



DIVISION OF
CORPORATION FINANCE

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

September 2, 2010

National Corporate Research Ltd.
As Agent for SemiLEDs Corporation
615 South DuPont Highway
Dover, DE 19901

Re: SemiLEDs Corporation
Registration Statement on Form S-1
Filed August 6, 2010
Amendment No. 1 to Registration Statement on Form S-1
Filed August 9, 2010
File No. 333-161052

Ladies and Gentlemen:

We have reviewed your registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

Amendment No. 1 to Registration Statement on Form S-1

Prospectus

1. Please confirm that any preliminary prospectus you circulate will include all non-Rule 430A information. This includes the price range and related information based on a bona fide estimate of the public offering price within that range. We may have further comments after you include pricing information and related disclosure.
2. We note your disclosure with respect to China SemiLEDs. Please revise to place greater emphasis on disclosure related to the current stage of China SemiLEDs' development rather than focusing on your future aspirations for China SemiLEDs.

Prospectus Summary, page 1

3. Revise the opening paragraph of your summary to disclose your net revenues and net income (loss) for the most recently completed fiscal year and the applicable stub period. In addition, please disclose that you have received a going concern opinion from your auditors.
4. Regarding the industry and market statistics that you cite in your document, please also tell us:
 - how you confirmed that the data used in your registration statement reflects the most recent available information;
 - whether all of the data is publicly available;
 - whether you paid for the compilation of any of the data;
 - whether any data was prepared for your use in the registration statement; and
 - whether the authors of the data consented to your use of such data in the registration statement.

If you were affiliated with the preparation of any of the data, please ensure that your disclosure clearly indicates the nature of all such affiliations.

5. We note that you rely heavily on industry and technical terms. We note, as examples, the phrase “epitaxy materials on sapphire” in the third paragraph on page 1 and your reference to a “vertical structure” in the first bullet point on page 2. Please revise, where appropriate, to provide a description of your business that is understandable to a person unfamiliar with your industry.

Our Strategy, page 2

6. Please avoid use of shortened names where the meaning is not clear from context. For example, we note your use of MOCVD in the fourth bullet point on page 3. Refer to sample comment 5 in Updated Staff Legal Bulletin No. 7 (June 7, 1999) available on the Commission’s web site.
7. Refer to the second-to-last bullet point on page 3. With a view toward clarified disclosure, please tell us what you mean by “build scale.”
8. We note your claim that you are on the forefront of innovation. Please provide objective support for this claim and any other unsubstantiated claims in the registration statement.

Corporate Information and Structure, page 4

9. Please consider providing a graphic illustrating your corporate structure.

10. Please revise the second paragraph of this section to reconcile your statement that your operations are located in Taiwan SemiLEDs with your statement that the majority of your LED components are sold through Helios Crew Corporation. In addition, please reconcile the former statement with your statement in the third paragraph that you have no material operations to date.

Risk Factors, page 9

11. We note that your risk factor disclosure is 30 pages long. Please note that this section should discuss risks that are material and particular to your business. It is not appropriate to merely list factors that would apply to any issuer or any offering. Make appropriate revisions to ensure that this section provides useful disclosure to investors.
12. Please include a risk factor that highlights the risks to your business from the damages and, in particular, the injunction sought in the Rothschild complaint.
13. We note that certain of your more lengthy risk factors appear to combine the discussion of several risks. Where appropriate, consider dividing these extended discussions into several more concise risk factors, with more detailed headings that identify the specific risk presented. For example and without limitation, you may wish to consider revisions to “We operate in highly competitive markets...” on page 11, “Intellectual property claims against us...” on page 12 and “China SemiLEDs may compete...” on page 28.

If LEDs fail to achieve widespread adoption..., page 10

14. It is unclear how the availability of regulations that discourage the use of traditional lighting technologies, as you mention in the first bullet point, presents a risk to the company. Please clarify.

We may have difficulty managing..., page 15

15. Refer to the first paragraph of this risk factor. We note that you have disclosed your revenues for 2006, 2009 and the stub period. Please also disclose your net income (loss) for those periods.

We may not succeed in cost-effectively producing..., page 16

16. Please revise, where appropriate, to clarify your disclosure as to why the production of larger wafers is necessary to your development. Specifically, your disclosure does not clearly explain the benefits derived from larger chips.

Variations in production yields...., page 16

17. We note that you have experienced difficulties in achieving acceptable yields when introducing new products or new manufacturing processes. With a view toward disclosure, please tell us in greater detail the nature of these difficulties and the impact on your operations.

We may not be successful in expanding...., page 17

18. Refer to the third paragraph of this risk factor. Please describe for us in greater detail your strategy to minimize litigation risk. In particular, please tell us:
- whether you currently sell your products in all countries that meet an acceptable risk profile. If you do not, please identify the additional countries which meet your risk profile but from which you currently do not derive revenue;
 - whether you believe that there is a material risk that you would face infringement litigation if you sold in countries that aggressively enforce intellectual property rights; and
 - whether you believe your strategy of focusing on countries with weak intellectual property enforcement regimes limits your ability to enforce your own intellectual property rights against infringement.

We derive a substantial portion of our revenues...., page 17

19. Please disclose in this risk factor the names of, and percentage of revenues accounted for by, your three largest customers in 2008 and 2007.

The marketing and distribution efforts...., page 18

20. Refer to the second-to-last paragraph under this heading. Please revise, where appropriate, to describe in greater detail the material terms of your distribution agreements, including exclusivity restrictions and other similar arrangements related to your material distributors.

The reduction or elimination of government investment...., page 21

21. Please revise, where appropriate, to specify the governments around the world that have used policy initiatives to accelerate the development and adoption of LED technologies. In this regard, we also note your disclosure on page 81 under “Government Investments and Support for LEDs.”

If we fail to implement...., page 21

22. Please clarify your risk factor by disclosing when you will be subject to the internal control requirement.

We are a multinational organization..., page 25

23. Please tell us whether you intend to file tax opinions.

Special Note Regarding Forward-Looking..., page 40

24. Refer to the final sentence on page 40. Please revise to confirm your obligation to comply with applicable securities laws.
25. Refer to the third sentence of the final paragraph on page 41. Please revise to remove any implication that you are disclaiming the accuracy of the information included in this prospectus.

Use of Proceeds, page 42

26. Disclose the approximate amount to be used for each of the purposes you disclose in the second paragraph in this section. Please note that you may reserve the right to change the use of proceeds. Refer to Item 504 of Regulation S-K.

Capitalization, page 43

27. Please revise to remove the caption relating to cash and cash equivalents from your presentation of capitalization.
28. We note from page F-22 through page F-24 that your outstanding Class B common stock and Series A, B, C, D, and E preferred shares will automatically convert into fully paid and non-assessable shares of Class A common stock on a one-to-one basis based upon on certain conditions including a minimum amount of gross proceeds and minimum price per share. In connection with your pro forma presentation in the filing, please confirm to us that you currently expect the offering to meet all of the conditions for automatic conversion. If you subsequently conclude the conditions may not be satisfied, please revise the filing accordingly.
29. Refer to the last bullet point on page 44. Please disclose the terms governing your ability to repurchase the 101,250 shares.

Selected Consolidated Financial Data, 47

30. Please revise pages 48-49 to remove the “unaudited” label beneath the May 31, 2010 and 2009 headings to avoid giving the impression that other selected financial data in the table is audited. This comment also applies to your presentations elsewhere in the filings, including pages 7 and 8.

Management's Discussion and Analysis..., page 50

Revenues, net, page 53

31. In the paragraph immediately below the table, you refer to "blended" selling prices. Given that your table includes separate revenue amounts for LED chips and components, please clarify what you mean by blended and how the average selling prices for all products differs from a blended average.

Interest income (expense), net., page 55

32. We note your disclosure of long-term borrowings and lines of credit in the first paragraph on page 56 and your reference to bank borrowings, notes and lines of credit on page 75 under "Liquidity and Capital Resources." Please file any related material agreements as exhibits.

Taiwan tax treatment., page 57

33. Regarding your disclosure in the last sentence of the second paragraph of this section, please disclose the deadline for using the exemption from taxation.

-Critical Accounting Policies, page 58

-Stock-based Compensation, page 59

34. Please disclose the aggregate intrinsic value of all outstanding options based on the midpoint of the estimated IPO price range. Please include an updated discussion of each significant factor contributing to the difference between the fair value as of the date of grant and the estimated IPO price for options granted during the twelve months prior to the date of the most recent balance sheet once you have determined your IPO price range.
35. We note your disclosures on pages 62-63 related to how you valued your common stock underlying your stock options issued since September 2008 utilizing the income and market approaches to determine the fair value of your enterprise. We note that in connection with the August 31, 2008 and February 28, 2010 valuations, you weighted the income and market approaches. However, for the valuation as of August 31, 2009, you state that you relied solely on the income approach. Please revise to explain in greater detail any changes in methodologies and weighting between valuation dates.
36. Further to the above, for each valuation date, describe how you determined the significant assumptions used in the valuations, including the weighting between the income and market approaches, the risk-adjusted discounts, the non-marketability discounts and the estimated holding periods.

37. We note your discussion on pages 62-63 of valuations as of August 31, 2008, August 31, 2009, February 28, 2010 and May 31, 2010. However, we note from the disclosure on page 60 that you granted options on November 1, 2008, February 15, 2009, March 1, 2009, February 10, 2010, May 2, 2010 and July 23, 2010. Please revise to explain how your accounting for these option grants complies with paragraph 718-10-30-6 of the FASB Accounting Standards Codification, which requires you to record the fair value of the options as of the grant date. Revise your disclosures as appropriate to explain how management considered events occurring between the related valuation and the grant date in determining the grant-date fair value of the stock options.
38. Please note that we are deferring any final evaluation of stock compensation until the estimated offering price is specified, and we may have further comments in that regard when you file the amendment containing that information.

-Inventory Valuation, page 63

39. We note your disclosure here on how you evaluate your inventory for a decline in net realizable value. Please tell us and revise your disclosure to explain in more detail how you develop certain of your assumptions such as “future demand” for purposes of your inventory valuation analysis. For example, discuss how you arrived at your estimates for future demands, how accurate your estimates of future demand have been in the past and how much the estimates of future demand have changed in the past.

Revenues, net, page 66

40. For this and other applicable periods, please quantify the effect of the changes in selling price on your revenues for both LED chips and LED components.

Quantitative and Qualitative Disclosures about Market Risk, page 78

41. For each market risk identified, please revise to provide quantitative disclosure in one of the three disclosure formats outlined in Item 305(a) of Regulation S-K.

Increased LED performance, page 80

42. Please clarify your disclosure in the fourth sentence regarding LEDs becoming “increasingly competitive.” For example, on what basis is it becoming competitive with other lighting technologies?

Business, page 84

Competitive Manufacturing Cost Structure, page 85

43. You disclose that recycling reduces your dependence on sapphire. Please clarify to what extent this dependency is reduced. In addition, please clarify how this reduced dependency insulates you from supply shortages and price fluctuations.

Efficient Operating and Business Model, page 85

44. Please refer to the second sentence in this section. When indicating that you are subject to lower costs, disclose what you are comparing against. In addition, explain how operating in Taiwan provides you with lower borrowing costs.

Expand our Manufacturing Capacity in Taiwan, page 86

45. Regarding your intention to expand capacity in Taiwan, please describe what steps you have taken toward the expansion. Also, if possible, quantify the added capacity from the planned expansion.

Government Incentive Funding..., page 87

46. If material, please disclose the dollar amount of grants received in the most recently completed fiscal year.

Our Technology, page 87

47. Please revise your illustration for clarity. In addition, please correspond your description of the LED chip production process to the individual steps shown in the diagram on page 88.
48. You disclose in the first paragraph on page 88 that your ability to remove the sapphire will enable you to more easily move to larger wafer sizes. Please disclose what obstacles remain for you to move to the larger wafer size.

LED Components, page 90

49. Please disclose the revenue generated by the sale of your LED components through Helios Crew and the percentage of revenues accounted for by those sales.

Sales and Marketing, page 91

50. Please disclose the size and geographic distribution of your sales and distribution network.

Intellectual Property, page 92

51. Please clarify when your 74 patents expire. Also, with a view toward disclosure, tell us the number of your patents that represent technology which is also covered by patents issued to you in a different country.

Competition, page 93

52. Refer to the fourth sentence of the second paragraph. Please disclose the names of the substantially larger companies that compete against you with discrete segments of their overall business.

Environmental Regulation, page 93

53. Please disclose whether you are in compliance with environmental regulations.

Legal Proceedings, page 94

54. We note that in the first paragraph you refer to the proceedings listed in this section as “examples.” Please confirm to us that all required disclosure under Item 103 of Regulation S-K has been made.

Sales by China SemiLEDs and Taiwan SemiLEDs, page 96

55. With a view toward disclosure, please tell us in greater detail your reasons for transferring intellectual property wholly-owned by you to an entity (China SemiLEDs) in which you are a minority shareholder and with whom you expect you will compete in the future for sales in China. Please describe the perceived benefit to you of this arrangement with appropriate consideration of applicable restrictions on your ability to directly or indirectly manufacture chips in China.
56. With a view toward disclosure, please tell us how you will allocate customers between you and China SemiLEDs to the extent that you are both competing for the same customer.

Board of Directors..., page 97

57. Refer to the first paragraph on this page. Please clarify, to the extent that you hold less than 41% of the shares of China SemiLEDs, how your right to nominate directors is adjusted. For example, if you hold 40.9% or 25.0% of the shares, how many directors will you be able to nominate?

58. Given that you share directors with China SemiLEDs and they may compete for customers, please disclose how the directors comply with their fiduciary duties to you and China SemiLEDs to the extent a conflict arises.

Management, page 99

Executive Officers and Directors, page 99

59. Please confirm that you will make all required disclosures once you appoint additional independent directors.
60. Please disclose Mr. Whiteacre's business experience for the past 5 years.

Executive Compensation, page 104

61. We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please advise us of the basis for your conclusion that disclosure is not necessary and describe the process you undertook to reach that conclusion.

Base Salaries, page 105

62. Please disclose the rationale for the board's decision to award bonuses in the amount of the salary increase and living allowance forgone by the chief executive officer and chief financial officer in 2007 due to the company's minimal income at that time. Please clarify the basis upon which you determined that these amounts should be paid in March 2009.

Annual Incentive Compensation, page 106

63. Regarding the NT\$15,000 special bonus, please disclose how this amount was determined.

Timing and Size of Grants, page 107

64. Please disclose how the factors in the final sentence of the first paragraph in this section are weighed in determining the size of grants.

Perquisites, page 108

65. Given that you disclose on page 105 that you paid certain executive officers a living allowance in 2010 for prior years, please reconcile your disclosure here and in the summary compensation table that you did not provide perquisites.

Summary Compensation Table, page 110

66. Please tell us your basis for not disclosing summary compensation information for the last three completed fiscal years.
67. It appears that the additional bonus described in the carryover paragraph at the bottom of page 105 was payment for amounts earned in previous years. Please disclose these amounts in the appropriate columns on page 110 or tell us why they should not be disclosed.

Salary, Bonus and Non-Equity Incentive Plan..., page 110

68. Please clarify the meaning of the percentages in the table in this section.

Grants of Plan-Based Awards, page 111

69. Please disclose or tell us why you should not disclose the threshold, target, and maximum amounts that Mr. Yeh can earn under the profit-sharing pool mentioned on page 106.

Outstanding Equity Awards at Fiscal Year-End, page 111

70. We note from your footnote disclosure that some option awards have vested which are not reflected in the "Exercisable" column in your table. Please reconcile. In addition, to the extent that certain options vest on September 1, 2010 ensure that your table is updated accordingly.

Employment Agreements, page 112

71. Much of the information in the second and third paragraph in this section is repeated from your disclosure on pages 108 and 109. Please revise the prospectus to avoid unnecessary repetition.

Certain Relationships and Related Transactions, page 118

72. Please disclose your license agreements with China SemiLEDs or tell us why disclosure is inappropriate.
73. As required by Regulation S-K Item 404(b)(1)(ii), please disclose the standards to be applied pursuant to your related-person transactions policies and procedures.

Issuance of Series C Convertible..., page 118

74. Please describe in your registration statement the nature of the relationship between Wi Harper and Peter Liu.

Lite-On Agreements, page 119

75. Please disclose the material terms of the warranty agreement.

Principal and Selling Stockholders, page 121

76. Please identify the natural persons who directly or indirectly have or share voting or investment power over the securities held by entities identified in your table as well as the trusts in footnotes (2) and (3) to the table.

Description of Capital Stock, page 124

Common Stock, page 124

77. Refer to the penultimate paragraph in this section. Please tell us how you are qualified to provide the legal opinion in the last sentence.

Legal Matters, page 141

78. With a view toward disclosure, please tell us which legal matters Lee and Li and Haiwen & Partners will pass upon. Also, tell us whether any related opinions will be issued and filed as exhibits.

Index to Consolidated Financial Statements, page F-1

Notes to Consolidated Financial Statements, page F-7

Note 2. Summary of Significant Accounting Policies, page F-7

-Revenue Recognition, page F-12

79. We note from your disclosures that you consider delivery to occur for the sale of your products at the time of shipment unless otherwise agreed in the applicable sales terms. Please tell us and revise your filing to explain at what other point in the revenue recognition process you would recognize revenue for the sales that you do not recognize at shipping point. Refer to the guidance in SAB Topic 14.
80. We further note that you provide warranties to your customers for the sales of your products. Please revise your filing to explain the nature of the warranties that you provide and how you account for these warranties. To the extent material, please revise your filing to provide the disclosures outlined in 460-10-50-8(c) of the FASB Accounting Standard Codification.

Note 4. Acquisitions, page F-16

81. Please provide us with your significance tests for the SBDI acquisition as set forth under Rule 1-02(w) of Regulation S-X. Refer to the guidance in Rule 3-05 of Regulation S-X.

Note 5. Investments in Unconsolidated Entities, page F-17

82. We note that you obtained a 50% ownership in SILQ in September 2009. You further state that SILQ, a joint venture in Malaysia, was established to design, manufacture and sell lighting fixtures and systems. Please address the following:
- Tell us who holds the remaining 50% interest in SILQ. Describe any relationships between your company and the other party in SILQ.
 - Revise the filing to explain in greater detail the purpose of the joint venture, including how the joint venture benefits SemiLEDs.
 - Revise the filing to disclose how you account for any transactions with SILQ. Provide any disclosures required by Topic 850 of the FASB Accounting Standards Codification.
 - Explain to us in greater detail how you determined how to account for your investment in SILQ. Specifically address how you considered the guidance in Topic 810 of the FASB Accounting Standards Codification.
83. We note that in December 2009 you obtained a 49% ownership in China SemiLEDs. We also note your disclosures on page 27 that you have a right to nominate the majority of its board of directors. Also on page 27, you state that the other shareholders, acting collectively as a group, control China SemiLEDs. Please address the following:
- Provide us with details regarding the ownership of the remaining 51% voting interest in China SemiLEDs. In this regard, explain what you mean in your disclosure on page 27 when you refer to the other shareholders “acting collectively as a group.”
 - Describe any relationships between SemiLEDs and the parties that hold the remaining voting interest in China SemiLEDs.
 - Revise the filing to explain in greater detail the purpose of China SemiLEDs, including how the investment benefits SemiLEDs. In this regard, we note that China SemiLEDs will perform some of the same services that you perform. Explain if there are any agreements to share any technologies between the two entities.

- Revise the filing to disclose how you account for any transactions with China SemiLEDs. Provide any disclosures required by Topic 850 of the FASB Accounting Standards Codification.
 - Explain to us in greater detail how you determined how to account for your investment in China SemiLEDs. Specifically address how you considered the guidance in Topic 810 of the FASB Accounting Standards Codification.
84. Further to the above, we note that you refer to China SemiLEDs Corporation here. Separately, in Exhibit 21.1 you refer to Xurui Guangdian Co., Ltd. It appears from your disclosure on page 1 that these two entities are the same. If true, please revise your disclosures here and in Exhibit 21.1 to clarify that the two entities are the same.
85. We note that in December 2009 you acquired a 49% ownership in SS Optoelectronics. You further state that SS Optoelectronics, a joint venture in Taiwan, was established to facilitate sales of your LED chips to the other investor in the joint venture. Please address the following:
- Tell us who holds the remaining 51% interest in SS Optoelectronics. Describe any relationships between your company and the other party in SS Optoelectronics.
 - Revise the filing to explain in greater detail the nature of SS Optoelectronics' operations. Explain to us why a joint venture entity was necessary in order to sell products to the other party to the joint venture.
 - Revise the filing to disclose how you account for transactions with SS Optoelectronics. Specifically address how you recognize revenue on sales to the other party to the SS Optoelectronics joint venture.
 - Revise the filing to provide any disclosures required by Topic 850 of the FASB Accounting Standards Codification.
 - Explain to us in greater detail how you determined how to account for your investment in SS Optoelectronics. Specifically address how you considered the guidance in Topic 810 of the FASB Accounting Standards Codification.

Item 16. Exhibits..., page II-3

86. It appears that you might not have filed all material agreements. For example, we note that you have not filed the documents governing your rights described in the last two paragraphs on page 97 as well as the warranty and lease agreements you disclose on page 119. We also note that you have not filed your distributor agreements. In addition, we note that it does not appear that you have filed all agreements related to your outstanding

significant purchase obligations. Please file all agreements required to be filed by Item 601 of Regulation S-K.

87. Please file complete copies of your agreements. For example, we note that exhibit A appears to be missing from exhibits 10.5 through 10.7.
88. Please tell us which exhibit contains the agreements mentioned in the penultimate paragraph on page 96.

Exhibit 23.1

89. Please provide an updated consent from your independent auditor as required by Item 601(b)(23)(i) of Regulation S-K prior to requesting effectiveness.

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

National Corporate Research Ltd.
As Agent for SemiLEDs Corporation
September 2, 2010
Page 16

You may contact Tara Harkins at (202) 551-3639 or Kevin Vaughn, Accounting Branch Chief, at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Gabriel Eckstein at (202) 551-3286 or Daniel Morris, Special Counsel at (202) 551-3314 if you have any other questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (via fax): Mark J. Lee
Orrick, Herrington & Sutcliffe LLP