

Mail Stop 6010

October 25, 2006

VIA U.S. MAIL AND FACSIMILE (952.944.6022)

Ms. Roberta L. Dircks
Vice President Finance and Administration and
Chief Financial Officer
Optical Sensors Incorporated
7615 Golden Triangle Drive, Suite C
Minneapolis, Minnesota 55344-3733

Re: Optical Sensors Incorporated
Form 10-KSB for the fiscal year ended December 31, 2005
Filed March 31, 2006
File No. 000-27600

Dear Ms. Dircks:

We have completed our review of your Form 10-KSB and related materials and do not, at this time, have any further comments.

Sincerely,

Martin F. James
Senior Assistant Chief Accountant