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Tower Semiconductor (NASDAQ: TSEM)

TSEM: Tower Reports Q1 On Target; Huge Growth in SiPho and Power Management Offsets China Handset Weakness

Using 3.5 times EV to Sales, we believe TSEM stock is worth at least $58.00 per share using 2025 revenues as growth returns and margins expand. The company is flush with $1.2 billion in cash, with which it is expanding capacity.

Current Price (5/13/2025)	$40.09
Valuation	**$58.00**

OUTLOOK

Tower is a pure-play analog semiconductor wafer foundry that manufactures SiGe, Silicon Photonics, MEMS, RF, embedded flash-based memory, analog/mixed-signal, and CMOS image-sensor devices in the US, Israel, Japan and Italy. It is serving markets in mobile such as RF High Position analog, as well as in CMOS image sensors, and power management. Its new fab in Italy in partnership with STMicro just started shipping product and its capacity will continue to ramp over the next two years. The company's new Silicon Photonics products are seeing strong demand in optical transceivers used in AI data centers. The company is flush with $1.2 billion in cash (or $10.59 per share), is cash flow positive and is increasing capacity.

SUMMARY DATA

52-Week High	**54.74**
52-Week Low	**29.65**
One-Year Return (%)	**8.5**
Beta	**0.8**
Average Daily Volume (sh)	**466,897**
Shares Outstanding (mil)	**111**
Market Capitalization ($mil)	**$4,450**
Short Interest Ratio (days)	**2.8**
Institutional Ownership (%)	**71**
Insider Ownership (%)	**1**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**3.4**
Earnings Per Share (%)	**27.3**
Dividend (%)	**N/A**
P/E using TTM EPS	**18.8**
P/E using 2025 Estimate	**18.6**
P/E using 2026 Estimate	**17.1**

Risk Level	**Above Average**
Type of Stock	**Large Value**
Industry	**Elec Comp-Semis**

ZACKS ESTIMATES

Revenue
(In millions of US$)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2023	$356 A	$357 A	$358 A	$352 A	$1,423 A
2024	$327 A	$351 A	$371 A	$387 A	$1,436 A
2025	$358 A	$372 E	$390 E	$435 E	$1,555 E
2026					$1,648 E

Earnings per Share
(non-GAAP)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2023	$0.60 A	$0.52 A	$0.54 A	$0.55 A	$2.17 A
2024	$0.46 A	$0.53 A	$0.57 A	$0.59 A	$2.15 A
2025	$0.45 A	$0.46 E	$0.53 E	$0.70 E	$2.15 E
2025					$2.35 E

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WHAT'S NEW

Tower Looks to RF Infrastructure as the Standout Sector For the Next Few Years

While down sequentially due to typical seasonality, Tower continued year-over-year revenue growth in Q1 2025 and expects that to continue sequentially and year-over-year throughout 2025. Capacity coming online in Italy, Texas, and Japan will cause revenues to increase markedly in the second half. The company expects much better results in 2025 as RF infrastructure and Power Management continue to grow rapidly. Lightcounting calls for the CAGR of Silicon Photonics to be 49% per year over the next few years, and Tower believes it commands 80% of that market. SiPho contributed $105 million in revenues in 2024, management expects to double in 2025. The handset is predicted to be flat in 2025, but Tower still expects its business to grow, particularly due to its envelope tracking power management product.

For Q2, Tower guided to revenues of $372 million plus or minus 5%, which would result in continued year-over-year growth. Despite much discussion, the company has seen no effect on business due to current or pending US or reciprocal tariffs. Very little, if any of Tower's revenues, come from products shipped into the US; most are shipped elsewhere in Asia for final assembly into end-user devices. As of last night's closing price, the company trades at an enterprise value of $3.5 billion, or 2.4 times EV to estimated sales for 2025, versus its peers, who trade at 5.0 times.

During the Quarter

On March 10th, Tower and Innolight announced expanded collaboration using Tower's newest Silicon Photonics (SiPho) platform. This technology cuts the number of lasers required per module by half.

On March 12th, OpenLight and Tower announced the successful demonstration of the 400G/lane modulator on Tower's platform. This enables a commercially viable path for both DR8 and FR4 next-generation 3.2 Tb solutions and beyond. Currently, pure silicon-based modulators are unable to support bit rates of 400G. This 400G modulator is a drop-in replacement for existing 200G modulator PASIC designs.

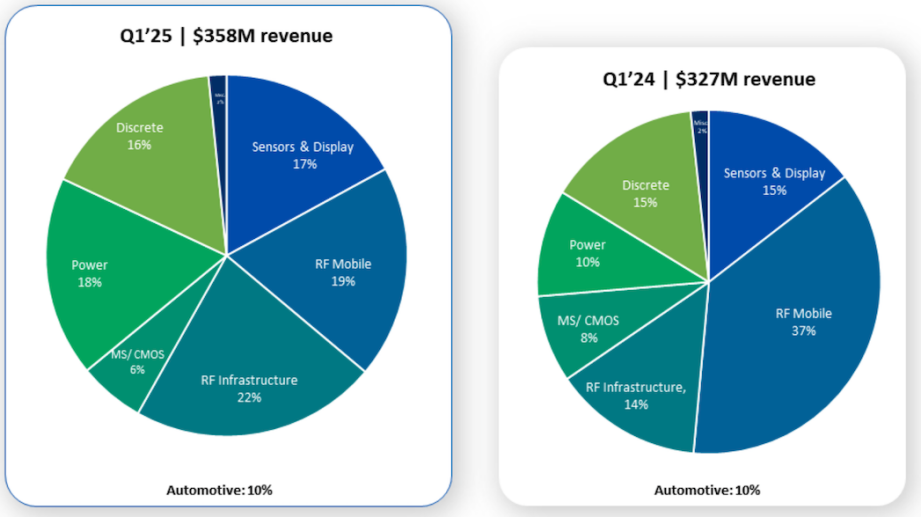
Q1 2025 Results

The biggest revenue contribution in the quarter again came from Power IC (if you add discrete and power), followed by RF infrastructure. In Q1, RF Infrastructure grew 72% and is expected to double for the full year.

RF Mobile declined 44% in Q1 2025, due to weak sales in China for Android phones. However, the Power category is benefiting from sales to the handset market for envelope tracking, which is used to improve battery life, and we believe is sold to Samsung for Galaxy handsets. This business is expected to continue to boom.

	Q1 2024	Q1 2025	% Change	$ Change
Total	327.2	358.17	9.5%	30.9
RF Infrastructure	45.8	78.8	72.0%	33.0
RF Mobile	121.1	68.1	-43.8%	(53.0)
Power	32.7	64.5	97.0%	31.7
Sensors and Displays	49.1	60.9	24.0%	11.8
Discrete	45.8	57.3	25.1%	11.5
MS/CMOS	26.2	21.5	-17.9%	(4.7)

Q1 2025 Revenue Breakdown by Technology



Source: Tower Semiconductor

Fab utilization will be improving. There is a gap in our table below as the company did not report numbers right before and during the acquisition attempt by Intel. Tower has now shut down Fab 1 and moved the remaining production to Fab 2. Fabs 2 and 9 are being repurposed for SiPho. Revenues began at the new Agate fab in Q4, which will continue to ramp up for the next two years. It has not reported utilization. All its capacity there is already spoken for 2024 and 2025.

Table 1. Fab Capacity Utilization

Fab		Q1 2021	NA	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024	Q1 2025
Fab 1	Migdal Haemek, Israel 6"	70%		70%	55%	60%	65%	75%	85%	70%	65%
Fab 2	Migdal Haemek, Israel 8"	80%		75%	75%	75%	75%	67%	60%	55%	80%
Fab 3	Newport Beach, CA 8" TPSCo factories	75%		40%	40%	40%	45%	55%	65%	70%	70%
Fab 5	Japan 8"	70%		70%	60%	40%	40%	45%	60%	60%	65%
Fab 7	Uozo Japan 12"	90%		75%	60%	70%	75%	85%	85%	90%	90%
Fab 9	San Antonio, 8"	70%		65%	65%	70%	60%	60%	60%	55%	70%
	Quarterly Average Utilization	76%		66%	59%	59%	60%	65%	69%	67%	73%

Q1 2025 Results

Revenues in Q1 2025 were $358 million versus $327 million in Q1 2024 and were up 9.5% year over year. This is the third quarter of revenue growth since Q3 2022.

The gross margin in Q1 2025 decreased to 20.4%, from 22.2% a year earlier and 22.4% in Q4 2024. During the fourth quarter of 2024, the company first took on its portion of the incremental costs of the greenfield Agrate facility, and that is reflected in the decline in gross margin this quarter. Gross margin dollars increased by $565,000, or 0.8%. Operating expenses were up $1.7 million year over year. The operating margin was 9.2%. Other income was $10.6 million compared to $4.0 million in last year's quarter. The company expects it to typically fluctuate between $8 million and $10 million per quarter.

Pretax profit was $43.5 million versus $38.0 million a year ago. Taxes were $3.8 million in the quarter, or a tax rate of 8.7%. GAAP net income was $40.1 million versus $44.6 million last year, while non-GAAP net income was $50.5 million versus $51.8 million a year ago, down 2.6%.

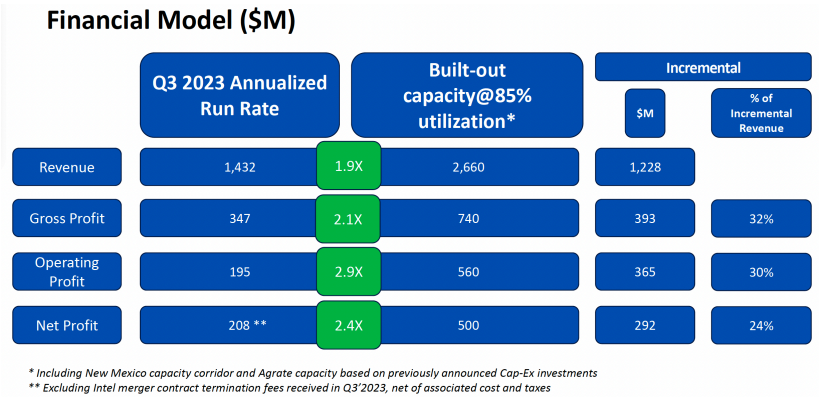
Diluted GAAP EPS was $0.36 per share, compared with $0.40 last year. Adjusted non-GAAP diluted EPS was $0.45, similar to $0.46 a year ago. The average diluted shares for the quarter were 113.2 million, up from 111.6 million last year. EBITDA for the fourth quarter of 2024 was $107 million compared to $101 million a year ago, but down sequentially from $122 million in Q4 2024.

Balance Sheet

On March 31st, the company had cash and short-term deposits of $1.2 billion, or $10.59 in cash per share. We estimate it is earning between 4.0% and 4.5% on about $800 million of that amount. Total debt decreased by $18 million to $162 million from the last quarter. Its quick ratio increased to 5.8x, and it has $1.5 billion in working capital. Operating cash flow without changes in working capital was $115 million for the quarter. Free cash flow was $3 million for the quarter after spending a net $111 million on cap ex in the quarter. Cap ex expenditures are expected to increase. Maintenance Capex is $200-$240 million per year; Tower will spend another $100 million on Agrate this year and $255 million in New Mexico, spread in installments through 2026. In addition, the company will spend $350 million to expand capacity for SiPho and SiGe in Israel, Texas, and Japan until the end of 2026. This heavy spending could put the company in negative free cash flow territory for the next year or two.

Target Business Model

During the Q3 2023 conference call, management showed a business model reflecting investments in new capacity, which it still deems valid. In the past, incremental revenues were coming in at above 50% gross margin; increased investment and current prices should result in incremental margins at 32%, as shown in the following chart. Through operating leverage, this incremental gross margin should translate into 24% net margins. So, as shown at 85% capacity utilization, revenues would increase by 86% to $2.66 billion and net income by 140% to $500 million.



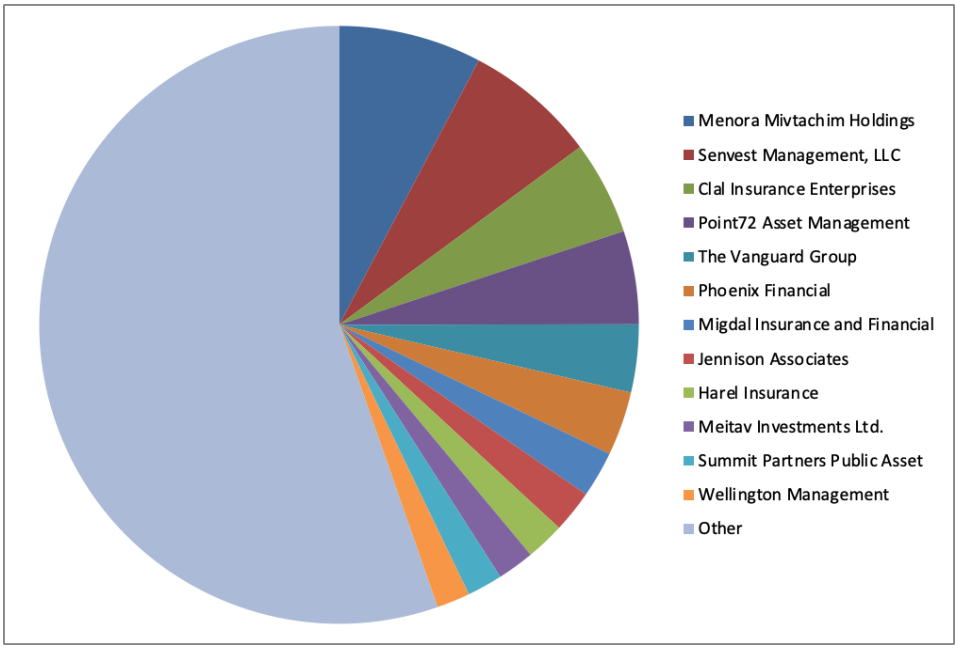
Source: Tower Semiconductor

VALUATION

TSEM trades at an enterprise value of $3.5 billion, or 2.4 times EV to estimated sales for 2025, less than half its peers, who trade at an average of 5.0 times. At even 3.5 times, TSEM stock would be worth approximately $58.00 per share using 2025 revenues.

Foundry Companies											
	Ticker	EPS 25E	EPS 26E	Price	PE 2025E	PE 2026E	Growth Rate	PE/Growth	Sales 2025E	EV/Sales	EV
Company											
GLOBALFOUNDRIES	GFS	1.62	2.20	39.70	24.5	18.0	35.8%	0.7	6.9	3.1	21
Semiconductor Manufacturing	0981.HK	0.51	0.59	42.65	83.6	72.3	15.7%	5.3	66.3	6.9	460
Taiwan Semiconductor	TSM	9.26	10.66	194.00	21.0	18.2	15.1%	1.4	103.3	7.5	779
United Microelectronics	UMC	0.51	0.59	7.76	15.2	13.2	15.7%	1.0	7.6	2.3	18
Average					36.1	30.4		2.1	46.0	5.0	319

OWNERSHIP



INCOME STATEMENT

	March Q1 24	June Q2 24	Sept Q3 24	Dec Q4 24	March Q1 25	June Q2 25E	Sept Q3 25E	Dec Q4 25E	2023	2024	2025E	2026E
REVENUE	327.2	351.2	370.5	387.2	358.2	372.0	390.0	435.0	1,422.7	1,436.1	1,555.2	1,648.5
Yr-to-yr Gr.	-8%	-2%	3%	10%	9%	6%	5%	12%	-15%	1%	8%	6%
OPERATING EXPENSES												
Cost of goods sold	254.6	264.3	277.5	300.3	285.0	291.2	299.9	321.5	1,069.2	1,096.7	1,197.5	1,244.2
Gross Margin	72.6	86.9	93.1	86.9	73.2	80.8	90.1	113.5	353.5	339.4	357.6	404.3
% of Sales	22.2%	24.8%	25.1%	22.4%	20.4%	21.7%	23.1%	26.1%	24.8%	23.6%	23.0%	24.5%
R&D	20.0	19.0	19.9	20.6	20.2	20.2	20.2	20.2	79.8	79.4	80.7	81.0
M, G&A	18.7	19.1	17.4	19.8	20.1	20.0	19.9	19.9	72.5	75.0	79.9	80.0
One-time charges	0.0	(6.3)	0.0	0.0	0.0	0.0	0.0	0.0	(346.0)	(6.3)	0.0	0.0
Tot Operating Exp.	38.6	31.8	37.3	40.4	40.3	40.2	40.1	40.1	(193.7)	148.1	160.6	161.0
Operating Income	34.0	55.1	55.8	46.4	32.9	40.6	50.1	73.5	547.3	191.3	197.0	243.3
Operating Margin	10.4%	15.7%	15.0%	12.0%	9.2%	10.9%	12.8%	16.9%	38%	13%	13%	15%
Yr-to-yr Gr.	-59%	11%	-85%	-7%	-12%	-30%	-15%	41%	107%	-65%	-5%	16%
Interest & other non-cash financing	4.0	7.7	6.1	8.3	10.6	8.5	8.5	8.5	37.6	26.1	36.1	20.0
Gain from acqusiition	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Profit before tax	38.0	62.9	61.9	54.7	43.5	49.1	58.6	82.0	584.8	217.4	233.1	263.3
Profit margin	11.6%	17.9%	16.7%	14.1%	12.1%	13.2%	15.0%	18.8%	41.1%	15.1%	14.0%	14.0%
Taxes	5.1	(6.1)	(7.0)	(2.1)	(3.8)	(5.9)	(7.0)	(9.8)	(65.3)	(10.2)	(26.5)	(31.6)
Tax Rate	-13.4%	9.7%	11.4%	3.9%	8.7%	12.0%	12.0%	12.0%	11.2%	4.7%	11.4%	12.0%
Profit before non-controlling	43.0	56.8	54.8	52.6	39.7	43.2	51.5	72.1	519.5	207.2	206.6	231.7
Minority Income	1.6	(3.3)	(0.2)	2.6	0.4	(1.0)	(1.0)	(1.0)	(1.0)	0.6	0.0	0.0
GAAP Net income	44.6	53.4	54.6	55.1	40.1	42.2	50.5	71.1	518.5	207.9	206.6	231.7
Yr-to-yr Gr.	-37%	4%	-84%	2%	-10%	-21%	-8%	29%	96%	-60%	-1%	12%
Non-GAAP Net Income	51.8	59.0	63.7	66.4	50.5	51.8	60.1	80.7	241.3	241.0	243.0	268.0
Yr-to-yr Gr.	-16%	2%	5%	9%	-3%	-12%	-6%	22%	-14%	0%	1%	10%
GAAP primary EPS	$0.40	$0.48	$0.49	$0.49	$0.36	$0.38	$0.45	$0.63	$4.70	$1.87	$1.85	$2.07
Fully diluted GAAP EPS	$0.40	$0.48	$0.49	$0.49	$0.35	$0.37	$0.44	$0.62	$4.66	$1.85	$1.83	$2.03
Adj Non-GAAP EPS-Fully dil.	**$0.46**	**$0.53**	**$0.57**	**$0.59**	**$0.45**	**$0.46**	**$0.53**	**$0.70**	**$2.17**	**$2.15**	**$2.15**	**$2.35**
Yr-to-yr Gr.	-23%	1%	4%	7%	-4%	-14%	-7%	20%	-14%	-1%	0%	9%
Primary Share Out	110.8	111.0	111.2	111.5	111.6	111.8	112.0	112.2	110.3	111.2	111.8	112.0
Fully Diluted GAAP	111.6	112.0	112.5	113.0	113.2	113.7	114.2	114.7	111.2	112.3	113.1	114.0
EBITDA	**100.7**	**126.3**	**120.8**	**122.4**	**107.1**	**115.6**	**125.1**	**148.5**	**508.7**	**448.8**	**496.3**	**543.3**
EBITDA Margin	31%	36%	33%	32%	30%	31%	32%	34%	36%	31%	32%	33%
Yr-to-yr Gr.	-9%	4%	-21%	-5%	-3%	-14%	-2%	8%	-14%	-12%	11%	9%

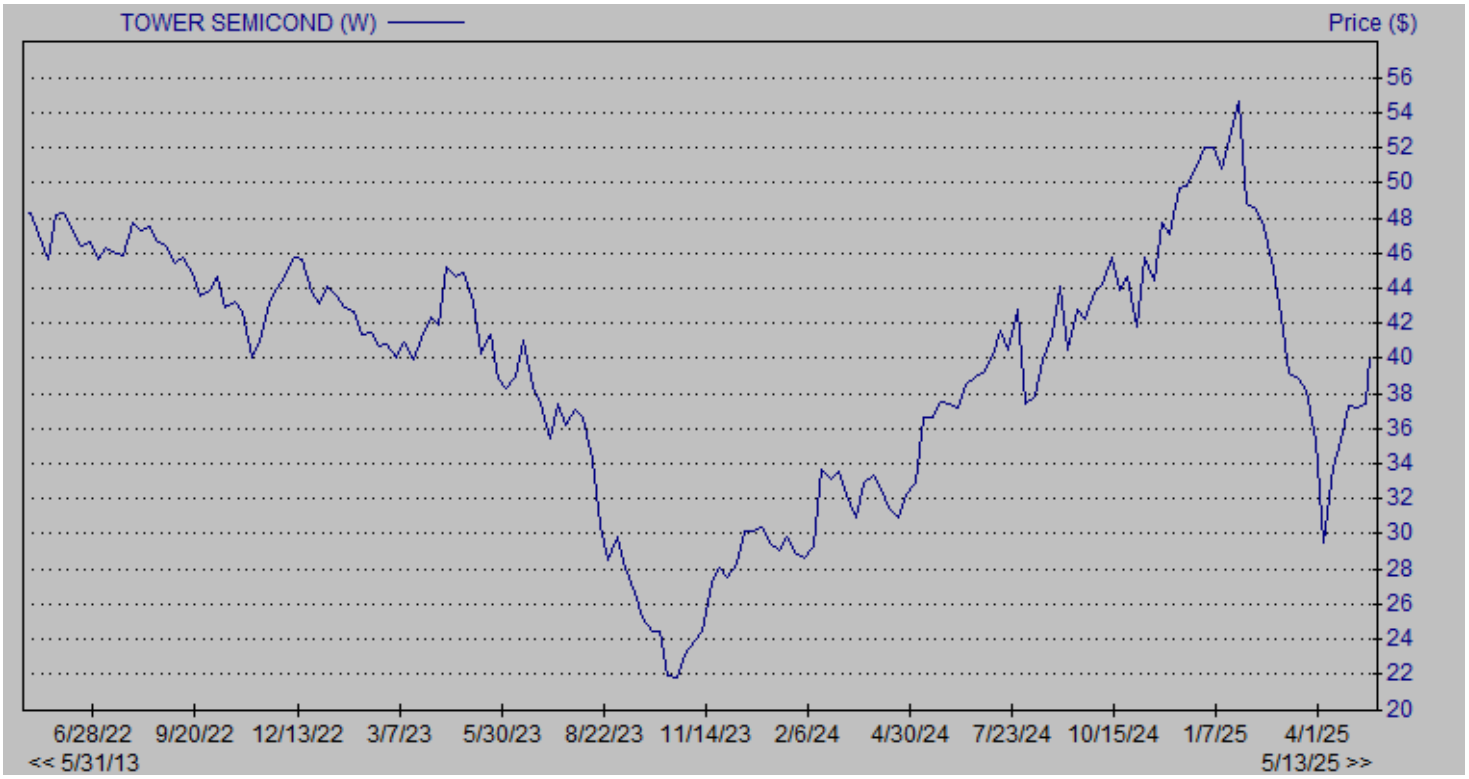
BALANCE SHEET

$ in thousands	Mar 31, 2025	Dec 31, 2024	Qtr-Qtr % Change	Mar 31, 2024	Yr-Yr % Change
CURRENT ASSETS					
Cash and cash equivalents	**$274,818**	**$271,894**	1.1%	**$260,497**	5.5%
Short term deposits	**906,446**	**946,351**	-4.2%	**848,522**	6.8%
Marketable securities	**0**	**0**	0.0%	**133,611**	-100.0%
Trade accounts receivable	219,496	211,932	3.6%	159,398	37.7%
Inventories	276,072	268,295	2.9%	299,377	-7.8%
Other current assets	51,429	61,817	-16.8%	42,049	22.3%
Total current assets	1,728,261	1,760,289	-1.8%	1,743,454	-0.9%
PROPERTY AND EQUIPMENT, NET	1,346,213	1,286,622	4.6%	1,180,569	14.0%
GOODWILL & INTANGIBLE ASSETS, NET	NA	10,196	NA	11,666	NA
DEFERRED TAX & OTHER ASSETS, NET	34,131	23,378	46.0%	41,226	-17.2%
TOTAL ASSETS	3,108,605	3,080,485	0.9%	2,976,915	4.4%
CURRENT LIABILITIES					
Short term debt	**27,490**	**48,376**	-43.2%	**57,700**	-52.4%
Trade accounts payable	118,318	130,624	-9.4%	169,526	-30.2%
Deferred revenue	17,233	21,655	-20.4%	19,732	-12.7%
Other current liabilities	86,421	84,409	2.4%	76,947	12.3%
Total current liabilities	249,462	285,064	-12.5%	323,905	-23.0%
LONG-TERM DEBT	**134,835**	**132,437**	1.8%	**151,699**	-11.1%
LONG-TERM CUSTOMERS' ADVANCES	NA	7,690	NA	22,465	NA
DEFERRED TAX LIABILITY	NA	15,114	NA	16,277	NA
OTHER LONG-TERM LIABILITIES	22,293	22,804	-2.2%	38,742	-42.5%
Total liabilities	406,590	440,305	-7.7%	514,346	-21.0%
SHAREHOLDERS' EQUITY	2,640,180	2,640,180	0.0%	2,462,569	7.2%
TOTAL LIABILITIES AND EQUITY	$3,046,770	$3,080,485	-1.1%	$2,976,915	2.3%
Current Ratio	6.9	6.2	12.2%	5.4	28.7%
Quick Ratio	5.8	5.2	11.2%	4.5	30.6%
Working Capital	1,478,799	1,475,225	0.2%	1,419,549	4.2%
Debt Percent of Assets	5.2%	5.9%	-11.0%	7.0%	-25.8%
Debt to Equity	0.1	0.1	-10.2%	0.1	-27.7%
Cash and equivalents	1,181,264	1,218,245	-3.0%	1,242,630	-4.9%
Cash and equivalents per share	$10.59	$10.93	-3.1%	$11.21	-5.6%
Debt	162,325	180,813	-10.2%	209,399	-22.5%
Change in cash	(36,981)	13,230	-379.5%	6,183	-698.1%
Change in debt	(18,488)	(12,495)	48.0%	(22,164)	-16.6%

CASH FLOW

	Year 2022	Year 2023	3-Mo 3/31/24	3-Mo 6/30/24	3-Mo 9/30/24	3-Mo 12/31/24	Year 2024	3-Mo 3/31/25
CASH FLOWS - OPERATING ACTIVITIES								
Net profit (loss)	$ 266,471	$ 519,530	$ 43,047	$ 56,750	$ 54,840	$ 52,585	$ 207,222	$ 39,717
Income and non-cash expense items:								
Depreciation and amortization	292,638	258,021	59,544	65,567	65,348	75,820	266,279	74,228
Effect of fair value measurement on debt	10,362	(1,632)	227	625	(425)	(294)	133	0
Other expense (income), net	6,934	(7,047)	5,993	0	6,289	12,439	24,721	558
Changes in assets and liabilities:								
Trade accounts receivable	(15,232)	(3,160)	(6,716)	(7,227)	(27,486)	(18,740)	(60,169)	(6,354)
Other assets	20,427	(9,541)	(13,454)	3,141	12,785	(36,464)	(33,992)	5,622
Inventories	(77,891)	8,682	(23,703)	17,744	14,093	(3,356)	4,778	(4,128)
Trade accounts payable	(20,893)	(8,254)	32,559	(19,741)	4,646	18,320	35,784	(11,114)
Deferred revenue and customers' advances	(30,069)	(35,676)	(1,931)	(2,091)	(2,049)	(8,712)	(14,783)	(4,432)
Other current liabilities	61,033	(70,163)	16,868	274	(2,178)	7,057	22,021	3,718
Employee related liabilities	2,956	(1,210)	0	0	0	0	0	0
Deferred tax liability, net	13,084	27,011	0	0	0	0	0	0
Other long-term liabilities	0	0	(2,396)	(1,957)	(1,120)	2,161	(3,312)	(3,893)
Net cash provided by operating activities	**529,820**	**676,561**	**110,038**	**113,085**	**124,743**	**100,816**	**448,682**	**93,922**
CASH FLOWS - INVESTING ACTIVITIES								
Investments in property and equipment, net	**(213,537)**	**(432,184)**	**(98,018)**	**(112,615)**	**(127,624)**	**(93,396)**	**(431,653)**	**(111,411)**
Interest bearing deposits, including designated deposits	(115,911)	(288,663)	(1,113)	17,443	19,412	(4,328)	31,414	44,470
Net cash provided by (used in) investing activities	(329,448)	(720,847)	(99,131)	(95,172)	(108,212)	(97,724)	(400,239)	(66,941)
CASH FLOWS - FINANCING ACTIVITIES								
Exercise of warrants and options	44	0	0	0	0	0	0	0
Debt repayment	(78,379)	(32,346)	(8,409)	(10,439)	(16,402)	2,795	(32,455)	(26,874)
Proceeds from investment in subsidiary	11,685	1,932	0	0	0	0	0	0
Net cash used in financing activities	(66,650)	(30,414)	(8,409)	(10,439)	(16,402)	2,795	(32,455)	(26,874)
Effect of foreign exchange rate change	(3,893)	(5,395)	(2,665)	(2,658)	5,537	(4,972)	(4,758)	2,817
INCREASE (DECREASE) IN CASH & CASH EQUIVALENTS	129,829	(80,095)	(167)	4,816	5,666	915	11,230	2,924
CASH & CASH EQTS - BEGINNING OF PERIOD	210,930	340,759	260,664	260,497	265,313	270,979	260,664	271,894
CASH & CASH EQUIVALENTS - END OF PERIOD	340,759	260,664	260,497	265,313	270,979	271,894	271,894	274,818
Operating Cash Flow	$ 576,405	$ 768,872	$ 108,811	$ 122,942	$ 126,052	$ 140,550	$ 498,355	$ 114,503
Free cash flow	$ 362,868	$ 336,688	$ 10,793	$ 10,327	$ (1,572)	$ 47,154	$ 66,702	$ 3,092

HISTORICAL STOCK PRICE



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