti - *Needham & Company, LLC, Research Division - Senior Analyst*

Got it. And then just turning to the industrial business, there's been obviously a lot of focus about demand and pricing in the laser market in China. And I'm wondering, are you seeing any changing, any changes in the pricing environment for the components that you supply customers in China in the industrial laser business?

Giovanni Barbarossa - *II-VI Incorporated - Compound Semiconductors President & Chief Strategy Officer*

Jim, this is Giovanni here. Nothing -- this is a very common trend in price declines and general pressure from the market on being -- remaining competitive. But I wanted to mention industrial that it's -- I would say that China and Europe definitely weaker, and North America is actually strong. So we see -- when we say the general industrial market, I would say, as a whole, it was -- as we said, it was -- it peaked, and we'll see it flat. But it's a combination of all geographies together because there is definitely a quite active -- quite an activity in North America with a very strong economy.

Operator

(Operator Instructions) Our next question comes from Mark Miller with The Benchmark Company.

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Mark S. Miller - *The Benchmark Company, LLC, Research Division - Research Analyst*

I was wondering if you can break out the ROADM sales as a percent of total sales. What was the year-over-year growth and if you can you give us a little more color on the impact of Huawei in the fourth quarter and what you expect this quarter?

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

So I think as Chuck indicated, the sales -- or the growth in communications was largely dominated by the growth in the ROADM component. So with respect to overall growth, I mean I think it's that they were -- they grew probably in excess of 60% for the year, as Chuck said. And also, in terms of their proportion of the absolute total, they're probably in the neighborhood of about 55% to 60% of general communications, which is about where they have been for a while.

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

What was the second part of your question, please?

Mark S. Miller - *The Benchmark Company, LLC, Research Division - Research Analyst*

A little more color on Huawei and what you're expecting this quarter and what happened last quarter.

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Let's see. We -- what we've said is that we are in the Huawei supply chain, but what we have not been able to say more than that. They have been an important customer for us inside that supply chain. We -- that was a driver in the fourth quarter. And I do expect it to slow down just a bit here as we enter into Q1, and that may be part of the story of this rebalancing or acceleration that I referred to earlier. That's the best I can do to give you some color.

Operator

Our next question comes from Sidney Ho with Deutsche Bank.

Shek Ming Ho - *Deutsche Bank AG, Research Division - Director & Senior Analyst*

With regards to your silicon carbide wafer business, I assume you also did not see any impact from the Huawei issue. But have you seen an acceleration of orders from your customers that would indicate share gains for them versus their competitors? And if so, how do you plan on satisfying that demand?

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

This is Chuck. Let me try that. We have -- we believe as we look out into the semi-insulating silicon carbide market, underpinning not just 1 and not just 2 but probably 3 or 4 major adopters of GaN on silicon carbide technology, we, I mean, we have had been extremely busy expanding and shifting some of our capability to serve this semi-insulating silicon carbide market. But our view is that across the board, the acceleration of the adoption of 5G infrastructure in addition to the normal pace of build-out for 4G, but in particular 5G, is stimulating an awful lot of design in work around this technology by quite a few large incumbents. Does that help you?



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Shek Ming Ho - *Deutsche Bank AG, Research Division - Director & Senior Analyst*

Yes, that's helpful. And then as a follow-up to that, if you look at it, let's say over the next 3 to 5 years, what kind of cost improvement for silicon carbide wafers do you expect on an annual basis? And the reason I asked that is because it does seem like there are more competitors entering the market. Just for example, last week, we have a Taiwanese company coming in. So maybe broadly, how do you view the competitive landscape there?

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

I think, first of all, as we look out on the silicon carbide market and we look at the demand we have from our customers, a lot of which is associated with long-term agreements, if not all of it, we look at what our plans are for capacity expansion, which we actually have talked about in the past, comes in a number of ways, not just the addition of machine. We would expect, first of all, be able to maintain the margins over the period as the market matures. While that probably has some interaction between the cost and the pricing, as I said, I think the first thing that's important to understand is that the innovations on how you make silicon carbide come along with the market's increasing demand, and that's important. Otherwise, the world would not have enough capacity. But let me hand it over to Giovanni to pick up from there.

Giovanni Barbarossa - *II-VI Incorporated - Compound Semiconductors President & Chief Strategy Officer*

Yes. We obviously had to remain competitive across the board from, obviously, cost perspective and the quality and capacity and so forth but I want to just state a very important fact that the, ultimately, the quality of the substrate dictates the quality and for the yield of the final product. And the process of qualifying the substrates, it's time-consuming, it's very long. And most of the customers, particularly the largest customers we have, don't want -- we believe they don't want to start what could end up being very expensive cost reductions. So in other words, they could be competitive cost-wise at substrate level which end up being not so profitable at the finished device level. And therefore, the substrate is probably not where the pressure is on cost but is actually more on the processing, the infrastructure and so forth.

So of course, there's going to be pressure to be cost-competitive. But the time it took us, for example, with our most important customer to be designing with our substrates, it was a codevelopment. It took several years, and they will take even more years to be replaced by someone else. So it's a very sticky process. And as the market is ramping, cost is always important, but it's probably not the most important criterion to select alternative suppliers. So we think that the process we went through with our customers basically demonstrated the quality, particularly semi-insulating substrates, and we think that explains why we believe we have the largest share of the RF market at this point with the silicon carbide substrates.

Shek Ming Ho - *Deutsche Bank AG, Research Division - Director & Senior Analyst*

That's super helpful. Maybe just switching gears to EUV stuff. Can you talk about the lead times of your products? That is, as your products shipping today, are they related to product shipped by your customers a quarter out, 2 quarters out, maybe even longer? And have your dollar content changed over time as the tools become more mature?

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Sidney, it's a great question. We believe that our lead times are probably among the shortest in the chain when you look at the entire supply chain for the many products that we make in multiple subsystems of the tool itself. Our understanding from publicly available or disclosed communications by the end customer is that the cycle time for building these tools is really, really quite a long time, as long as 2 years or at least 1 to 2 years, including the burn-in times.

And so we have been ramping, and we have said that we believe that roughly 1% to 2% of the price of the tool is our share both for initial components and then consumable components, we believe that has not changed. We think time will tell, for example, whether or not we have either an increase or decrease in consumable content. But based on what we know, 1% to 2%. And I don't think that we have -- because we talked to both our

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intermediate customer and the end user, and I think that we really don't have an idea just how long it takes for what we make to end up actually in somebody's wafer fab. But my guess is it's probably inside that 1- to 2-year time period. Okay?

Operator

And our next question comes from Dave Kang with B. Riley FBR.

Ku Kang - *B. Riley FBR, Inc., Research Division - Senior Analyst of Optical Components*

My first question is regarding your fiscal first quarter outlook, regarding a sequential decline of approximately \$25 million, \$30 million. Besides Huawei that you talked about, is there anything else that's driving the sequential decline?

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

Well, I think first of all, what we said about our outlook was more that we were expecting that we may have some kind of effects ongoing kind of geopolitical tensions. I don't believe we said Huawei specifically about anything at all. But I think generally speaking, for us, industrial as a general matter typically has a decline of that roughly 10% or more for industrial proper because a lot of the same dynamics that actually drives the fourth quarter, which is that typically the machines go in before the summer shutdown. So that's one thing. And also, from a military point of view, which starts with the end of the fiscal year, we have quite a bit of an increase in our Aerospace and Defense business, and that may shift that seasonality a little bit. But those are really the main factors.

And I think even in years where we have been questioned when the optical cycle -- optical communications cycle has been growing about -- no, no, we shouldn't really see seasonality in Q1. We did have seasonality in Q1, and the year still grew. So I think that's really all there is to it. It's just the typical seasonality that we're expecting. I think we have...

Ku Kang - *B. Riley FBR, Inc., Research Division - Senior Analyst of Optical Components*

Okay...

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

Go ahead, Dave.

Ku Kang - *B. Riley FBR, Inc., Research Division - Senior Analyst of Optical Components*

Go ahead.

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

No, it's all right.

Ku Kang - *B. Riley FBR, Inc., Research Division - Senior Analyst of Optical Components*

So just to be clear, because when Chuck was talking about like \$10 million to \$20 million acceleration in fiscal fourth quarter, I thought maybe that may not repeat so that Huawei might be slowing down. I thought that's what he said but maybe not.



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Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

No. What I said was that we believe that inside this very strong fourth quarter that supply chain managers accelerated their request for us to ship based on our extraordinary ability to scale in the fourth quarter and to satisfy their needs. They asked us to ship what we believe is roughly \$10 million to \$20 million that we think would have come ordinarily either from the schedule first quarter or most of it schedule first quarter and maybe a tad in the second quarter. That's it.

Ku Kang - *B. Riley FBR, Inc., Research Division - Senior Analyst of Optical Components*

Got it. Yes. Okay, understood. And second question is regarding 5G base stations. I believe Huawei was looking into GaN on silicon carbide and also GaN on silicon. Have they decided which route they're going to go with?

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Dave, we believe that the 5G infrastructure, the largest build-outs of 5G infrastructure around the world is -- our belief, will contain, will have the largest content of electronics based on GaN on silicon carbide, not just one provider -- or not just one service provider. That's our belief.

Ku Kang - *B. Riley FBR, Inc., Research Division - Senior Analyst of Optical Components*

Got it. And my last question is, any tariff impact either to U.S. or to China?

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Yes. Give Mary Jane a sec here just to drink some water. Okay, Mary Jane, would you want to...

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

You asked if there's any tariff impact? Sure. I mean when we commented that the tariff on the year or the quarters was not particularly material, that is still the answer. It wasn't particularly material. But I would not like to leave you with a sense that there was 0. I would say this, though, as well. 1, 2, 3, 4 things that are immaterial can still be collectively immaterial. If they keep going, however, where there's 7, 8, 9 immaterial things, that could start to add up. But right now, the impact of tariffs is relatively immaterial if we take them collectively as they apply to II-VI, whether imposed by China or the U.S.

Operator

Our next question comes from Paul Silverstein with Cowen.

Paul Jonas Silverstein - *Cowen and Company, LLC, Research Division - MD and Senior Research Analyst*

Some clarifications before broader questions. First off, Mary Jane, a response to the previous question. Your answer I think was largely backward looking. The short question would be, now that tariffs are going up to 25%, does that change the equation going forward? I trust the answer still not meaningfully individually, although, collectively could have an impact. And I've got 2 other clarifications with broader question.



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Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

Yes. That's right. When we put the comment out that we thought tariffs would be relatively immaterial, we included what would happen if the tariffs moved to the 25%.

Paul Jonas Silverstein - *Cowen and Company, LLC, Research Division - MD and Senior Research Analyst*

Okay. Moving on. Your Photonics book-to-bill and the Performance Products book-to-bill I trust from the previous commentary that you are not concerned, by extension, we should not be concerned with the fact that the book-to-bill is soft quite a bit. Is that the pull-forward of the revenue that Chuck alluded to and mentioned? Is that normal seasonality? What's going on there?

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

Yes. I would say that, basically, there's 3 things that are affecting the book-to-bill across the segment. One was, right, on one hand, the revenue itself was high so that changes the math of the equation of the book-to-bill ratio itself. The fact is that there were higher bookings particularly true in Performance Products in Q2 and Q3. We've always said bookings are a little bit lumpy, but the bookings were huge especially for Performance Products in Q2 and 3. And then, as Chuck said, at roughly \$10 million to \$20 million of revenue, that would have normally been in Q1, let's say. It would have been in Q4 as a booking but, in fact, would be what we would call a book-and-ship. It came in and we shipped it.

Paul Jonas Silverstein - *Cowen and Company, LLC, Research Division - MD and Senior Research Analyst*

Got it. All right. Let me ask a more broader question. If we look beyond 90-day periods and we look out through the full calendar -- excuse me, fiscal '20 beyond, what are the greatest upside opportunities? And I recognize you all have a lot of irons in the fire, you always have, and they seem to be growing. But what are the greatest opportunities? And what are the greatest downside risks?

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

Well, I think it -- we'll all help you here. I think generally speaking, I mean one of the things that's really exciting is that the growth markets that we targeted, silicon carbide, EUV, 3D Sensing are really starting to move. And we continue to see, again, not only growth, for example, in silicon carbide in power, but we also are seeing it on the semi-insulating side for RF. So those really taking root are very [prudent signs for] optical communications, obviously, moving into the beginnings of 5G. It's super exciting given the potential for that to be a sustained trend.

In industrial as well, I mean Giovanni gave a lot of really fantastic color on many of the innovations in advanced machining that are dependent on laser power, notwithstanding -- and there's -- fiscal year '19 was a little bit of a flatter year. All of those things drive for countries around the world, not just individual companies, right, the ability to advance the knowledge economy, advance Industry 4.0, et cetera. So that is making us pretty excited about a lot of things.

Having said that, anything that disrupts trade is disruptive, and you can get to the point where people are uncertain and, therefore, just pause in how they are buying things or planning. So consequently, we do worry about the ongoing political tensions. We certainly look forward to them being resolved satisfactorily. And I think generally speaking, there's any number of things that can happen. We just talked about competition, geopolitical, economics, et cetera. But I'd say, we're fairly excited about all of them. But let me see what Giovanni would like to add.

Giovanni Barbarossa - *II-VI Incorporated - Compound Semiconductors President & Chief Strategy Officer*

Yes. I was a bit concerned about trade relations. Those will -- notwithstanding, we're still very excited about, generally speaking, the optical communications, the upside potential there across the board; the 5G; silicon carbide; electric vehicles; high-energy lasers, where we have -- we've been gaining share there; but also that 3D sensing. I just want to remind everybody, just a couple of years ago, we had [0 share]. So obviously,



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someone's been losing share out there, and we have been growing there, and we grew -- continued to grow our share in the 3D sensing market. And as we said there in the script, we anticipate that for the fiscal '20, our 3D Sensing revenue will be higher than the fiscal '19. So we'll keep growing, and we'll add up to, which I've just said, the other technology platforms which we believe will be boosted by what we call irreversible megatrends which we don't believe will slow down in the next 2 years.

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Yes. This is Chuck. I'd like to -- in particular, I'd like to come to the optical communications space to make 3 points. Number one, we continue to see in '20 as we did in '19 and in '18 a really strong up-cycle on undersea communication network deployments, and we believe that we're extremely well positioned with our portfolio. We believe that will see growth in '20 over -- even over '19, which was a strong year to begin with. We're sold out as it relates to 5G. Our -- the number of our lines, including with thin-film filter lines, which are going to be needed in very large volumes, we are sold out, and we are looking now to be able to expand our capacity quickly to satisfy them. And then finally, you're looking beyond '20. We're going to use this time period where other people may see more uncertainty, and we're going to position our portfolio, and Giovanni alluded to it earlier, you will see us spending more time developing more software-embedded products to be able to satisfy the evolving needs of our customers, including OTDR subsystems or ROADM subsystems and for all optical cross-connect systems. So this is a great, great and exciting moment for us all.

Operator

Our next question comes from Richard Shannon with Craig-Hallum.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

Maybe I'll add to the topic of silicon carbide here. I think if I caught your numbers right from the prepared remarks, silicon carbide grew roughly 50% last year. Wondered if you can give us a sense of what your expectations are for growth there or maybe couch it in terms of what your capacity will enable. And also, if you can talk about the current position or mix of silicon carbide, that's the 6-inch, and where that could go next year.

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

So with respect to -- go ahead, Giovanni. I think first of all, we would expect to continue to see silicon carbide continuing to grow. Whether it's exactly at 50%, I'm not sure I can say, but we certainly expect it to be amongst the elevated growth rates we see, north of 30-ish. Keep going. I'm not saying at 30%. I'm just saying that we expect it to be among the accelerated growers.

And if you think about Giovanni's remarks that we have doubled the capacity 3x in 5 years, we don't tend as a company to put out press releases when we do capacity expansions. We just sort of get on with doing it. But also, capacity expansion happens in a lot of different ways, not just the addition of new machines. And so consequently, I would expect us for a good long time here to be having a significant part of the CapEx dedicated to silicon carbide. As we have said before, we now see demand in RF and power, particularly for electronic vehicles. But our view as a company, I think as you know, is that we do not expect the demand for power use of silicon carbide to be just limited to electric vehicles over the course of time.

Go ahead, Chuck.

Vincent D. Mattera - *II-VI Incorporated - CEO, Principal Operating Officer & Director*

Yes. Richard, I would just add that we think that the yield and throughput -- large increases in yield and throughput need to accelerate. As we look out, this is such a big marketplace that we are underpinning. As we look out over the next 3 to 5 or even 5 to 10 years, the marketplace is woefully inadequate with supply capability of high-quality silicon carbide substrates that the electric vehicle market penetrates deeper and deeper into the



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traditional internal combustion engine market, the world is going to need a lot more capacity than what it has. And we're intending to add more capacity to keep pace with our objectives, which is that this business will be one of the growth engines for II-VI for a long time to come.

Richard Cutts Shannon - *Craig-Hallum Capital Group LLC, Research Division - Senior Research Analyst*

Oaky. Great. Second question on CapEx. Can you give us a sense of what you think of for fiscal '20, either a number or kind of relative to what you just spent for '19?

Mary Jane Raymond - *II-VI Incorporated - CFO, Treasurer & Assistant Secretary*

Well, I think first of all, generally speaking, it's probably in the neighborhood or less of what we had this year. We obviously had some 2 or 3 years here of very elevated CapEx. And I'll just remind everyone that back in 2012, when our revenue was about \$550 million, our CapEx was \$50 million. So CapEx for our company tends to run about 10% of the revenue. Even though I know people look at our number now, for us, more than \$100 million, and think that that's still kind of validated, I think you want to think about that as being 10% of the revenue. So I suspect that it may be at this level and some barge around it, plus or minus \$10 million, probably.

I think at this point, I know we have a lot of other calls of other companies scheduled today. We are at 10:00. I think we probably should move to close. We really want to thank all of you who were with us today and thank you for all of the questions. We look forward to updating you on the results of our first quarter call, first quarter of fiscal year '20, in the early part of November.

Thank you so much for joining, and we'll talk to you soon. Bye-bye.

Operator

Ladies and gentlemen, thank you for your participation in today's conference. This does conclude the program. You may now disconnect. Everyone, have a great day.

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