

**COVERAGE** 

INITIATION

# **Biolase Technology, Inc.**

We'd be Buyers following the Q3 Report

We love this company, but the stock may be tested next week by earnings, (Mon., Nov. 7, 8am ET), as 2 (of 3) covering analysts have numbers that appear too high

Market leadership in a rapidly growing market with low penetration: Biolase is the leading manufacturer and vendor of dental lasers, having sold 17,300 laser systems in 50+ countries since 1998. Penetration is less than 1.5% of over 1.2 million dentists in 134 countries.

Disruptive technology: The use of lasers in medical and dental procedures is relatively new (~20 years) but increasing rapidly. (Think Lasik for eyes, laser hair removal, varicose vein removal, teeth whitening, etc.) Biolase's laser has the potential to make the dental drill and scalpel obsolete in dental procedures such as decay removal (cavities) and root canals.

Strong, proprietary product: Biolase owns the patents to and is the only company to offer an Er, Cr:YSGG dental laser. This laser's wavelength of 2,780nm makes it superior for dental applications, a claim supported by the dentists we interviewed. In addition, Biolase owns the patents to neighboring wavelengths, such as the Er:YAG laser.

New product cycle: Biolase introduced the latest version of its flagship laser, the Waterlase iPlus, in Jan. 2011. This laser offers greater precision, less ancillary damage, no -or little- pain versus a drill's grinding, heat and vibration, minimal to no bleeding, a much reduced need for anesthetic, and with the new version, comparable speeds to the traditional drill.

Sales growth could turn parabolic if Biolase is successful in broadening its lasers' application beyond dentistry, such as in ophthalmology, for which Biolase has already been issued 10 patents, with another 19 pending.

However, our optimism is tempered by the following concerns ahead of next week's earnings report:

1) 2 analysts (of total 3) covering the stock have Q3 forecasts of \$14.25mm and \$13.35mm; we suspect this may prove too aggressive. (3<sup>ra</sup> analyst: \$12.0mm; Our forecast: \$12.4mm)

2) The same 2 analysts may need to cut their Q4 revenue forecasts of \$19.0mm and \$18.5mm. (3<sup>rd</sup> analyst: \$14.2mm; Our forecast: \$14.0mm)

3) Biolase reported (Oct. 13) that international sales surpassed domestic sales for the first time in its history. We view this as a strong positive, but it implies that U.S. sales were down from Q2. (our read 25-30%) This may be read negatively, even though sales in Q2 were supply constrained.

4) Sales of a new digital imaging line were expected to begin generating meaningful revenues in Q3. However, comments we gleaned at the ADA conference in October suggest that regulatory and registration issues led to a slower rollout of the imaging line.

Very high short interest of 6.43 million shares is highest level since 2006. We anticipate a short-covering rally in Biolase, but likely only after these issues are flushed out in the company's Q3 earnings report next week.

#### **Company Description**

Biolase is the global leader in the design, manufacture and distribution of dental lasers and related products. The company markets both an alltissue laser, which cuts both teeth and gums, and a diode laser, for softtissue surgical and hygiene procedures. This summer, Biolase began marketing a line of dental imaging systems (as a reseller).

United States Medical Devices

November 2, 2011

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# Stock Data

Exchange:	NasdaqCM
52-week Range:	\$1.18 – \$6.85
Shares Outstanding (Aug. 9, 2011):	29,896,070
Market cap* (\$million):	\$108.80
* Fully diluted, treasury method	
EV (\$million):	\$ 98.79
Avg. Daily Trading Vol. (\$million):	\$ 1.29
Float (million shares):	27.185 (91%)
Short Interest (million shares):	6.43
Incorporation:	Delaware, 1987
Public auditor:	BDO USA, LLP

# **Revenues (US\$ million)**

	<u>2009A</u>	<u>2010A</u>	<u>2011E</u>	<u>2012E</u>										
Q1	\$ 6.59A	\$ 4.40A	\$10.56A	\$13.40E										
Q2	\$14.32A	\$ 5.89A	\$12.08A	\$15.19E										
Q3	\$12.09A	\$ 6.22A	\$12.40E	\$17.10E										
Q4	\$10.35A	\$ 9.72A	\$14.00E	<u>\$19.94E</u>										
Total	\$43.35A	\$26.23A	\$49.04E	\$65.63E										
EV/Revs	2.3x	3.8x	2.0x	1.5x										
Earnings per Share (GAAP)														
	<u>2009A</u>	<u>2010A</u>	<u>2011E</u>	<u>2012E</u>										
Q1	\$(0.19)A	\$(0.21)A	\$( 0.03)A	\$(0.02)E										
Q2	\$ 0.09 A	\$(0.17)A	\$( 0.03)A	\$(0.01)E										
Q3	\$ 0.03 A	\$(0.11)A	\$( 0.02)E	\$ 0.00 E										
Q4	<u>\$(0.06)A</u>	<u>\$ 0.01 A</u>	<u>\$( 0.02)E</u>	<u>\$ 0.01 E</u>										
Total	\$(0.12)A	\$(0.48)A	\$( 0.10)E	\$(0.01)E										
P/E	NMF	NMF	NMF	NMF										
	NMF (US\$ mill		NMF	NMF										
			NMF <u>2011E</u>	NMF 2012E										
	(US\$ mill	ion)												
EBITDAS	(US\$ mill <u>2009A</u>	ion) <u>2010A</u>	<u>2011E</u>	<u>2012E</u>										
EBITDAS	(US\$ mill <u>2009A</u> \$(4.05)A	<b>ion)</b> <u>2010A</u> \$(4.80)A	<b>2011E</b> \$0.38 A	<b>2012E</b> \$0.18 E										
EBITDAS Q1 Q2	(US\$ mill <u>2009A</u> \$(4.05)A \$ 3.15 A	ion) <u>2010A</u> \$(4.80)A \$(3.66)A	2011E \$0.38 A \$0.10 A	<b>2012E</b> \$0.18 E \$0.43 E										
EBITDAS Q1 Q2 Q3	(US\$ mill <u>2009A</u> \$(4.05)A \$ 3.15 A \$ 1.57 A	ion) <u>2010A</u> \$(4.80)A \$(3.66)A \$(1.99)A	2011E \$0.38 A \$0.10 A \$0.04 E	2012E \$0.18 E \$0.43 E \$0.75 E										
EBITDAS Q1 Q2 Q3 Q4	(US\$ mill 2009A \$(4.05)A \$ 3.15 A \$ 1.57 A \$(0.84)A \$(0.16)A	ion) 2010A \$(4.80)A \$(3.66)A \$(1.99)A <u>\$ 0.96 A</u>	<b>2011E</b> \$0.38 A \$0.10 A \$0.04 E <u>\$0.21 E</u>	2012E \$0.18 E \$0.43 E \$0.75 E <u>\$1.15 E</u>										
Q1 Q2 Q3 Q4 Total EV/EBITD. *EBITDAS is c	(US\$ mill 2009A \$(4.05)A \$ 3.15 A \$ 1.57 A \$(0.84)A \$(0.16)A AS NMF	ion) <u>2010A</u> \$(4.80)A \$(3.66)A \$(1.99)A <u>\$ 0.96 A</u> <b>\$ (9.49)A</b> NMF ings before into	2011E \$0.38 A \$0.10 A \$0.04 E <u>\$0.21 E</u> <b>\$0.72 E</b> 136.7x erest, taxes, deg	2012E \$0.18 E \$0.43 E \$0.75 E \$1.15 E \$2.51 E 39.4x										

Ascendiant Capital Markets, LLC seeks to do business with companies covered by its research team. Consequently, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making an investment decision.

For analyst certification and other important disclosures, refer to the Disclosure Section, located on pages 11 and 12.

# **Rating:** ST Neutral; LT Buy

Ticker: BLTI

Price: \$3.63

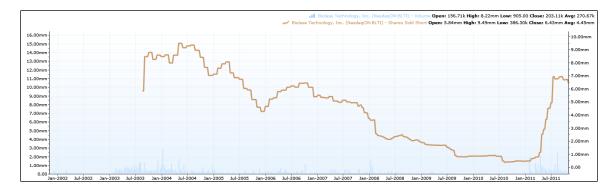


#### Figure 1: BLTI share price (10 years through November 1, 2011)

Source: Capital IQ

Note: Biolase has been quoted on NASDAQ since November 12, 1992.

# Figure 2: BLTI short interest (10 years through November 1, 2011)



Source: Capital IQ





#### Figure 3: Biolase revenue split, U.S. and international (in millions of U.S. dollars)

Source: Biolase SEC filings, Ascendiant Capital Markets, LLC research

Note: Since 1998, Biolase has sold 17,300 laser systems in over 50 countries.

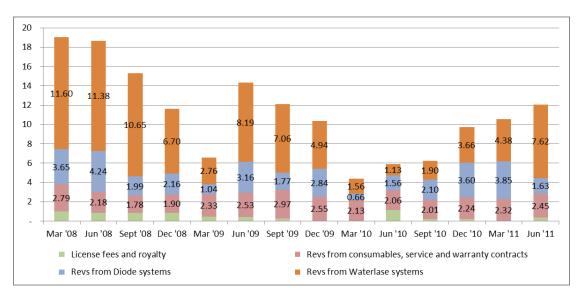
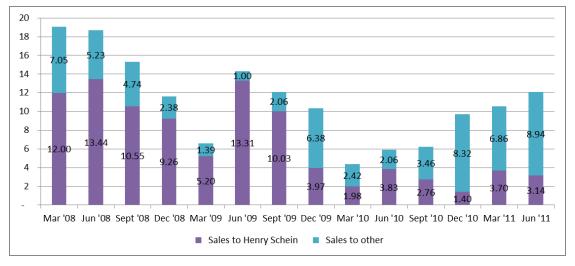


Figure 4: Biolase revenue split, by product line (in millions of U.S. dollars)

Source: Biolase SEC filings, Ascendiant Capital Markets, LLC research

Note: The Waterlase system is Biolase's flagship product, capable of cutting both hard tissue (teeth) and soft tissue (gums). The diode systems are used to perform soft tissue and cosmetic procedures (such as teeth whitening).





#### Figure 5: Biolase revenue split, sales through Henry Schein and to other (in millions of U.S. dollars)

Source: Biolase SEC filings, Ascendiant Capital Markets, LLC research

Note: Understanding the Henry Schein relationship is key to evaluating Biolase. Following the August 2010 end of the exclusive distribution arrangement through Henry Schein, Biolase has been rebuilding its direct sales force. So far, direct sales have been strong.



# **Investment Thesis**

We initiate coverage of Biolase Technologies with a Short-Term Neutral rating in spite of our long-term enthusiasm for the company.

Our belief is that an analyst is responsible for making two calls: the first on the company's prospects; the second on the stock.

We believe Biolase - the company - will do very well over the next few years, given its patented, proprietary technology, strong leadership, revitalized sales, and meaningful turnaround which has started to be reflected in the numbers.

Even so, we believe the stock may be challenged in the very near term (i.e. the next week or two) by analyst forecasts that are likely to prove too optimistic for the third and fourth quarter of this year. Given our expectation that these analysts will need to cut their numbers, we feel it would be a disservice to investors to initiate with a more bullish recommendation.

Nevertheless, we do expect very strong growth from Biolase, based on our due diligence which included extensive conversations with dentists and oral surgeons and time spent at both the California Dental Association conference this summer and the American Dental Association (ADA) Annual Session conference in October.

The last few quarters suggest Biolase is emerging from a very challenging 2008 to 2010 period. The company's original founder and early Chairman and CEO had been pushed out in 2006. This was reportedly over his objections to giving an exclusive distribution arrangement to Henry Schein, which is one of the dental industry's largest product distributors. After some initial success with the new distribution arrangement (perhaps due to Henry Schein's inventory build in anticipation of the new orders), sales began to slow, suggesting a lack of follow-through by the Henry Schein field organization and a sales force ill equipped to sell such a technical, high-priced product. Concurrently, sales were adversely affected by the effects of the global economic recession and the general curtailment of credit. This resulted in a dramatic decline in Biolase's revenues in late 2009 and early 2010. (See Figures 3, 4, and 5 in the preceding pages.)

The former Chairman and CEO returned to Biolase in mid-2010, swept out company management, replaced the entire board of directors, and ended Henry Schein's exclusive distribution arrangement. With a renewed emphasis on building a direct sales force, Biolase has begun to recapture the strong growth it had enjoyed prior to the Henry Schein deal.

Our conversations with dentists revealed general praise for the product, though the high capital cost can dissuade dentists who are not early technology adopters. We were surprised to learn that dentistry is very competitive. (Thinking of it now, it makes sense; dentists offer very similar services. The differentiator is the customer experience.) The dentists who are early technology adopters seek to differentiate themselves by touting the lasers' benefits to customers attracted by the prospect of more benign dentistry. Ultimately, laser dentistry offers too many advantages to traditional cutting instruments, driving our belief that this technology will eventually become mainstream. As with smart phones, everyone is likely to upgrade eventually, even if most of us know at least one person who still uses a flip phone.

We will have a follow-up of this report with a more in-depth review of Biolase following the quarterly report next week.



#### Figure 6: Waterlase Dentistry<sup>™</sup> Clinical Uses

Waterlase<sup>®</sup> was first cleared by the US Food and Drug Administration (FDA) to cut hard tissues (such as teeth) in 1998, and since that time has received numerous additional clearances from the FDA for a wide range of procedures on teeth, bone and gum tissue.

#### **Laser Hard Tissue Applications**

Class I, II, III, IV and V cavity preparation Caries removal Hard tissue surface roughening or etching Enameloplasty, excavation of pits and fissures for placement of sealants

# Laser Soft Tissue Applications I

Excisional and incisional biopsies Exposure of unerupted teeth Fibroma removal Flap preparation - incision of soft tissue to prepare a flap and expose the bone Flap preparation - incision of soft tissue to prepare a flap and expose unerupted teeth (hard and soft tissue impactions) Frenectomy and frenotomy Gingival troughing for crown impressions Gingivectomy Gingivoplasty Gingival incision and excision Hemostasis

#### Laser Soft Tissue Applications II

Implant recovery Incision and drainage of abscesses Laser soft tissue curettage of the post-extraction tooth sockets and the periapical are during apical surgery Leukoplakia Operculectomy **Oral papillectomies** Pulpotomy Pulp extirpation Pulpotomy as an adjunct to root canal therapy Root canal debridement and cleaning Reduction of gingival hypertrophy Soft tissue crown lengthening Sulcular debridement (removal of diseased and inflamed soft tissue) Treatment of canker sores, herpetic and aphthous ulcers of the oral Mucosa Vestibuloplasty

Source: Biolase Technology, Inc.

# **Laser Cosmetic Procedures**

Bone Surgical Procedures Cutting, shaving, contouring and resection of oral osseous tissues (bone) Osteotomy

#### **Laser Endodontics**

Root Canal/Endodontic Procedures The Waterlase MD<sup>™</sup> with Endolase<sup>™</sup> Radial Firing Tips is indicated for disinfection of the root canal after endodontic instrumentation. Tooth preparation to obtain access to root canal Root canal preparation including enlargement Root canal debridement and cleaning Flap preparation - incision of soft tissue to prepare a flap and expose the bone Cutting bone to prepare a window access to the apex (apices) of the roots Apicoectomy Root end preparation for retrofill Removal of pathological tissues and hyperplastic tissue

# Laser Periodontal Therapy

Full thickness flap Partial thickness flap Split thickness flap Laser soft tissue curettage Laser removal of diseased, infected, inflamed and necrosed soft tissue within the periodontal pocket Removal of highly inflamed edematous tissue affected by bacteria penetration of the pocket lining and junctional epithelium Removal of granulation tissue from bony defects Sulcular debridement (removal of diseased or inflamed soft tissue in the periodontal pocket to improve clinical indices including gingival index, gingival bleeding index, probe depth, attachment loss and tooth mobility) Osteoplasty and osseous recontouring (removal of bone to correct osseous defects and create physiologic osseous contours) Ostectomy (resection of bone to restore bony architecture,

Ostectomy (resection of bone to restore bony architecture, resection of bone for grafting, etc.) Osseous crown lengthening



# **Historical Data and Financial Projections**

Figure 7: Income Statement (all figures in thousand U.S. dollars except for EPS)

Biolase Technology, Inc.																									
Ascendiant Capital Markets LLC																									
George Santana, CFA																									
George Santana, GPA																									
Fiscal period (FY ends December 31)																Q1 '11(A)									
Period ends	Mar '08		Sept '08	Dec '08	Dec '08	Mar '09	Jun '09	Sept '09	Dec '09	Dec '09	Mar '10	Jun '10	Sept '10	Dec '10	Dec '10	Mar '11	Jun '11	Sept '11	Dec '11	Dec '11	Mar '12	Jun '12	Sept '12	Dec '12	Dec '12
Income Statement (all figures in thousand US dollar	's except EPS	)																							
Revenues:																									
Laser products and services	18,037	17,795	14,418	10,760	61,010	6,119	13,887	11,796	10,335	42,137	4,339	4,744	6,002	9,495	24,580	10,546	11,689	12,275	13,524	48,034	12,875	14,163	15,579	17,916	60,532
License fees and royalties	1,004	868	868	875	3,615	475	430	289	16	1,210	56	1,148	218	223	1,645	15	390	25	25	456	25	25	25	25	101
Imaging products	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	450	550	500	1,000	1,500	2,000	5,000
Other													-	-				-							
Total Revenues	19,041	18,663	15,286	11,635	64,625	6,594	14,317	12,085	10,351	43,347	4,395	5,892	6,220	9,718	26,225	10,561	12,079	12,400	14,000	49,039	13,400	15,188	17,104	19,941	65,633
COGS	9,459	8,556	7,755	6,193	31,963	4,826	6,219	6,252	5,988	23,285	4,125	3,961	4,429	4,885	17,400	5,722	6,466	6,598	7,455	26,241	7,126	8,032	8,941	10,356	34,455
Total cost of goods sold	9,459	8,556	7,755	6,193	31,963	4,826	6,219	6,252	5,988	23,285	4,125	3,961	4,429	4,885	17,400	5,722	6,466	6,598	7,455	26,241	7,126	8,032	8,941	10,356	34,455
Gross Profit	9,582	10,107	7,531	5,442	32,662	1,768	8,098	5,833	4,363	20,062	270	1,931	1,791	4,833	8,825	4,839	5,613	5,802	6,544	22,799	6,274	7,156	8,163	9,586	31,178
Sales and marketing	5,605	5,052	5,615	5,768	22,040	3,045	2,770	2,231	2,995	11,041	2,633	3,082	2,110	2,113	9,938	2,453	3,010	3,070	3,383	11,916	3,220	3,542	3,897	4,481	15,141
General and administrative	3,077	3,398	3,165	2,366	12,006	2,569	1,735	1,699	1,832	7,835	1,725	1,976	1,330	1,526	6,557	1,699	2,227	2,271	2,491	8,689	2,411	2,652	2,903	3,265	11,231
Engineering and development	1,461	1,271	1,313	1,535	5,580	1,083	1,119	999	945	4,146	1,220	995	775	800	3,790	1,093	1,093	1,108	1,179	4,472	1,154	1,231	1,308	1,417	5,110
Impairment expense and other			1,232	587	1,819		-					-	-	35	35		-	-	-	-				-	-
Total operating expenses	10,143	9,721	11,325	10,256	41,445	6,697	5,624	4,929	5,772	23,022	5,578	6,053	4,215	4,474	20,320	5,245	6,330	6,449	7,053	25,077	6,785	7,425	8,108	9,163	31,482
Operating Income (Loss)	(561)	386	(3,794)	(4,814)	(8,783)	(4,929)	2,474	904	(1,409)	(2,960)	(5,308)	(4,122)	(2,424)	359	(11,495)	(406)	(717)	(647)	(509)	(2,278)	(512)	(270)	55	423	(303)
Gain (loss) on foreign currency transactions	616	225	(637)	(390)	(186)	315	(109)	(40)	10	176	17	26	(118)	(35)	(110)	(38)	(16)	-	-	(54)	-	-	-	-	-
Interest income	58	26	26	8	118	1	2	1	1	5	1	-	1	1	3	-	-	-	-	-	-	12	11	11	34
Interest expense	(24)	(36)	(35)	(62)	(157)	(30)	(12)	(7)	(9)	(58)	(4)	(55)	(157)	(145)	(361)	(73)	(6)	-	-	(79)	-	-	-	-	-
Other income (expense), net							-		-					-		(225)		-	-	(225)				-	-
Income (loss) before tax and minority interest	89	601	(4,440)	(5,258)	(9,008)	(4,643)	2,355	858	(1,407)	(2,837)	(5,294)	(4,151)	(2,698)	180	(11,963)	(742)	(739)	(647)	(509)	(2,636)	(512)	(258)	66	434	(270)
Provision (benefit) for income taxes	63	(21)	50	29	121	33	25	(1)	62	119	<u>11</u>	13	28	6	<u>58</u>	8	<u>14</u>	25	25	72	25	25	25	25	100
Income (loss) before minority interest	26	622	(4,490)	(5,287)	(9,129)	(4,676)	2,330	859	(1,469)	(2,956)	(5,305)	(4,164)	(2,726)	174	(12,021)	(750)	(753)	(672)	(534)	(2,708)	(537)	(283)	41	409	(370)
Minority interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Net Income (Loss)	26	622	(4,490)	(5,287)	(9,129)	(4,676)	2,330	859	(1,469)	(2,956)	(5,305)	(4,164)	(2,726)	174	(12,021)	(750)	(753)	(672)	(534)	(2,708)	(537)	(283)	41	409	(370)
GAAP EPS	0.00	0.03	(0.18)	(0.21)	(0.37)	(0.19)	0.09	0.03	(0.06)	(0.12)	(0.21)	(0.17)	(0.11)	0.01	(0.48)	(0.03)	(0.03)	(0.02)	(0.02)	(0.10)	(0.02)	(0.01)	0.00	0.01	(0.01)
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Basic shares outstanding <sup>1</sup>	24,540	24,650	24,731	24,735	24,664	24,731	24,731	24,769	24,849	24,770	24,905	24,955	24,919	24,987	24,941	26,558	28,097	29,896	30,016	28,642	30,136	30,256	30,377	30,499	30,317
Diluted shares outstanding <sup>1</sup>	24,783	24,848	24,731	24,735	24,664	24,731	24,810	25,033	24,849	24,770	24,905	24,955	24,919	24,987	24,941	26,558	28,097	29,896	30,016	28,642	30,136	30,256	34,244	34,366	32,251
EBITDAS <sup>2</sup>	374	1,306	(2,890)	(3,927)	(5,137)	(4,046)	3,152	1,572	(837)	(159)	(4,803)	(3,657)	(1,985)	960	(9,485)	376	99	42	206	723	182	426	752	1,145	2,505
<sup>1</sup> Adjusted for stock dividends of 1% (paid Mar. 2011 and 1% <sup>2</sup> Earnings Before Interest, Taxes, Depreciation, Amortization			ion																						

Source: Biolase SEC filings, Ascendiant Capital Markets, LLC forecast

Note: EBITDAS is defined as earnings before interest, taxes, depreciation, amortization and stock-based compensation.



# Figure 8: Metrics, Margins and EBITDAS (in thousand U.S. dollars)

Revenue analysis	Mar '08	Jun '08	Sept '08	Dec '08	FY '08	Mar '09	Jun '09	Sept '09	Dec '09	FY '09	Mar '10	Jun '10	Sept '10	Dec '10	FY '10	Mar '11	Jun '11	Sept '11	Dec '11	FY '11	Mar '12	Jun '12	Sept '12	Dec '12	FY '12
Laser products and services - % of total revenues	94.7%	95.3%	94.3%	92.5%	94.4%	92.8%	97.0%	97.6%	99.8%	97.2%	98.7%	80.5%	96.5%	97.7%	93.7%	99.9%	96.8%	99.0%	96.6%	97.9%	96.1%	93.2%	91.1%	89.8%	92.2%
sequential guarter growth		-1.3%	-19.0%	-25.4%		-43.1%	126.9%	-15.1%	-12.4%		-58.0%	9.3%	26.5%	58.2%		11.1%	10.8%	5.0%	10.2%		-4.8%	10.0%	10.0%	15.0%	
year on year growth						-66.1%	-22.0%	-18.2%	-3.9%	-30.9%	-29.1%	-65.8%	-49.1%	-8.1%	-41.7%	143.1%	146.4%	104.5%	42.4%	95.4%	22.1%	21.2%	26.9%	32.5%	26.0%
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License fees and royalties - % of total revenues	5.3%	4.7%	5.7%	7.5%	5.6%	7.2%	3.0%	2.4%	0.2%	2.8%	1.3%	19.5%	3.5%	2.3%	6.3%	0.1%	3.2%	0.2%	0.2%	0.9%	0.2%	0.2%	0.1%	0.1%	0.2%
sequential guarter growth	0.070	-13.5%	0.0%	0.8%		-45.7%	-9.5%	-32.8%	-94.5%		250.0%	1950.0%	-81.0%	2.3%		-93.3%	2500.0%	-93.5%	0.0%		0.0%	0.0%	0.0%	0.0%	
year on year growth		-10.070	0.070	0.070		-52.7%	-50.5%	-66.7%	-98.2%	-66.5%	-88.2%	167.0%	-24.6%	1293.8%	36.0%	-73.2%	-66.0%	-88.4%	-88.6%	-72.3%	69.0%	-93.5%	0.0%	0.0%	-77.7%
year on year growin						=32.7 /0	-30.3%	-00.7 /6	=50.2 /6	=00.5 %	=00.2 /0	107.076	-24.076	1293.076	30.0 %	=1 3.2 /0	=00.076	-00.4 /0	-00.0 %	=12.370	05.076	-93.376	0.076	0.076	-11.170
Imaging products - % of total revenues																		0.8%	3.2%	1.1%	3.7%	6.6%	8.8%	10.0%	7.6%
																		0.0 %		1.170				33.4%	7.076
sequential quarter growth																			350.0%		11.0%	100.2%	50.0%		
year on year growth																							1400.0%	344.5%	809.0%
Total revenues																									
sequential quarter growth		-2.0%	-18.1%	-23.9%		-43.3%	117.1%	-15.6%	-14.3%		-57.5%	34.1%	5.6%	56.2%		8.7%	14.4%	2.7%	12.9%		-4.3%	13.3%	12.6%	16.6%	
year on year growth						-65.4%	-23.3%	-20.9%	-11.0%	-32.9%	-33.3%	-58.8%	-48.5%	-6.1%	-39.5%	140.3%	105.0%	99.4%	44.1%	87.0%	26.9%	25.7%	37.9%	42.4%	33.8%
percent derived from U.S.																									
percent derived from international																									
percent attributable to Henry Schein																									1
contribution by quarter (seasonality)	29%	29%	24%	18%	100%	15%	33%	28%	24%	100%	17%	22%	24%	37%	100%	22%	25%	25%	29%	100%	20%	23%	26%	30%	100%
revenue from Waterlase systems																									
revenue from Diode systems																									
Margins	Mar '08	Jun '08	Sept '08	Dec '08	FY '08	Mar '09	Jun '09	Sept '09	Dec '09	FY '09	Mar '10	Jun '10	Sept '10	Dec '10	FY '10	Mar '11	Jun '11	Sept '11	Dec '11	FY '11	Mar '12	Jun '12	Sept '12	Dec '12	FY '12
Gross margin - laser products & licensing	50.3%	54.2%	49.3%	46.8%	50.5%	26.8%	56.6%	48.3%	42.2%	46.3%	6.1%	32.8%	28.8%	49.7%	33.7%	45.8%	46.5%	47.0%	47.5%		47.5%	48.0%	48.5%	49.0%	
Gross margin - imaging products																		25.0%	25.0%		30.0%	35.0%	40.0%	40.0%	
Gross margin - total	50.3%	54.2%	49.3%	46.8%	50.5%	26.8%	56.6%	48.3%	42.2%	46.3%	6.1%	32.8%	28.8%	49.7%	33.7%	45.8%	46.5%	46.8%	46.7%	46.5%	46.8%	47.1%	47.7%	48.1%	47.5%
Operating margin	-2.9%	2.1%	-24.8%	-41.4%	-13.6%	-74.7%	17.3%	7.5%	-13.6%	-6.8%	-120.8%	-70.0%	-39.0%	3.7%	-43.8%	-3.8%	-5.9%	-5.2%	-3.6%	-4.6%	-3.8%	-1.8%	0.3%	2.1%	-0.5%
Net margin	0.1%	3.3%	-29.4%	-45.4%	-14.1%	-70.9%	16.3%	7.1%	-14.2%	-6.8%	-120.7%	-70.7%	-43.8%	1.8%	-45.8%	-7.1%	-6.2%	-5.4%	-3.8%	-5.5%	-4.0%	-1.9%	0.2%	2.1%	-0.6%
Operating expenses	Mar '08	Jun '08	Sept '08	Dec '08	FY '08	Mar '09	Jun '09	Sept '09	Dec '09	FY '09	Mar '10	Jun '10	Sept '10	Dec '10	FY '10	Mar '11	Jun '11	Sept '11	Dec '11	FY '11	Mar '12	Jun '12	Sept '12	Dec '12	FY '12
Sales and marketing - % of revenues	29.4%	27.1%	36.7%	49.6%	34.1%	46.2%	19.3%	18.5%	28.9%	25.5%	59.9%	52.3%	33.9%	21.7%	37.9%	23.2%	24.9%	24.8%	24.2%	24.3%	24.0%	23.3%	22.8%	22.5%	23.1%
sequential guarter growth		-9.9%	11.1%	2.7%		-47.2%	-9.0%	-19.5%	34.2%		-12.1%	17.1%	-31.5%	0.1%		16.1%	22.7%	2.0%	10.2%		-4.8%	10.0%	10.0%	15.0%	
year on year growth						-45.7%	-45.2%	-60.3%	-48.1%	-49.9%	-13.5%	11.3%	-5.4%	-29.4%	-10.0%	-6.8%	-2.3%	45.5%	60.1%	19.9%	31.3%	17.7%	26.9%	32.5%	27.1%
General and administrative - % of revenues	16.2%	18.2%	20.7%	20.3%	18.6%	39.0%	12.1%	14.1%	17.7%	18.1%	39.2%	33.5%	21.4%	15.7%	25.0%	16.1%	18.4%	18.3%	17.8%	17.7%	18.0%	17.5%	17.0%	16.4%	17.1%
sequential guarter growth		10.4%	-6.9%	-25.2%		8.6%	-32.5%	-2.1%	7.8%		-5.8%	14.6%	-32.7%	14.7%		11.3%	31.1%	2.0%	9.7%		-3.2%	10.0%	9.5%	12.4%	
year on year growth		10.170	0.070	20.270		-16.5%	-48.9%	-46.3%	-22.6%	-34.7%	-32.9%	13.9%	-21.7%	-16.7%	-16.3%	-1.5%	12.7%	70.8%	63.2%	32.5%	41.9%	19.1%	27.8%	31.0%	29.3%
Engineering and development - % of revenues	7.7%	6.8%	8.6%	13.2%	8.6%	16.4%	7.8%	8.3%	9.1%	9.6%	27.8%	16.9%	12.5%	8.2%	14.5%	10.3%	9.0%	8.9%	8.4%	9.1%	8.6%	8.1%	7.6%	7.1%	7.8%
sequential guarter growth	1.1.70	-13.0%	3.3%	16.9%	0.070	-29.4%	3.3%	-10.7%	-5.4%	0.070	29.1%	-18.4%	-22.1%	3.2%	11.070	36.6%	0.0%	1.3%	6.4%	0.170	-2.1%	6.7%	6.3%	8.3%	1.070
year on year growth		-13.0 %	3.376	10.5 %		-25.9%	-12.0%	-23.9%	-38.4%	-25.7%	12.7%	-11.1%	-22.1%	-15.3%	-8.6%	-10.4%	9.8%	42.9%	47.4%	18.0%	5.6%	12.6%	18.1%	20.2%	14.2%
Total operating expenses - % of revenues	53.3%	52.1%	74.1%	88.1%	64.1%	101.6%	39.3%	40.8%	-30.4 %	-23.1%	126.9%	102.7%	67.8%	46.0%	77.5%	49.7%	52.4%	42.9 % 52.0%	50.4%	51.1%	50.6%	48.9%	47.4%	45.9%	48.0%
Other Items	Mar '08		Sept '08	Dec '08	FY '08	Mar '09	Jun '09		Dec '09	FY '09	Mar '10		Sept '10		FY '10	49.7 % Mar '11	52.4%	Sept '11	Dec '11	FY '11	Mar '12	40.9%	47.4% Sept '12	45.9% Dec '12	FY '12
Interest rate on cash	Wai Uo	Juli 08	Sept 00	Dec 08	FIVO	Wal 05	Juli 03	Sept 05	Dec 03	FT 03	Wiai IU	Juli lu	Sept 10	Dec IU	1 10	0.0%	0.0%	0.0%	0.0%	FT 11	0.0%	0.5%	0.5%	0.5%	FT 12
Interest rate on debt																11.1%	11.1%	11.1%	11.1%		11.1%	11.1%	11.1%	11.1%	
Tax Rate, federal	70.8%	-3.5%	-1.1%	-0.6%	-1.3%	-0.7%	1.1%	-0.1%	-4.4%	-4.2%	-0.2%	-0.3%	-1.0%	3.3%	-0.5%	-1.1%	-1.9%	0.0%	0.0%	-2.7%	0.0%	0.0%	0.0%	0.0%	-37.1%
	70.0%	-3.5%	-1.170	-0.0%	-1.3%	-0.7%	1.170	-0.1%	-4.4%	-4.2%	-0.2%	-0.3%	-1.0%	3.3%	-0.5%	-1.170	-1.9%	25	25	-2.770	25	25			-37.1%
Taxes, other																		25	25		25	25	25	25	
Days of accounts receivable									38	36				32	46	51	48	48	45	51	45	45	45	45	54
Days of inventory									121	123				132	147	114	113	113	105	118	105	100	95	90	107
Days payables outstanding									75	77				76	85	72	71	71	71	80	71	71	71	71	84
Tetal Oceani					(981)					(449)					(007)	(40)	(400)	(7-)	(7-)	(007)			(7-)	(7.5)	(000)
Total Capex EBITDAS calculation	Mar '08	Jun '08	Sept '08	Dec '08	(981) FY '08	Mar '09	Jun '09	Sept '09	Dec '09	(449) FY '09	Mar '10	Jun '10	Sept '10	Dec '10	(237) FY '10	(18) Mar '11	(139) Jun '11	(75) Sept '11	(75) Dec '11	(307) FY '11	(75) Mar '12	(75) Jun '12	(75) Sept '12	(75) Dec '12	(300) FY '12
GAAP Operating Income (loss)	(561)	386	(3,794)	(4.814)	(8,783)	(4,929)	2,474	904	(1.409)	(2,960)	(5.308)	(4,122)	(2.424)	359	(11.495)	(406)	(717)	(647)	(509)	(2.278)	(512)	(270)	5ept 12	423	(303)
Depreciation and amortization	481	479	(3,794) 480	469	1.909	(4,525) 415	361	350	318	(2,500)	(3,308)	285	302	291	1,177	405	183	233	235	1,056	237	239	242	244	962
		865																						-	
EBITDA Unadjusted	(80)	608	(3,314)	(4,345)	(6,874)	(4,514)	2,835	1,254	(1,091)	(1,516)	(5,009)	(3,837)	(2,122)	650	(10,318)	(1)	(534)	(414)	(273)	(1,222)	(274)	(30)	296	667	658
Add back one-time items																		<u> </u>				-			·
EBITDA Adjusted	(80)	865	(3,314)	(4,345)	(6,874)	(4,514)	2,835	1,254	(1,091)	(1,516)	(5,009)	(3,837)	(2,122)	650	(10,318)	(1)	(534)	(414)	(273)	(1,222)	(274)	(30)	296	667	658
Add back stock-based compensation	452	441	424	418	1,735	468	317	318	254	1,357	206	180	113	228	727	220	456	456	479	1,611	456	456	456	479	1,847
Non-cash other	2				2	-		-	-				24	82	106	157	177		-	334	-	-		-	-
		1.306	(2.890)	(3.927)	(5,137)	(1 0 10)	3,152	1.572	(837)	(159)	(4.803)			960	(9,485)	376	99	42	206	723	182				2.505
EBITDAS	374	1.306	(2.890)	(3.927)	(5.137)	(4.046)					(4.80.3)	(3.657)	(1.985)	960								426	752	1.145	2.505

Source: Biolase SEC filings, Ascendiant Capital Markets, LLC forecast

Note: Shaded cells contain variables that drive the forecast.



# Figure 9: Balance Sheet (in thousand U.S. dollars)

Balance Sheet	Dec '09	Dec '10	Mar '11	Jun '11	Sept '11	Dec '11	Mar '12	Jun '12	Sept '12	Dec '12
Cash and cash equivalents	2,975	1,694	1,632	10,134	8,902	8,882	9,278	8,829	8,859	8,713
Accounts receivable	4,229	3,331	5,966	6,398	6,497	6,878	6,656	7,544	8,403	9,797
Inventory	7,861	6,987	7,178	8,029	8,104	8,508	8,222	8,826	9,232	10,130
Prepaid expenses and other current assets	1,347	1,355	928	771	771	771	771	771	771	771
Other assets		576								
Total current assets	16,412	13,943	15,704	25,332	24,273	25,039	24,928	25,970	27,266	29,412
Property and equipment - gross	8,718	7,755	8,341	8,394	8,469	8,544	8,619	8,694	8,769	8,844
Accumulated depreciation	(6,538)	(7,000)	(7,157)	(7,210)	(7,433)	(7,658)	(7,886)	(8,115)	(8,347)	(8,580)
Property and equipment - net	2,180	755	1,184	1,184	1,036	886	733	579	422	264
Intangible assets	472	342	309	277	267	257	247	237	227	217
Goodwill	2,926	2,926	2,926	2,926	2,926	2,926	2,926	2,926	2,926	2,926
Deferred tax asset	17	11	12	13	13	13	13	13	13	13
Other assets	170	170	170	185	185	185	185	185	185	185
Total assets	22,177	18,147	20,305	29,917	28,700	29,306	29,032	29,910	31,039	33,017
Loans payable, current portion	-	2,622	-	-	-	-	-	-	-	-
Accounts payable	4,887	4,029	4,540	5,035	5,082	5,742	5,549	6,254	6,887	7,976
Accrued liabilities	5,152	5,482	5,035	5,437	5,437	5,437	5,437	5,437	5,437	5,437
Customer deposits	-	5,877	2,954	918	-	-	-	-	-	-
Deferred revenue, current portion	1,123	1,650	1,662	2,185	2,185	2,185	2,185	2,185	2,185	2,185
Total current liabilities	11,162	19,660	14,191	13,575	12,704	13,364	13,171	13,876	14,509	15,598
Long term borrowings	-	-	-	-	-	-	-	-	-	-
Deferred tax liabiliites	473	544	562	580	580	580	580	580	580	580
Warranty accrual, long term	448	424	524	431	431	431	431	431	431	431
Deferred revenue, long term	1,975	433	425	41	41	41	41	41	41	41
Other liabilities	190	133	266	379	379	379	379	379	379	379
Total liabilities	14,248	21,194	15,968	15,006	14,135	14,795	14,602	15,307	15,940	17,029
Preferred stock	-	-	-	-	-	-	-	-	-	-
Stockholders' equity	7,929	(3,047)	4,337	14,911	14,565	14,510	14,430	14,603	15,100	15,988
Total liabilities and stockholders' equity	22,177	18,147	20,305	29,917	28,700	29,306	29,032	29,910	31,039	33,017

Source: Biolase SEC filings, Ascendiant Capital Markets, LLC forecast



# Figure 10: Cash flow statement – quarterly (in thousand U.S. dollars)

Cash Flow Statement - quarterly	Mar '10	Jun '10	Sept '10	Dec '10	FY '10	Mar '11	Jun '11	Sept '11	Dec '11	FY '11	Mar '12	Jun '12	Sept '12	Dec '12	FY '12
Net income (loss)	(5,305)	(4,164)	(2,726)	174	(12,021)	(750)	(753)	(672)	(534)	(2,708)	(537)	(283)	41	409	(370)
Depreciation & amortization	299	272	259	240	1,070	228	183	233	235	879	237	239	242	244	962
Stock-based compensation expense	206	180	113	228	727	220	456	456	479	1,611	456	456	456	479	1,847
Loss on disposal of assets, net	3	-	-	52	55	7	1	-	-	8	-	-	-	-	-
Impairment of PP&E	-	35	-	-	35	-	-	-	-	-	-	-	-	-	-
Provision for (Recovery of) bad debts	(24)	75	(98)	(33)	(80)	10	10	-	-	20	-	-	-	-	-
Impairment of intangible asset	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Recovery of sales returns allowance	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Provision for inventory excess and obsolescence	5	(5)	-	-	-	-	118	-	-	118	-	-	-	-	-
Amortization of discounts on term loan payable	-	5	12	20	37	78	-	-	-	78	-	-	-	-	-
Amortization of debt issuance costs	-	8	31	31	70	99	-	-	-	99	-	-	-	-	-
Non-employee equity instruments	-	-	-	19	19	96	114	-	-	210	-	-	-	-	-
Other non-cash compensation	-	-	24	63	87	61	63	-	-	124	-	-	-	-	-
Deferred income taxes	19	9	15	34	77	(1)	(1)	-	-	(2)	-	-	-	-	-
Change in value of warrant liability	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Changes in working capital:	5,382	337	1,466	(1,073)	6,112	(5,112)	(2,230)	(1,044)	(126)	(8,512)	315	(787)	(633)	(1,202)	(2,307)
Accounts receivable	3,231	(728)	(1,088)	(437)	978	(2,645)	(441)	(99)	(382)	(3,566)	222	(888)	(859)	(1,394)	(2,919)
Inventory	(554)	(869)	852	1,445	874	(191)	(969)	(75)	(405)	(1,639)	286	(604)	(406)	(898)	(1,622)
Prepaid expenses and other current assets	(125)	215	317	(234)	173	212	274	-	-	486	-	-	-	-	-
Accounts payable, accrued & other liabilities	(1,118)	388	(476)	432	(774)	431	803	47	660	1,941	(193)	705	632	1,090	2,234
Customer deposits	3,982	2,344	2,092	(2,541)	5,877	(2,923)	(2,036)	(918)	-	(5,877)	-	-	-	-	-
Deferred revenue	(34)	(1,013)	(231)	262	(1,016)	4	139	-	-	143		-		-	-
Net cash provided by (used in) operating activities	585	(3,248)	(904)	(245)	(3,812)	(5,064)	(2,039)	(1,027)	55	(8,076)	472	(374)	105	(71)	132
Acquisition of PP&E	(69)	(115)	(36)	(17)	(237)	(18)	(139)	(75)	(75)	(307)	(75)	(75)	(75)	(75)	(300)
Proceeds from sale of PP&E	-	-	-	-	-	- 1	-	-	-	-	-	-	-	-	-
Net cash provided by (used in) investing activities	(69)	(115)	(36)	(17)	(237)	(18)	(139)	(75)	(75)	(307)	(75)	(75)	(75)	(75)	(300)
Proceeds (payment) from debt	-	3.000	-	(300)	2,700	(2,700)	-	-	-	(2,700)	-	-	-	-	-
Sale of common stock, net of issuance costs	-	-	-	-	-	7,049	10,276	(130)	-	17,195	-	-	-	-	-
Proceeds from exercise of stock options and warrants	8	34	106	51	199	594	370	-	-	964	-	-	-	-	-
Payment of debt issuance costs	-	(85)	-	-	(85)	-	-	-	-	-	-	-	-		-
Net cash provided by (used in) financing activities	8	2,949	106	(249)	2,814	4,943	10,646	(130)	-	15,459	-	-	-	-	-
Effect of exchange rate changes	(71)	(119)	165	(21)	(46)	77	34	-	-	111	-	-	-	-	-
Net increase (decrease) in cash	453	(533)	(669)	(532)	(1,281)	(62)	8,502	(1,232)	(20)	7,188	397	(449)	30	(146)	(168)
Cash at beginning of period	2,975	3,428	2,895	2,226	2,975	1,694	1,632	10,134	8,902	1,694	8.882	9,278	8,829	8,859	8,882
Cash at end of period	3,428	2,895	2,895	2,220	2,975	1,632	10,134	8.902	8,882	8.882	9,278	9,278 8.829	8,859	8,713	8,713
Cash at thu of period	3,420	2,095	2,220	1,094	1,094	1,032	10,134	0,902	0,002	0,002	9,210	0,029	0,009	0,113	0,713

Source: Biolase SEC filings, Ascendiant Capital Markets, LLC forecast



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#### **Risks & Considerations**

Our optimism is tempered by the following concerns ahead of next week's earnings report:

- 2 analysts (of total 3) covering the stock have Q3 forecasts of \$14.25mm and \$13.35mm; we suspect this may prove too
  aggressive. (3<sup>rd</sup> analyst: \$12.0mm; Our forecast: \$12.4mm)
- The same 2 analysts may need to cut their Q4 revenue forecasts of \$19.0mm and \$18.5mm. (3<sup>rd</sup> analyst: \$14.2mm; Our forecast: \$14.0mm)
- Biolase reported (Oct. 13, 2011) that international sales surpassed domestic sales for the first time in its history. We view this
  as a strong positive, but it implies that U.S. sales were down from Q2. (Our read is for a sequential decline of 25-30%.) This
  may be read negatively, even though the reason was that the company was constrained in a few key parts.
- Sales of a new imaging line were expected to begin generating meaningful revenues in Q3. However, comments we gleaned at the ADA conference in October suggest that regulatory and registration issues led to a slower rollout of the imaging line.



Ascendiant Capital Market	s, LLC Rating System
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Strong Buy:We expect the stock to provide a total return of 30% or more within a 12-month period.Buy:We expect the stock to provide a total return of between 10% and 30% within a 12-month period.

Neutral: We expect the stock to provide a total return of between minus 10% and plus 10% within a 12-month period.

Sell: We expect the stock to provide a total return of minus 10% or worse within a 12-month period.

**Speculative Buy:** This rating is reserved for companies we believe have tremendous potential, but whose stocks are illiquid or whose equity market capitalizations are very small, often in the definition of a nano cap (below \$50 million in market cap). In general, for stocks ranked in this category, we expect the stock to provide a total return of 50% or more within a 12-month period. However, because of the illiquid nature of the stock's trading and/or the nano cap nature of the investment, we caution that these investments may not be suitable for all parties.

Total return is defined as price appreciation plus dividend yield.

#### Ascendiant Capital Markets, LLC Distribution of Investment Ratings

Ascendiant Capital Markets, LLC Distribution of Investment Ratings (as of November 2, 2011): 50% rated Strong Buy/Buy, 50% rated Neutral, 0% rated Sell, 0% rated Speculative Buy. Within these ratings categories, 0% of Strong Buy/Buy-rated, 100% of Neutral-rated, and 0% of Sell-rated companies were provided investment banking services within the past 12 months.

#### **Other Important Disclosures**

Our analysts use various valuation methodologies including discounted cash flow, price/earnings (P/E), enterprise value/EBITDAS, and P/E to growth rate, among others. Risks to our price targets include failure to achieve financial results, product risk, regulatory risk, general market conditions, and the risk of a change in economic conditions.

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