



DIVISION OF
CORPORATION FINANCE

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

September 28, 2010

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

**Re: SemiLEDs Corporation
Amendment No. 2 to Registration Statement on Form S-1
Filed September 14, 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.

Prospectus

1. We note your response to prior comment 3 and reissue the comment. Please provide the requested disclosure in the opening paragraph of the prospectus summary.
2. Please revise the prospectus summary to disclose your reliance on joint venture arrangements.
3. Please continue to revise the prospectus in response to prior comments 5.

Risk Factors, page 10

4. Please add an appropriate risk factor addressing the possibility that up to 10% of your net profits will be allocated to a profit-sharing pool as well as the effects that this reduction in profits may have on growth, capital investment, and your stock price.

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

5. Please expand your revisions in response to prior comment 16 to identify the companies that you know already possess or are developing the technology to produce LED chips in larger wafer sizes.

Variations in our production yields..., page 17

6. It is unclear from your revisions in response to prior comment 17 what caused the specific difficulties in achieving acceptable yields that you refer to in the penultimate paragraph of this risk factor. We therefore reissue our comment.

We may not be successful in expanding..., page 18

7. We note your response to prior comment 17.
 - Please revise the prospectus to disclose the information contained in your response to the first bullet of prior comment 17.
 - Please revise the prospectus to disclose in the Business section and briefly in the prospectus summary your strategy of focusing on countries with limited intellectual property regimes. Your revised disclosure should address why you believe that the potentially increased likelihood of infringement of your intellectual property right is sufficiently offset by benefits to you.

The marketing and distribution efforts..., page 19

8. Please expand your disclosure in response to prior comment 20 to include the expiration date and other material terms of these agreements. Revise here and in your business section as appropriate. Also, to the extent material, please file these agreements as exhibits.

The reduction or elimination of government investment..., page 22

9. We note your response to prior comment 21. We note your revised disclosure here and your disclosure on page 82 under “Government Investments and Support for LEDs.” With a view to disclosure, please tell us whether you have disclosed the governments around the world that use policy initiatives to accelerate LED development and adoption.

If we fail to implement..., page 22

10. Please provide us with your analysis for your disclosure in response to prior comment 22 relating to the internal control requirement.

We are a multinational organization..., page 26

11. We note your response to prior comment 23. Please reconcile your indication that there are no material tax consequences to investors with your disclosure in this risk factor regarding the uncertainty of the tax laws to which your multinational organization is subject, including the possibility of a material impact to you if taxing authorities claim that various withholding requirements apply to you or your subsidiaries or assert that the benefits of tax treaties are not available to you.

Use of Proceeds, page 42

12. We note your response to prior comment 26; however, it is unclear how omitting the approximate amounts to be used for each purpose complies with Item 504 of Regulation S-K. In addition, it is unclear how you considered Instruction 7 to Item 504 of Regulation S-K. We therefore reissue our comment.

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

Interest income (expense), net, page 56

13. Please note that we may have further comments after you file the exhibits mentioned in your response to prior comments 32 and 86, as well as the disclosure in response to prior comment 59.
14. With regard to prior comment 32, please provide us with your analysis as to how you determined that your outstanding notes are not material and need not be filed.

Taiwan Tax Treatment, page 57

15. We note your response to prior comment 33. Please disclose the specific date by which Taiwan SemiLEDs must designate the year from which you will begin using your exemption. In this regard, we note the second-to-last sentence of the last full paragraph on page 57.

-Critical Accounting Policies, page 58

-Share-based Compensation, page 59

16. We note your response to prior comments 34 through 38. Please note that we are deferring any final evaluation of stock compensation until the estimated offering price is specified and all of the requested information is provided, and we may have further comments when you file the amendment containing that information.
17. We note your response to prior comment 36 and your disclosures on page 61 related to your enterprise value being weighted between the market approach and the income approach. As previously requested, please revise your filing to explain in more detail how you determined the significant assumptions used in the valuations, including the risk-adjusted discounts, the non-marketability discounts and the estimated holding periods. Within your updated disclosure, please explain why the discount rates estimated holding periods changed within each valuation.
18. We note your response to prior comment 37 whereby you indicate that you have complied 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. We also note the revised disclosures on page 62 in which you state that “the independent valuations were as of measurement dates that [you] believe were sufficiently close to the stock option grant dates such that the resulting stock option fair values were an appropriate approximation of the grant date fair values of the stock options.” It is not clear to us how the accounting for stock options disclosed here complies with paragraph 718-10-30-6 of the FASB Accounting Standards Codification as your disclosures appear to indicate the valuations are as of a date different than the grant date. Please revise or advise.

Increased LED Performance, page 80

19. We note your response to prior comment 42. With a view to disclosure, please provide us with a comparison of the energy savings of LED relative to the traditional lighting technologies mentioned in this section.

Business, page 84

Competitive Manufacturing Cost Structure, page 85

20. You disclose in response to prior comment 43 that every time you reuse a sapphire you eliminate the need to purchase a sapphire. Please expand your disclosure to indicate the extent to which your technologies allow you to reuse sapphires. Quantify, if possible. In addition, please clarify the number of times that any single sapphire may be reused.

Efficient Operating and Business Model, page 85

21. Based on your disclosure in response to prior comment 44, it is unclear why companies with facilities in Taiwan are able to borrow at lower interest rates than companies located elsewhere. We therefore reissue the second part of our comment.

Expand our Manufacturing Capacity..., page 87

22. Your response to prior comment 45 suggests that you have not determined whether you will increase your capacity by leasing or acquiring additional manufacturing space. Given that you expect to add capacity in late 2010 and the first three months of 2011, please tell us when you expect to make this determination, how many additional reactors you have acquired, whether you expect to acquire more reactors, and the anticipated cost to you of this expansion effort.
23. Also, with respect to the second sentence of prior comment 45, we note that your disclosure emphasizes that you will expand your capacity but does not provide investors meaningful information to quantify expansion. Please tell us why you believe that additional disclosure is not appropriate.

Our Technology, page 88

24. Please further revise your disclosure in response to prior comment 47 by cross-referencing the description of the LED chip production process to the specific illustrations in your diagram on page 89.

Sales and Marketing, page 92

25. We note that your response to prior comment 50 refers to “the Asian market” and “the European market.” Please revise to provide greater specificity, if possible. If greater specificity is not possible, please tell us why.

Sales by China SemiLEDs and Taiwan..., page 98

26. Please disclose the substance of your response to prior comment 55. In addition, with a view to disclosure, please tell us the different strategies (referred to in the second paragraph of your response) that you considered to increase your growth and market share in China and why you believe that your current joint venture strategy is preferable to other strategies, including those in which your company would be entitled to all the revenues generated by your sales. Please provide similar disclosure regarding your business decisions to establish joint ventures in Malaysia and Taiwan.
27. We note your response to prior comment 56 and in particular the second paragraph of your response to that comment. Please include expanded disclosure in the prospectus

regarding your method for resolving conflicts. Please note that your disclosure should also discuss whether there are objective criteria in place to evaluate conflicts and by whom final decisions as to conflicts resolution will be made.

Board of Directors of China SemiLEDs, page 98

28. We note your response to prior comment 57. Note that your disclosure remains unclear as to how you determine the number of directors that you may nominate. Please revise to clarify, using illustrative examples as appropriate. In addition, please disclose, as indicated in the second paragraph of your response, that there may be uncertainty regarding the precise number of directors you may appoint.
29. We note your response to prior comment 58. Please disclose whether Mr. Doan and Dr. Trun are required to present opportunities to both you and China SemiLEDs and whether either you or China SemiLEDs has a right of first refusal.

Executive Compensation, page 106

30. We note your response to prior comment 61 and reissue the comment.

Base Salaries, page 107

31. Please tell us how you determined that the base salary paid in 2007 was less than the market rate for the same position at similar companies.

Annual Incentive Compensation, page 108

32. With a view to disclosure, please provide us with additional information regarding the operation of the profit-sharing plan.

Timing and Size of Grants, page 109

33. We note your revisions in response to prior comment 64. Please quantify, to the extent possible, the relative importance of the factors you disclose in the last sentence.

Perquisites, page 110

34. We note your response to prior comments 65 and 67. Please tell us how you determined that the additional amounts payable to your two officers, as authorized by the board of directors in May 2009, should be characterized as bonuses rather than perquisites.

Warranty Agreement, page 121

35. Please disclose the term of the warranty agreement.

Intellectual Property Cross-Licensing..., page 122

36. Please revise to provide the information required by Item 404 of Regulation S-K.

Principal and Selling Stockholders, page 123

37. We reissue prior comment 76 as it relates to DJS Properties L.P. in footnote (1) of your table and JRS Properties III L.P. in footnote (6).

Effect of Certain Provisions..., page 128

38. Please tell us the reason for the deletion of the disclosure on page 128.

Index to Consolidated Financial Statements, page F-1

39. Please revise to include updated financial statements and related disclosures in your filing in accordance with Rule 3-12 of Regulation S-X.

Notes to Consolidated Financial Statements, page F-7

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

40. We note your response to prior comments 55 and 83. Please address the following:

- Provide us with your detailed analysis of how you considered the conditions in paragraph 810-10-15-14 of the FASB Accounting Standards Codification.
- Provide us with details of the contributions to the joint venture by each of the shareholders. As we note that the joint venture has not yet begun significant operations, discuss whether the joint venture will require additional financial support in order to finance its activities.
- Provide us with additional details to support your conclusion that the rights granted to the shareholder group are participating rights. In this regard, describe the actions that can be undertaken solely by the Board of Directors and the actions that require shareholder approval.
- We note from your disclosures on page 98 regarding the management of China SemiLEDs. Specifically, we note that the Board of Directors appoints the general manager who is responsible for the day to day operations of the joint venture. The Board of Directors, which you control, has the ability to hire and fire the general manager and the general manager is required to implement board resolutions and report to the board. Please explain to us how you considered the power afforded you

- by way of your ability to control the appointment of the general manager responsible for the day to day operations of China SemiLEDs in your evaluation of whether to consolidate China SemiLEDs.
- Please clarify your assessment in response to prior comment 83 that you do not have control with your statements in response to prior comment 55 that discuss the “control mechanisms” that you hold. Explain how you considered all of these factors in your evaluation of whether to consolidate China SemiLEDs.
 - We note from pages 99-100 that you have entered into cross-licensing arrangements with China SemiLEDs. Please revise your filing to disclose this arrangement within your notes to the financial statements and to discuss how you are accounting for this arrangement. Refer to the guidance in Topic 850 of the FASB Accounting Standards Codification.
 - Further, explain to us how you have considered the cross-licensing arrangement with China SemiLEDs in your evaluation of whether to consolidate China SemiLEDs.
41. Notwithstanding the comment above, please tell us how you considered the requirements of Rule 3-09 of Regulation S-X related to your equity method investment in China SemiLEDs.
42. We note your response to prior comment 85 related to the SS Optoelectronics joint venture which was established to facilitate sales of your LED chips to the customer. Please explain to us in more detail why a joint venture entity was necessary in order to sell products to the customer and how this was beneficial to the company.
43. Further to the above, please tell us how you plan to account for sales to the joint venture. Tell us whether the terms of your sales to the joint venture will differ from the terms of your historical sales to the customer. Describe any other rights that you will offer to the joint venture or that the joint venture will offer to the customer.
44. It appears that your historical sales to the unrelated customer will be replaced with sales to a related party joint venture. Please revise your disclosures as appropriate to describe how this joint venture may impact your operations in future periods. In this regard, if historical sales to the customer have been material, consider whether quantification of such amounts could be material to an investors understanding of your operations.

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.

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,

Martin James
Acting Assistant Director

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