



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 6010

July 14, 2008

Steven R. Roth
Senior Vice President and Chief Financial Officer
Rudolph Technologies, Inc.
One Rudolph Road
PO Box 1000
Flanders, New Jersey 07836

RE: Rudolph Technologies, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2007
File No. 000-27965

Dear Mr. Roth:

We have completed our review of your Form 10-K and related filings and have no further comments at this time.

Sincerely,

Kevin L. Vaughn
Branch Chief