VIGO Photonics S.A.

Price target: PLN 742.80 | Update | Rating: BUY

Recently, we discussed with VIGO's CFO the company's long-term prospects. 2023 will likely be much better y-o-y on both top- and bottom-line and we expect that the introduction of 3/5 detectors will significantly increase volumes sold especially from 2025E. Although they are 10x cheaper than the current generation of detectors (MCT), we expect that volumes will rapidly grow as existing clients will order more and detectors will be used in more areas. In the next 2-3 years, matrices, another new product that is however more than 20x more expensive than detectors, will likely start contributing several ten million USD of revenues only from Poland, where the government plans significant expansion of its land-based military and increase of defense spending-to-GDP to 4%. Consequently, our expected long-term revenue CAGR for VIGO Photonics goes up from previously 19.9% to 23.9%. This results in a new 12-months PT (70% DCF, 30% peer group) of PLN 742.80 (prev. PLN 439.60) and a BUY rating (REDUCE). On our estimates, VIGO is currently trading at an attractive P/E 2024E = 15.1x. The PEG 2023E ratio equals 0.31.

Q1/23 was strong, with sales and EBITDA growth of 59.9% and 96.4% respectively y-o-y Operating (PLN 5.4m vs. PLN 7.4m in Q1/22) and free cash flow (PLN 3.6m vs. PLN -8.4m) were impacted by higher working capital and much lower CAPEX. As of 31/03/2023, net debt equalled PLN 43.7m (31/12/2022: PLN 47.1m, Q1/22: PLN 37.1m), which corresponds to a reasonable net gearing of 30.1%. According to management, most of the debt is Euro-denominated.

We have increased the revenue CAGR following the discussion with VIGO's CFO. We expect that on the one hand the volumes sold will significantly increase due to the introduction of 3/5 detectors that are even 10 times cheaper than the MCT (HgCdTE) detectors. However, on the other the market introduction of detectors with matrices, which cost c. EUR 30,000 and thus >20x than MCT-based ones, will offset this to some extent. They are supposed to be in high demand due to the plans of the Polish Defense Ministry to significantly increase the number of armored vehicles (e.g. Polish Borsuk, Raki, Kraby) and tanks (K2). In terms of the long-term sales CAGR, we now expect 23.9% compared to 19.9% previously. Our assumption for the target EBIT margin has remained unchanged and equals c. 34%.

in PLNm	2020	2021	2022	2023E	2024E	2025E
Net sales	53.45	71.50	67.87	96.72	119.53	153.94
EBITDA	26.48	29.67	18.07	33.10	51.25	64.40
EBIT	20.23	22.91	8.70	18.87	36.88	49.88
Net income	32.55	30.51	7.22	14.30	28.96	39.58
EPS	44.65	41.85	9.90	19.61	39.73	54.29
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RoE	38.60%	26.32%	5.35%	9.82%	17.31%	19.63%
Net gearing	17.21%	20.81%	34.02%	21.16%	0.02%	-14.62%
EV/Sales	9.00x	6.73x	7.09x	4.97x	4.02x	3.13x
EV/EBITDA	18.17x	16.22x	26.63x	14.53x	9.39x	7.47x
P/E	13.44x	14.34x	60.59x	30.59x	15.10x	11.05x

Company profile

VIGO Photonics is the world market leader in the area of uncooled mid-range infrared photon detectors. With currently c. 170 employees, the company has among others NASA, Caterpillar, ESA, Trumpf and Safran Aerotechnics among its clients. VIGO, which is an offical supplier of subassemblies for NASA, has been listed on the Warsaw Stock Exchange since 2014. Its shares can also be traded on the Frankfut Stock Exchange.

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Website	www.vigo.com.pl
Sector	Technology
Country	Poland
ISIN	PLVIGOS00015
Reuters	VGO.WA
Bloomberg	VGO PW

Share information

Last price	600.00
No of shares (m)	0.73
Market cap. (PLNm)	437.40
Market cap. (EURm)	97.20
52-week range	PLN 678 / PLN 401
Average volume	420

Performance

4-weeks	2.04%
13-weeks	23.71%
26-weeks	24.48%
52-weeks	-2.28%
YTD	32.74%

Shareholder structure

Warsaw Equity Management S.A.	14.27%
Jozef Piotrowski	11.89%
Investors TFI	9.63%
Janusz Kubrak	6.60%
PTE Allianz Polska	5.36%
Miroslaw Grudzien	5.10%
Free float	47.15%

Financial calendar

H1/23 report	September 19, 2023

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Recent results

Revenues and Profitability

After fiscal-year 2022, when sales came in in-line with our estimates and EBITDA and EBIT 17-26% above, in Q1/23 VIGO Photonics' revenues increased by 59.9% to PLN 18.8m, which stemmed both from higher order volumes and a 20% price increase in Q4/22.

The best-performing client groups were those from the Defense sector (+923.6% y-o-y, especially from the long-term clients Safran and PCO S.A.), Semiconductor materials (+192.3%, relates especially to structures for QCL lasers) and Transport (+50.3%). The largest client group was the Industrial sector (59% of total sales, 33.1% sales growth y-o-y). In the industrial segment, VIGO's detectors are used e.g. for the analysis of gases and in the Semiconductor industry.

Between January and April 2023, VIGO's order intake was 10% higher y-o-y and equalled PLN 24.2m.

in PLNm	Q1/23	Q1/22
Detection modules	**17.17**	**11.19**
Share in total sales	*91.6%*	*95.4%*
EBIT margin	17.0%	16.1%
Semiconductor metarials (wafers itd.)	**1.58**	**0.54**
Share in total sales	*8.4%*	*4.6%*
EBIT margin	49.7%	-45.6%
Total revenues	**18.75**	**11.73**

Source: Company information, East Value Research GmbH

in PLNm	Q1/23	Q1/22	change y-o-y
Net sales	**18.75**	**11.73**	59.9%
EBITDA	**6.54**	**3.33**	96.4%
EBITDA margin	*34.9%*	*28.4%*	
EBIT	**3.71**	**1.56**	138.5%
EBIT margin	*19.8%*	*13.3%*	
Net income	**2.50**	**3.61**	-30.7%
Net margin	*13.3%*	*30.8%*	

Source: Company information, East Value Research GmbH

Between January and March 2023, VIGO's EBITDA and EBIT improved by 96.4% to PLN 6.5m and 138.5% to PLN 3.7% respectively y-o-y. The main reason was a strict cost discipline.

Net income, which declined by 30.7% y-o-y to PLN 2.5m, was negatively impacted by a lower net financial result (PLN -698k vs. PLN -540k in Q1/22) and a tax payment of PLN 514k (tax refund of PLN 2.6m).

Balance sheet and Cash flow

At the end of March 2023, VIGO Photonics had consolidated equity worth PLN 141m, which corresponds to an equity ratio of 54.2%. Interest-bearing debt amounted to PLN 46.7m (31/03/2022: PLN 38.7m), thereof 42.7% (43.9%) short-term. Thus, the balance sheet structure slightly improved y-o-y. Fixed assets equalled PLN 116.8m compared to PLN 104.3m at the end of Q1/22. Intangible assets (PLN 81.3m vs. PLN 68.8m) reflected VIGO's proprietary technology relating to semiconductor material, detection chips, mid-wave modules, detectors as well as R&D projects and usage rights. Investments in shareholdings that are co-owned by VGO amounted to PLN 6.6m (Q1/22: PLN 1k) and reflected the VC fund VIGO Ventures, which is a JV between VIGO Photonics and Warsaw Equity Group and has so far invested in 6 international photonic startups. According to VIGO's management, one of the fund's best investments is Fluence, a Polish producer of ultrafast all-fiber femtosecond lasers.

Between January and March 2023, VIGO Photonics generated an operating cash flow of PLN 5.4m compared to PLN 7.4m in the previous year. The reason was especially a much lower cash inflow from receivables y-o-y (PLN 2.8m vs. PLN 8.9m in Q1/22). Cash flow from investing equalled PLN -1.8m (Q1/22: PLN -15.8m) as most planned investment e.g. in a cleaning room were conducted last year. Cash flow from financing (PLN -2.8m vs. PLN 4.3m) reflected a PLN 9.6m higher debt repayment y-o-y. In Q1/23, VIGO Photonics's cash position increased by PLN 770k to PLN 3m.

Financial forecasts

Revenues and Profitability

During our recent meeting VIGO's CFO Lukasz Piekarski explained that many B2B clients were scaling production and increasing their order volumes. Clients work with VIGO because it has the best technology and offers the best quality (according to the CFO, less than 1% of customer orders are currently being returned, down from c. 14% a few years ago).

VIGO sees a large potential for its products especially in the US, where currently Teledyne and Hamamatsu Photonics are No 1 and 2 market players. The company plans to become No 2 in the US. Apparently, after it had started to sell through its own local sales team, its number of customers there increased significantly. Moreover, large US-based defense companies are requesting information on its products. In contrast to the US, in China price is the only factor, which counts, but VIGO can adjust its pricing to customers' expectations.

In terms of products, VIGO still receives by far the most orders for MCT (HgCdTE, highest sensitivity at 2-25 micrometers) detectors. Sales of detectors that are based on 3-5 materials and c. 10 times cheaper than MCT-based ones are developing slower than management had previously assumed. The same holds for epitaxy.

Asked about projects, which could accelerate VIGO's growth in the current decade, Mr Piekarski mentioned matrices of infrared detectors mainly for military applications and integrated sensor systems/circuits for the analysis of gases. While integrated circuits still need 2 years of R&D, prototypes of matrices have already been produced. VIGO could even sell c. 500 units of them per year to the PGZ, a state-owned Polish defense group. Only the Polish army, which is supposed to become the strongest in Europe, plans significant investments in tanks and armored vehicles e.g. Borsuk, Krab, Rak, K2, missiles, which all are equipped with cameras with matrices. According to VIGO's management, each matrice costs up to EUR 30,000 and orders from the Polish army could generate revenues of up to EUR 20m/c. PLN 90m per year at a gross margin of 50-60%.

Below are our updated sales estimates for VIGO Photonics. While we have slightly adjusted our forecasts for 2023E based on the data in the Q1/23 report, we have increased the long-term sales CAGR from previously 19.9% to 23.9% (hist. CAGR 2018-2022 = 16.1%). Although VIGO faces cost pressure from increasing energy, material and personnel costs, our assumption for the target EBIT margin of <34% remains unchanged (hist.: 12.8%-38%) as we believe that the company has implemented effective cost saving measures and new products will generate gross margins of c. 60%. We would like to emphasize that according to its management VIGO Photonics is still using by far not its whole production capacity and there is significant potential for efficiency improvements.

Detection modules: Following the 2022 and Q1/23 results, we have slightly lowered our estimates for 2023E (revenues = PLN 90.8m vs. PLN 90m before, EBIT margin of 20% vs. 21%), but due to the new products, more demand especially from the US and the likely strong demand from the Polish defence sector we have increased our assumption for the long-term sales CAGR from 19.7% to 24.1%. While the matrices are supposed to be much more expensive than the 3-5 and MCT detectors, we have assumed a 2% decline y-o-y of the average price per detector as especially the cheap 3-5 detectors will be a mass product.

Semiconductor materials (e.g. wafers): Given a disappointing 2022 but very strong Q1/23, we now forecast sales of PLN 5.9m (+42% y-o-y) in 2023E and an EBIT margin of 12% (2022: 3.3%), which both are unchanged vs. our previous estimates.

After discussions with management, we have lowered the assumption regarding the long-term sales CAGR from 22% to 19.8% by 2031E. We still believe that the EBIT margin will reach a target value of c. 18% in the long run.

in PLNm	2023E	2024E	2025E
Detection modules	**90.83**	**112.22**	**145.16**
Share in total sales	*93.9%*	*93.9%*	*94.3%*
EBIT margin	20.0%	32.0%	33.5%
Total production capacity	100,000	100,000	100,000
Production volume	17,009	22,452	29,637
Average price (in EUR)	1,200	1,176	1,152
Avg. FX rate	4.45	4.25	4.25
Semiconductor metarials (wafers itd.)	**5.89**	**7.32**	**8.78**
Share in total sales	*6.1%*	*6.1%*	*5.7%*
EBIT margin	12.0%	13.3%	14.3%
Total yearly production	1,103	1,434	1,721
Average price (in EUR)	1,200	1,200	1,200
Avg. FX rate	4.45	4.25	4.25
Total net sales	**96.72**	**119.53**	**153.94**
(change y-o-y)	42.5%	23.6%	28.8%

Source: East Value Research GmbH

	2023E			2024E		2025E	
in PLNm	new	guid.	old	new	old	new	old
Net sales	**96.72**	**100.00**	**95.92**	**119.53**	**116.95**	**153.94**	**140.34**
EBITDA	**33.10**	**40.00**	**32.44**	**51.25**	**48.99**	**64.40**	**60.36**
EBITDA margin	*34.2%*	*40.0%*	*33.8%*	*42.9%*	*41.9%*	*41.8%*	*43.0%*
EBIT	**18.87**		**19.61**	**36.88**	**36.03**	**49.88**	**47.27**
EBIT margin	*19.5%*		*20.4%*	*30.9%*	*30.8%*	*32.4%*	*33.7%*
Net income	**14.30**		**13.69**	**28.96**	**27.08**	**39.58**	**36.10**
Net margin	*14.8%*		*14.3%*	*24.2%*	*23.2%*	*25.7%*	*25.7%*

Source: East Value Research GmbH

in PLNm	Q1/20	Q2/20	Q3/20	Q4/20	*2020*
Net sales	**12.40**	**13.90**	**12.89**	**14.26**	***53.45***
y-o-y change	*8.3%*	*64.5%*	*8.2%*	*28.8%*	*24.6%*
EBITDA	**5.48**	**6.96**	**5.86**	**8.17**	***26.48***
EBITDA margin	*44.2%*	*50.1%*	*45.5%*	*57.3%*	*49.5%*
EBIT	**3.98**	**5.41**	**4.29**	**6.55**	***20.23***
EBIT margin	*32.1%*	*38.9%*	*33.3%*	*45.9%*	*37.8%*
Net income	**2.63**	**5.58**	**3.83**	**20.51**	***32.55***
Net margin	*21.2%*	*40.2%*	*29.7%*	*143.8%*	*60.9%*

in PLNm	Q1/21	Q2/21	Q3/21	Q4/21	*2021*	Q1/22	Q2/22	Q3/22	Q4/22E	*2022E*	Q1/23
Net sales	**14.58**	**18.01**	**16.65**	**22.25**	***71.50***	**11.73**	**20.31**	**16.28**	**19.56**	***67.87***	**18.75**
y-o-y change	*17.6%*	*29.6%*	*29.2%*	*56.0%*	*33.8%*	*-19.6%*	*12.7%*	*-2.2%*	*-12.1%*	*-5.1%*	*59.9%*
EBITDA	**6.84**	**8.25**	**8.91**	**5.66**	***29.67***	**3.33**	**7.03**	**4.63**	**3.08**	***18.07***	**6.54**
EBITDA margin	*46.9%*	*45.8%*	*53.5%*	*25.4%*	*41.5%*	*28.4%*	*34.6%*	*28.4%*	*15.7%*	*26.6%*	*34.9%*
EBIT	**5.20**	**6.56**	**7.21**	**3.94**	***22.91***	**1.56**	**3.78**	**3.00**	**0.37**	***8.70***	**3.71**
EBIT margin	*35.7%*	*36.4%*	*43.3%*	*17.7%*	*32.0%*	*13.3%*	*18.6%*	*18.4%*	*1.9%*	*12.8%*	*19.8%*
Net income	**4.91**	**7.02**	**8.61**	**9.98**	***30.51***	**3.61**	**4.68**	**4.75**	**-5.81**	***7.22***	**2.50**
Net margin	*33.6%*	*39.0%*	*51.7%*	*44.8%*	*42.7%*	*30.8%*	*23.0%*	*29.2%*	*-29.7%*	*10.6%*	*13.3%*

Source: Company information, East Value Research GmbH

CAPEX and Working capital

As according to management most investments have already been conducted, we have lowered our (gross) CAPEX forecasts. We now assume PLN 46.7m (previously: PLN 48.5m) in 2023E and PLN 29m (PLN 30.8m) in 2024E. In the long run, we believe that gross CAPEX will equal c. 20% of annual sales compared to 62.8% in 2022.

Regarding working capital, we expect that the cash conversion cycle will equal 60 days in the long run (2022: 246 days).

Valuation

We have valued VIGO Photonics by using a weighted average of a DCF model (70% weight) and peer-group-based fair value (30%). With higher long-term growth assumptions, our new 12-months PT for the stock is PLN 742.80 (previously: PLN 410.40). This implies an upside of 23.8% at present and a BUY rating (previously: REDUCE).

Below are the key assumptions of our WACC calculation:

(1) *Risk-free rate*: Current yield of Polish long-term government bonds with maturity in 2047E is 6.47% (Source: www.boerse-stuttgart.de)
(2) *Beta*: Average 4-year unlevered beta of companies from the Semiconductor sector of 1.45x
(3) *Levered beta*: 1.74x
(4) *Equity risk premium (Poland)*: 7.4% (Source: www.damodaran.com)
(5) *Target equity ratio*: 80%
(6) *After-tax cost of debt*: 4.9%
(7) *Cost of equity*: 19.4%
(7) *WACC*: 16.5%
(8) *Sales growth in the terminal period*: 2%
(9) Free cash flows and residual values are discounted to May 24, 2023

DCF model

in PLNm	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E
Net sales	**96.72**	**119.53**	**153.94**	**196.89**	**250.06**	**315.32**	**394.71**	**490.44**	**584.00**
(y-o-y change)	42.5%	23.6%	28.8%	27.9%	27.0%	26.1%	25.2%	24.3%	19.1%
Operating profit	**18.87**	**36.88**	**49.88**	**66.83**	**84.91**	**107.07**	**133.97**	**166.01**	**196.90**
(operating margin)	19.5%	30.9%	32.4%	33.9%	34.0%	34.0%	33.9%	33.8%	33.7%
NOPLAT	**15.29**	**29.87**	**40.40**	**54.13**	**68.78**	**86.73**	**108.52**	**134.47**	**159.49**
+ Depreciation & amortisation	14.23	14.37	14.52	14.66	14.81	14.96	15.11	15.26	15.41
= Net operating cash flow	29.52	44.24	54.92	68.80	83.59	101.68	123.62	149.73	174.90
- Total investments (Capex and WC)	-37.00	-11.98	-23.22	-26.68	-26.89	-26.32	-35.09	-38.03	-32.47
Capital expenditures	-46.73	-28.97	-46.17	-54.18	-63.72	-74.99	-88.15	-103.33	-101.49
Working capital	9.73	16.99	22.95	27.49	36.83	48.67	53.06	65.30	69.01
= Free cash flow (FCF)	-7.48	32.26	31.70	42.11	56.70	75.36	88.53	111.70	142.43
PV of FCF's	**-6.82**	**25.26**	**21.31**	**24.31**	**28.10**	**32.07**	**32.34**	**35.04**	**38.36**

PV of FCFs in explicit period	229.96
PV of FCFs in terminal period	297.69
Enterprise value (EV)	**527.65**
+ Net cash / - net debt (31 March 2023)	-43.68
Shareholder value	**483.97**
Number of shares (m)	**0.73**
WACC	**16.5%**
Cost of equity	19.4%
Pre-tax cost of debt	6.0%
Normal tax rate	19.0%
After-tax cost of debt	4.9%
Share of equity	80.0%
Share of debt	20.0%
Fair value per share in PLN	**663.89**
Fair value per share in PLN (in 12 months)	**773.21**

WACC \ Terminal EBIT margin	30.7%	31.7%	32.7%	33.7%	34.7%	35.7%	36.7%
12.5%	1186.66	1213.46	1240.25	1267.05	1240.25	1213.46	1186.66
13.5%	1039.74	1062.40	1085.07	1107.73	1085.07	1062.40	1039.74
14.5%	918.27	937.60	956.93	976.26	956.93	937.60	918.27
15.5%	816.47	833.08	849.68	866.28	849.68	833.08	816.47
16.5%	730.15	744.51	758.86	**773.21**	758.86	744.51	730.15
17.5%	656.23	668.70	681.17	693.64	681.17	668.70	656.23
18.5%	592.36	603.25	614.14	625.03	614.14	603.25	592.36
19.5%	536.76	546.31	555.86	565.41	555.86	546.31	536.76

Source: East Value Research GmbH

Peer Group Analysis

Below is a list of comparable companies to VIGO Photonics, of which six are listed and have sell-side estimates.

Listed peers:

(1) *Hamamatsu Photonics K.K.*.: Hamamatsu Photonics, which is based in Hamamatsu/Japan, manufactures and sells photomultiplier tubes, imaging devices, light sources, opto-semiconductors, and imaging and analysing systems. In 2021/2022, the company generated revenues of JPY 208.8bn and a ROCE of 14.8%. Currently, its market capitalisation equals JPY 1132bn.

(2) *Teledyne Technologies Inc.*: Teledyne, which is based in Thousand Oaks/US, operates through the following segments: (1) Instrumentation: offers monitoring and control instruments for marine, environmental, industrial segments, among others, (2) Digital Imaging: among others, provides visible spectrum sensors and digital cameras for industrial machine vision and automated quality control, as well as for medical, research, and scientific applications, (3) Aerospace and Defence Electronics: provides electronic components and subsystems, as well as communications products, (4) Engineered Systems: offers systems engineering and integration, technology development, and manufacturing solutions for defence, space, environmental, and energy applications. In 2022, Teledyne generated revenues of USD 5.5bn and a ROCE of 6.1%. Currently, the company's market capitalisation equals USD 19.6bn.

(3) *OPTEX Group Company Ltd.*: OTSU Group, which is based in Otsu/Japan, develops, manufactures, and sells security sensors and automatic door sensors worldwide. It operates through Sensing Solution, Industrial Automation, and Electronic Manufacturing Service business segments. In 2022, OPTEX generated revenues of JPY 54.8bn and a ROCE of 10.9%. The company's current market capitalisation equals JPY 70.7bn.

(4) *Visual Photonics Epitaxy Co. Ltd.*: Visual Photonics, which is based in Taoyuan City/Taiwan, offers GaN epi wafers, VCSEL epi wafers, solar cell epi wafers, and customized epi foundry services, among others. In 2022, the company generated revenues of TWD 2.6bn and a ROCE of 12.6%. Visual Photonics' current market capitalization equals TWD 17.7bn.

(5) *Coherent Corp.*: Coherent (previously II-VI), which is based in Saxonburg/US, develops, manufactures, and distributes engineered materials, optoelectronic components, and devices worldwide. It operates through two segments: Compound Semiconductors and Photonic Solutions. The Compound Semiconductors segment provides optical and electro-optical components and materials used in high-power CO2 lasers, fiber-lasers, and direct diode lasers for materials processing applications; infrared optical components and high-precision optical assemblies for aerospace and defense, medical, and commercial laser imaging applications; semiconductor lasers and detectors for optical interconnects and sensing applications; engineered materials for thermoelectric, ceramics, and silicon carbide various applications; and compound semiconductor epitaxial wafers for applications in optical and wireless communication. The Photonic Solutions segment manufactures transceivers for data centers and telecom optical networks; pump lasers, optical amplifiers, crystal materials, optics, lasers, and optoelectronic modules, among others. In 2021/2022, II-VI generated revenues of USD 3.3bn and a ROCE of 5%. Its current market capitalization is USD 4.5bn.

(6) *IPG Photonics Corp.*: IPG Photonics, which is based in Oxford/US, develops and manufactures a range of high-performance fiber lasers, fiber amplifiers, and diode lasers used primarily in materials processing. The company's products include among others high power lasers, fiber coupled direct diode laser systems, high-energy pulsed lasers, multi-wavelength and tunable lasers, high power optical fiber delivery cables, fiber couplers, beam switches, erbium-doped fiber and Raman amplifiers, ytterbium and thulium specialty fiber amplifiers and broadband light sources. In 2022, IPG Photonics generated revenues of USD 1.4bn and a ROCE of 7.4%. Its current market capitalization equals USD 5.4bn.

Privately-held peers:

(7) *Infrared Associates Inc.*: Infrared Associates, which is based in Stuart/US, offers a variety of standard HgCdTe and InSb Infrared Detectors as well as custom devices that cover the wavelength range from 1 to 25 microns. Its devices are used by customers from the sectors Healthcare, Environmental Services and Industry. The company has clients in the US, Europe and Asia.

(8) *Excelitas Technologies Corp.*: Excelitas Technologies, which is based in Mississauga/Canada, provides photonic detectors, thermal infrared sensors, imaging lenses & systems, LED systems, high energy switches and lasers, among others. The company has offices in North America, Western Europe, Brazil and Asia.

	EV/Sales		EV/EBITDA		P/E		P/BVPS	EBITDA margin	Net gearing
Company	**2023E**	**2024E**	**2023E**	**2024E**	**2023E**	**2024E**	**Latest**	**Last FY**	**Latest**
Hamamatsu Photonics K.K. (JPY)	4.41x	4.22x	13.93x	13.19x	26.92x	26.23x	3.87x	33.76%	-37.40%
Teledyne Technologies Inc. (USD)	4.00x	3.83x	16.41x	15.39x	26.29x	23.97x	2.36x	24.10%	37.72%
OPTEX Group Ltd. (JPY)	1.09x	1.02x	7.30x	6.50x	12.52x	10.95x	1.72x	14.90%	-11.65%
Visual Photonics Epitaxy Co. Ltd. (TWD)	6.95x	5.20x	21.55x	13.73x	41.70x	24.04x	5.73x	31.53%	-1.20%
Coherent Corp. (USD)	1.61x	1.68x	6.40x	6.61x	10.81x	13.34x	0.93x	21.14%	77.87%
IPG Photonics Corp. (USD)	3.04x	2.78x	11.19x	9.61x	21.54x	18.83x	2.30x	22.53%	-44.85%
Median	**3.52x**	**3.31x**	**12.56x**	**11.40x**	**23.92x**	**21.40x**	**2.33x**	**23.32%**	**-6.42%**
VIGO Photonics S.A. (PLN)	4.97x	4.02x	14.53x	9.39x	30.59x	15.10x	3.10x	26.62%	30.97%
Fair value per share VIGO Photonics (PLN)	**576.86**								

Source: CapitalIQ, marketscreener.com, East Value Research GmbH

Price target calculation

Valuation method	Fair value	Weight
DCF model	663.89	70%
Peer-group-based fair value	576.86	30%
Weighted average (present value)	**637.78**	
In 12-months (PV * (1+WACC))	**742.80**	

Source: East Value Research GmbH

Profit and loss statement

in PLNm	2020	2021	2022	2023E	2024E	2025E
Revenues	**53.45**	**71.50**	**67.87**	**96.72**	**119.53**	**153.94**
Cost of goods sold	-11.59	-18.94	-23.43	-38.69	-41.84	-54.03
Gross profit	**41.86**	**52.56**	**44.44**	**58.03**	**77.70**	**99.91**
Other operating income	4.42	5.90	8.27	7.86	7.46	7.09
Distribution costs	-3.37	-4.74	-10.40	-10.41	-11.07	-13.49
Administration costs	-15.86	-20.14	-20.67	-19.34	-21.52	-24.63
Other operating expenses	-0.57	-3.92	-3.58	-3.03	-1.32	-4.48
EBITDA	**26.48**	**29.67**	**18.07**	**33.10**	**51.25**	**64.40**
Depreciation	-6.24	-6.75	-9.36	-14.23	-14.37	-14.52
Operating income	**20.23**	**22.91**	**8.70**	**18.87**	**36.88**	**49.88**
Net financial result	-2.13	-0.34	-1.02	-1.22	-1.12	-1.02
Gain/Loss from at-equity investments	0.00	0.00	0.00	0.00	0.00	0.00
EBT	**18.10**	**22.58**	**7.68**	**17.65**	**35.76**	**48.86**
Income taxes	14.45	7.93	-0.47	-3.35	-6.79	-9.28
Minorities	0.00	0.00	0.00	0.00	0.00	0.00
Net income / loss	**32.55**	**30.51**	**7.22**	**14.30**	**28.96**	**39.58**
EPS	44.65	41.85	9.90	19.61	39.73	54.29
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Share in total sales						
Revenues	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %	100.00 %
Cost of goods sold	-21.69 %	-26.49 %	-34.52 %	-40.00 %	-35.00 %	-35.10 %
Gross profit	78.31 %	73.51 %	65.48 %	60.00 %	65.00 %	64.90 %
Other operating income	8.26 %	8.25 %	12.18 %	8.12 %	6.24 %	4.61 %
Distribution costs	-6.31 %	-6.63 %	-15.32 %	-10.77 %	-9.27 %	-8.77 %
Administration costs	-29.66 %	-28.16 %	-30.46 %	-20.00 %	-18.00 %	-16.00 %
Other operating expenses	-1.07 %	-5.48 %	-5.27 %	-3.13 %	-1.10 %	-2.91 %
EBITDA	49.53 %	41.49 %	26.62 %	34.23 %	42.88 %	41.83 %
Depreciation	-11.68 %	-9.45 %	-13.79 %	-14.71 %	-12.02 %	-9.43 %
Operating income	37.85 %	32.05 %	12.82 %	19.51 %	30.85 %	32.40 %
Net financial result	-3.99 %	-0.47 %	-1.50 %	-1.26 %	-0.94 %	-0.66 %
Gain/Loss from at-equity investments	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
EBT	33.86 %	31.58 %	11.32 %	18.25 %	29.92 %	31.74 %
Income taxes	27.03 %	11.10 %	-0.69 %	-3.47 %	-5.68 %	-6.03 %
Minorities	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %	0.00 %
Net income / loss	60.89 %	42.67 %	10.64 %	14.78 %	24.23 %	25.71 %

Balance sheet

in PLNm	2020	2021	2022	2023E	2024E	2025E
Cash and equivalents	13.25	6.50	2.26	9.05	33.35	57.74
Short-term financial assets	3.03	0.00	0.00	0.00	0.00	0.00
Inventories	9.22	6.90	15.28	22.84	22.12	25.24
Trade accounts and notes receivables	9.93	14.37	14.26	18.33	20.19	22.84
Other current assets	2.52	6.56	3.31	3.64	4.01	4.41
Current assets, total	**37.96**	**34.32**	**35.11**	**53.87**	**79.67**	**110.24**
Property, plant and equipment	70.75	99.22	113.50	123.50	123.50	123.50
Other intangible assets	39.56	53.88	72.88	95.38	109.97	141.63
Goodwill	0.00	0.00	0.00	0.00	0.00	0.00
Other long-term assets	4.34	8.23	10.52	10.73	10.94	11.16
Deferred tax assets	14.46	22.40	22.01	0.00	0.00	0.00
Non-current assets, total	**129.11**	**183.72**	**218.91**	**229.61**	**244.42**	**276.29**
Total assets	**167.06**	**218.04**	**254.02**	**283.47**	**324.09**	**386.53**
Trade payables	1.74	8.10	4.41	3.30	3.77	5.69
Other short-term liabilities	4.34	4.13	4.61	4.61	4.61	4.61
Short-term financial debt	6.44	12.44	21.33	16.33	11.33	6.33
Pension provision	1.21	1.72	1.25	1.78	2.20	2.84
Provisions	3.13	2.94	2.00	2.85	3.52	4.54
Current liabilities, total	**16.85**	**29.34**	**33.60**	**28.87**	**25.43**	**24.00**
Long-term financial debt	24.12	21.37	28.06	25.06	22.06	19.06
Pension provision	0.25	0.23	0.18	0.26	0.32	0.42
Other long-term liabilities	25.26	35.88	53.65	76.46	94.49	121.69
Other provisions	0.00	0.00	0.00	0.00	0.00	0.00
Long-term liabilities, total	**49.63**	**57.48**	**81.90**	**101.78**	**116.87**	**141.16**
Total liabilities	**66.48**	**86.82**	**115.49**	**130.65**	**142.30**	**165.17**
Shareholders equity, total	**100.58**	**131.23**	**138.52**	**152.82**	**181.79**	**221.36**
Minority interests	0.00	0.00	0.00	0.00	0.00	0.00
Total equity and debt	**167.06**	**218.04**	**254.02**	**283.47**	**324.09**	**386.53**

Cash Flow Statement

in PLNm	2020	2021	2022	2023E	2024E	2025E
Net income / loss	32.55	30.51	7.22	14.30	28.96	39.58
Depreciation	6.24	6.75	9.36	14.23	14.37	14.52
Change of working capital	-7.98	-9.16	-12.03	9.73	16.99	22.95
Others	-9.62	-7.44	-0.77	-22.86	-0.67	-1.01
Net operating cash flow	**21.19**	**20.67**	**3.78**	**15.40**	**59.65**	**76.03**
Cash flow from investing	**-15.92**	**-30.27**	**-22.14**	**-46.73**	**-28.97**	**-46.17**
Free cash flow	5.27	-9.60	-18.36	-31.33	30.68	29.86
Cash flow from financing	**-5.12**	**3.04**	**14.13**	**38.12**	**-6.39**	**-5.46**
Change of cash	0.45	-6.75	-4.24	6.79	24.30	24.39
Cash at the beginning of the period	12.80	13.25	6.50	2.26	9.05	33.35
Cash at the end of the period	13.25	6.50	2.26	9.05	33.35	57.74

Financial ratios

	2020	2021	2022	2023E	2024E	2025E
Profitability and balance sheet quality						
Gross margin	78.31%	73.51%	65.48%	60.00%	65.00%	64.90%
EBITDA margin	49.53%	41.49%	26.62%	34.23%	42.88%	41.83%
EBIT margin	37.85%	32.05%	12.82%	19.51%	30.85%	32.40%
Net margin	60.89%	42.67%	10.64%	14.78%	24.23%	25.71%
Return on equity (ROE)	38.60%	26.32%	5.35%	9.82%	17.31%	19.63%
Return on assets (ROA)	20.76%	14.15%	3.24%	5.47%	9.28%	10.50%
Return on capital employed (ROCE)	24.22%	16.41%	3.71%	6.00%	10.00%	11.14%
Economic Value Added (in PLNm)	11.65	-0.11	-28.12	-26.64	-19.31	-19.29
Net debt (in PLNm)	17.31	27.31	47.13	32.33	0.04	-32.36
Net gearing	17.21%	20.81%	34.02%	21.16%	0.02%	-14.62%
Equity ratio	60.21%	60.18%	54.53%	53.91%	56.09%	57.27%
Current ratio	2.25	1.17	1.04	1.87	3.13	4.59
Quick ratio	1.56	0.71	0.49	0.95	2.11	3.36
Net interest cover	-9.48	-67.99	-8.53	-15.47	-32.93	-48.90
Net debt/EBITDA	0.65	0.92	2.61	0.98	0.00	-0.50
Tangible BVPS	137.97	180.01	190.02	209.63	249.36	303.65
Capex/Sales	37.57%	69.28%	62.83%	48.31%	24.23%	29.99%
Working capital/Sales	-18.06%	-28.38%	-43.94%	-40.90%	-47.30%	-51.64%
Cash Conversion Cycle (in days)	304	50	246	221	196	171
Trading multiples						
EV/Sales	9.00	6.73	7.09	4.97	4.02	3.13
EV/EBITDA	18.17	16.22	26.63	14.53	9.39	7.47
EV/EBIT	23.78	21.00	55.27	25.49	13.04	9.64
P/Tangible BVPS	4.35	3.33	3.16	2.86	2.41	1.98
P/E	13.44	14.34	60.59	30.59	15.10	11.05
P/FCF	83.01	-45.58	-23.83	-13.96	14.26	14.65

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