



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

DIVISION OF
CORPORATION FINANCE

July 31, 2015

Via E-mail

Mr. Paul F. McLaughlin
Chairman and Chief Executive Officer
Rudolph Technologies, Inc.
One Rudolph Road
P.O. Box 1000
Flanders, New Jersey 07836

**Re: Rudolph Technologies, Inc.
Form 10-K for the Fiscal Year ended December 31, 2014
Filed February 20, 2015
File No. 1-36226**

Dear Mr. McLaughlin:

We have completed our review of your filings. We remind you that our comments or changes to disclosure in response to our comments do not foreclose the Commission from taking any action with respect to the company or the filings 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. We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include the information the Securities Exchange Act of 1934 and all applicable rules require.

Sincerely,

/s/ Martin James

Martin James
Senior Assistant Chief Accountant