



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Mail Stop 6010

November 3, 2008

Via U.S. Mail and Facsimile to (858) 202-4766

Christian O. Henry
Chief Financial Officer
Illumina, Inc.
9885 Towne Centre Drive
San Diego, CA 92121

Re: Illumina, Inc
Form 10-K for the Fiscal Year Ended December 30, 2007
Filed February 26, 2008
Form 10-Q for the Fiscal Quarter Ended September 28, 2008
File No. 000-30361

Dear Mr. Henry:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Fiscal Year Ended December 30, 2007

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 28

Comparison of Years Ended December 30, 2007 and December 31, 2006, page 33

Revenue, page 33

1. We note that your discussion of the significant changes in revenues and costs of revenues does not *quantify* the specific reasons for material changes in these financial statement line items. In future filings, each significant factor that contributed to the changes, including offsetting factors, should be separately quantified. Trends and uncertainties that may have a material impact upon revenues or operating results should also be discussed. In addition, in future filings separately describe and quantify the effects of changes in prices and volume of your product offerings on your operating results. Refer to Item 303 and the related instructions in Regulations S-K as well as SEC Interpretive Release No. 33-8350.

Consolidated Financial Statements page F-1

Note 1. Organization and Summary of Significant Accounting Policies, page F-7

Inventories, page F-9

2. In future filings, please revise your inventory accounting policy disclosure to include the method by which amounts are removed from inventory, e.g., "average cost," "first-in, first-out," "last-in, first-out," "estimated average cost per unit". Refer to Rule 5-02(6)(b) of Regulation S-X.

Note 5. Convertible Senior Notes, page F-22

3. We note that in conjunction with the sale of the \$400 million Convertible Senior Notes in February 2007, you entered into a convertible note hedge and issued a warrant. We see that you recorded the cost of the hedge as a reduction of additional paid in capital. Please describe for us in greater detail how you accounted for the issuance of the convertible note hedge and warrant issuance and the accounting literature which supports your conclusions. Additionally, please tell us how you valued and specifically recorded the transactions in your financial statements.
4. In a related matter, please also tell us the authoritative accounting literature that supports your accounting for and presentation of the \$54.6 million incremental tax benefit related to the convertible note issuance as disclosed on page F-5.

Note 8. Litigation Settlements, page F-27

5. We see that on January 9, 2008 you entered into a settlement agreement with Affymetrix whereby you agreed to pay them \$90 million. We note the disclosure herein that as of December 30, 2007 you had accrued the \$90 million settlement payment and recorded an intangible asset (licensed technology) for \$36 million. Please tell us more about your accounting for the settlement agreement, including the basis in U.S GAAP for your treatment of a portion of the settlement as an intangible asset as of December 31, 2007. Furthermore, please describe for us how you determined that those costs would be recoverable and how you determined the fair value and useful life of the recorded intangible asset.

Note 11. Income Taxes, page F-30

6. We note that at December 30, 2007 and December 31, 2006, net operating loss carry forwards of \$28.7 million and \$99.1 million, respectively, and research and development tax credit carryforwards of approximately \$9.2 million and \$9.3 million, respectively, were available to reduce future income taxes. We also see that in 2007 you released a portion of your deferred tax asset valuation allowance of approximately \$17.1 million. Please explain further your basis for concluding that it is more likely than not that these deferred tax assets released are realizable. Describe the nature of the positive and negative evidence you considered in your determination and how that evidence was weighted. Expand the disclosures herein and in Management's Discussion and Analysis in future filings to address the factors considered by management in determining whether your deferred tax assets as of year end will or will not be realized. Your future revisions should address the factors outlined in paragraphs 20 to 25 of Statement 109.

Note 13. Segment Information, Geographic Data and Significant Customers, page F-34

7. Disclosure of long-lived assets by geographic area under SFAS 131 should present tangible assets only and should not include intangibles or investments. See question 22 to the FASB publication "Segment Information: Guidance on Applying Statement 131." Please address our concern in your future filings.

Form 10-Q for the Fiscal Quarter Ended September 28, 2008

Item 1. Financial Statements, page 3

Note 4. Cash and Cash Equivalents and Investments, page 11

8. We note you have approximately \$52 million in auction rate securities (ARS) at September 28, 2008. We also note that during the first quarter of 2008, most ARS auctions began to fail and the securities became illiquid. Consequently, in 2008 you reclassified these ARS securities to long-term investments and since there was an

insufficient observable market for the ARS you determined the fair value of the ARS securities utilizing a discounted cash flow model. Please tell us the following:

- How you considered trades in the secondary market and if you did not consider trades in the secondary market, why you did not consider this an appropriate analysis;
- The basis for the assumptions used to determine your estimate of the present value of the auction rate securities in your discounted cash flow analysis, including the sensitivity of your estimated present value to those assumptions.
- Whether you considered any broker's estimation of the fair value of your auction rate securities;
- How you determined, based on your estimate of fair value, that the temporary impairment loss was only \$4.3 million and specifically how you concluded that there were no *other-than-temporary* losses in your auction rate security investments as September 28, 2008, considering the failed auctions for your ARS beginning in the first quarter of 2008. Please clarify whether you have the intent and the ability to hold these securities until maturity. Refer to SFAS 157, FSP FAS 115-1 and FAS 124-1, SAB Topic 5M, or other authoritative accounting literature which supports your analysis.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Christian O. Henry
Illumina, Inc.
November 3, 2008
Page 5

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

You may contact Kevin Kuhar, Staff Accountant, at (202) 551-3662 or me at (202) 551-3603 if you have questions regarding these comments on the financial statements and related matters. In this regard, do not hesitate to contact Angela Crane, Branch Chief, at (202) 551-3554.

Sincerely,

Jay Webb
Reviewing Accountant