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

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): January 7, 2010

Electro-Optical Sciences, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

000-51481
(Commission
File Number)

13-3986004
(IRS Employer
Identification No.)

50 South Buckhout Street, Suite 1
Irvington, New York
(Address of principal executive offices)

10533
(Zip Code)

Registrant's telephone number, including area code **(914) 591-3783**

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instructions A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 5.02 — Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

On January 7, 2010, the Board of Directors (the “Board”) of Electro-Optical Sciences, Inc. (the “Company”) filled a vacancy on the Company’s Board by the election of Charles Stiefel as a director.

Mr. Stiefel served as the Chairman and CEO of Stiefel Laboratories, Inc. from 2001 to July 2009 when he stepped down after overseeing GlaxoSmithKline’s successful acquisition of the company. He joined Stiefel Laboratories as General Counsel in 1982 and was subsequently named Executive Vice President and then President of the company. He had served as a member of Stiefel Laboratories’ Board of Directors since 1975. At the time of its acquisition by GSK in March of 2009, Stiefel was the largest privately-held dermatology company in the world.

Mr. Stiefel will be provided with the standard compensation package available to all of the Company’s non-employee directors.

Item 7.01 — Regulation FD Disclosure

The information in Item 5.02 with respect to the election of Charles Stiefel to the Company’s Board of Directors is hereby incorporated into this Item 7.01 by reference.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Electro-Optical Sciences, Inc.

Date: January 11, 2010

By: /s/ Richard Steinhart
Richard Steinhart
Chief Financial Officer
(Principal Financial Officer)