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

FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Applied Optoelectronics, Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

76-0533927

(I.R.S. Employer Identification Number)

13139 Jess Pirtle Blvd. Sugar Land, TX 77478 (281) 295-1800

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

Applied Optoelectronics, Inc. Amended and Restated 2013 Equity Incentive Plan

(Full title of the plan)

Stefan J. Murry Chief Financial Officer Applied Optoelectronics, Inc. 13139 Jess Pirtle Blvd. Sugar Land, TX 77478 (281) 295-1800

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

David C. Kuo General Counsel Applied Optoelectronics, Inc. 13139 Jess Pirtle Blvd. Sugar Land, TX 77478 (281) 295-1800

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer o Accelerated filer x

Non-accelerated filer o (Do not check if a smaller reporting company) Smaller reporting company o Emerging growth company x

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o

CALCULATION OF REGISTRATION FEE

		Proposed	Proposed			
Title of securities	Amount to be	maximum offering	maximum aggregate	Amount of		
to be registered	registered (1)	price per share	offering price	registration fee		
Common Stock, par value \$0.001 per share						
— To be issued under the Amended and Restated 2013	1 216 027(2)	\$45.965(3)	\$55,895,140.71	\$6,478.25		
Equity Incentive Plan	1,216,037(2)					
Total				\$6,478.25		

⁽¹⁾ Pursuant to Rule 416(a) of the Securities Act of 1933, as amended (the "1933 Act"), this Registration Statement shall also cover any additional shares of Applied Optoelectronics, Inc. (the "Registrant") common stock that become issuable under the Applied Optoelectronics, Inc. Amended and Restated 2013 Equity Incentive Plan (the "2013 Plan") by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the Registrant's receipt of consideration that increases the number of the Registrant's outstanding shares of common stock.

⁽²⁾ Represents automatic annual increases to the number of shares of Registrant's common stock reserved for issuance under the 2013 Plan as provided for in the 2013 Plan of (i) 252,879 shares as of January 1, 2014, (ii) 296,492 shares as of January 1, 2015, (iii) 333,333 shares as of January 1, 2016 and (iv)

- 333,333 shares as of January 1, 2017, for an aggregate of 1,216,037 shares. Such amounts were calculated pursuant to the terms of the 2013 Plan, after taking into account the effect of the 30:1 reverse stock split that the Company effected on August 20, 2013, after the Company's adoption of the 2013 Plan.
- (3) Estimated in accordance with paragraphs (c) and (h) of Rule 457 under the Securities Act solely for purposes of calculating the registration fee. The price for the Common Stock being registered hereby is based on a price of \$45.965 per share of Common Stock, which is the average of the high and low trading prices for a share of Common Stock of the Registrant on May 3, 2017, as reported on the NASDAQ Global Market.

EXPLANATORY NOTE

The Registration Statement on Form S-8 registers an additional 1,216,037 shares of common stock of the Registrant to be issued pursuant to the Registrant's 2013 Plan. Accordingly, the contents of the Registration Statements on Form S-8 relating to the 2013 Plan previously filed by the Registrant with the Securities and Exchange Commission (the "Commission") on November 19, 2013 (File No. 333-192407) are incorporated by reference into this Registration Statement pursuant to General Instruction E of Form S-8. The additional shares of common stock to be registered hereunder have become reserved for issuance as a result of the operation of the "evergreen" provisions in the Registrant's 2013 Plan, which provides that the total number of shares subject to the 2013 Plan will be increased each year pursuant to a specified formula.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of documents by reference

The Registrant hereby incorporates by reference into this Registration Statement the following documents previously filed with the Commission:

- a. The Registrant's Annual Report on Form 10-K for its fiscal year ended December 31, 2016 filed with the Commission on March 9, 2017 pursuant to Section 13(a) of the Securities Exchange Act of 1934, as amended (the "1934 Act");
- b. All other reports filed with the Commission pursuant to Sections 13(a) or 15(d) since the end of the fiscal year covered by the Registrant's Annual Report referred to in a. above, including, but not limited to, the Registrant's Quarterly Report on Form 10-Q for the Registrant's quarter ended March 31, 2017 filed with the Commission on May 9, 2017;
- c. The description of the Registrant's common stock, par value \$0.001, contained in the Registrant's Registration Statement on Form 8-A (File No. 001-36083) filed with the Commission on September 23, 2013 pursuant to Section 12(b) of the Securities Exchange Act of 1934 (the "1934 Act"), including any amendment or report filed for the purpose of updating such description.

All reports and definitive proxy or information statements filed pursuant to Section 13(a), 13(c), 14 or 15(d) of the 1934 Act after the date of this Registration Statement (except for any portions of the Registrant's Current Reports on Form 8-K furnished pursuant to Item 2.02 or Item 7.01 thereof and any corresponding exhibits thereto not filed with the Commission) and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which de-registers all securities then remaining unsold shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 6. Indemnification of Directors and Officers.

Delaware law provides a detailed statutory framework covering indemnification of directors, officers, employees or agents against liabilities and expenses arising out of legal proceedings brought against them by reason of their status or service as directors, officers, employees or agents. Section 145 of the DGCL ("Section 145") provides that a director, officer, employee or agent of a corporation (i) shall be indemnified by the corporation for expenses actually and reasonably incurred in defense of any action or proceeding if such person is sued by reason of his service to the corporation, to the extent that such person has been successful in defense of such action or proceeding, or in defense of any claim, issue or matter raised in such litigation, (ii) may, in actions other than actions by or in the right of the corporation (such as derivative actions), be indemnified for expenses actually and reasonably incurred, judgments, fines and amounts paid in settlement of such litigation, even if he is not successful on the merits, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation (and in a criminal proceeding, if he did not have reasonable cause to believe his conduct was unlawful), and (iii) may be indemnified by the corporation for expenses actually and reasonably incurred (but not judgments or settlements) in any action by the corporation or of a derivative action (such as a suit by a stockholder alleging a breach by the director or officer of a duty owed to the corporation), even if he is not successful, provided that he acted in good faith and in a manner reasonably believed to be in or not opposed to the best interests of the corporation, provided that no indemnification is permitted without court approval if the director has been adjudged liable to the corporation. Delaware law also permits a corporation to elect to indemnify its officers, directors, employees and agents under a broader range of circumstances than that provided u

Provisions in the Registrant's amended and restated certificate of incorporation and amended and restated bylaws limit or eliminate the personal liability of the Registrant's directors to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended. Consequently, a director will not be personally liable to the Registrant or the Registrant's stockholders for monetary damages or breach of fiduciary duty as a director, except for liability for:

- · any breach of the director's duty of loyalty to the Registrant or the Registrant's stockholders;
- · any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- · any unlawful payments related to dividends or unlawful stock purchases, redemptions or other distributions; or
- · any transaction from which the director derived an improper personal benefit.

These limitations of liability do not alter director liability under the federal securities laws and do not affect the availability of equitable remedies such as an injunction or rescission.

In addition, the Registrant's amended and restated bylaws provide that:

- the Registrant will indemnify its directors, officers and, in the discretion of the Registrant's board of directors, certain employees to the fullest extent permitted by the DGCL, as it now exists or may in the future be amended; and
- the Registrant will advance reasonable expenses, including attorneys' fees, to its directors and, in the discretion of the Registrant's board of directors, to its officers and certain employees, in connection with legal proceedings relating to their service for or on behalf of the Registrant, subject to limited exceptions.

The Registrant has entered into indemnification agreements with each of its directors and certain of its executive officers. These agreements provide that the Registrant will indemnify each of its directors and certain of its executive officers to the fullest extent permitted by Delaware law.

The Registrant also maintains general liability insurance which covers certain liabilities of its directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers, including liabilities under the Securities Act.

Reference is made to the underwriting agreement filed as Exhibit 1.1 to Registrant's Registration Statement on Form S-1 (Registration No. 333-190591), as amended, declared effective by the Commission on September 25, 2013, and the underwriting agreement filed as Exhibit 1.1 to Registrant's Registration Statement on Form S-1 (Registration No. 333-194379), as amended, declared effective by the Commission on March 19, 2014, the equity distribution agreement filed as Exhibit 1.1 to Registrant's Current Report on Form 8-K filed on July 14, 2015, with respect to the Registrant's Registration Statement on Form S-3 (Registration No. 333-204703) that was declared effective by the Commission on June 23, 2015, and the equity distribution agreement filed as Exhibit 1.1 to Registrant's Current Report on Form 8-K filed on November 14, 2016, with respect to the Registrant's Registration Statement on Form S-3 (Registration No. 333-214146), declared effective by the Commission on November 1, 2016, pursuant to which the underwriters have agreed to indemnify the Registrant's officers and directors against certain liabilities under the 1933 Act.

Item 8. Exhibits.

See the Index to Exhibits immediately following the signature pages to this Registration Statement on Form S-8, which is incorporated by reference herein.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Sugar Land, State of Texas on May 10, 2017.

APPLIED OPTOELECTRONICS, INC.

By: <u>/s/ CHIH-HSIANG (THOMPSON) LIN</u>

CHIH-HSIANG (THOMPSON) LIN
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Chih-Hsiang (Thompson) Lin and Dr. Stefan J. Murry, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement and to file the same with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully and to all intents and purposes as they might or could not in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or their or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on May 10, 2017.

Signature	Date
/S/ CHIH-HSIANG (THOMPSON) LIN	
CHIH-HSIANG (THOMPSON) LIN,	
President, Chief Executive Officer and	May 10, 2017
Chairman of the Board of Directors	
(principal executive officer)	
/S/ STEFAN J. MURRY	
Stefan J. Murry,	
Chief Financial Officer	May 10, 2017
(principal financial officer and	
principal accounting officer)	
/S/ WILLIAM H. YEH	
William H. Yeh,	May 10, 2017
Director	
/S/ RICHARD B. BLACK	
RICHARD B. BLACK,	May 10, 2017
Director	•
/S/ CHE-WEI LIN	
CHE-WEI LIN,	May 10, 2017
Director	
/S/ ALEX IGNATIEV	
ALEX IGNATIEV,	May 10, 2017
Director	,
/S/ ALAN MOORE	
ALAN MOORE,	May 10, 2017
Director	
(C/MINI CHILI (MILZEN CHENI	
/S/ MIN-CHU (MIKE) CHEN	May 10, 2017
Min-Chu (Mike) Chen,	May 10, 2017
Director	

EXHIBIT INDEX

Exh	nibit Number	Description
	4.1	Amended and Restated Certificate of Incorporation (incorporated by reference from Exhibit 3.1 to the Registrant's Form 10-Q filed on November 14, 2013 (File No. 001-36083)).
	4.2	Amended and Restated Bylaws (incorporated by reference from Exhibit 3.2 to the Registrant's Form 10-Q filed on November 14, 2013 (File No. 001-36083)).
	4.3	<u>Applied Optoelectronics, Inc. Amended and Restated 2013 Equity Incentive Plan</u> (incorporated by reference from Exhibit 10.6 to the Registrant's Form 10-K filed on March 9, 2017 (File No. 001-36083)).
	5.1*	Opinion of Vinson & Elkins LLP as to the legality of the securities being registered.
	23.1*	Consent of Vinson & Elkins LLP (contained in Exhibit 5.1).
	23.2*	Consent of Grant Thornton LLP.
	24.1*	Powers of Attorney (included on the signature page of this Registration Statement).
*	Filed herewith.	

Vinson&Elkins

May 10, 2017

Applied Optoelectronics, Inc. 13139 Jess Pirtle Blvd. Sugar Land, TX 77478

Ladies and Gentlemen:

We have acted as counsel for Applied Optoelectronics, Inc., a Delaware corporation (the "Company"), in connection with the Company's registration under the Securities Act of 1933, as amended (the "Act"), of the offer and sale of up to 1,216,037 shares of either the Company's common stock, par value \$0.001 per share, (the "Shares"), pursuant to the Company's registration statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") on May 10, 2017, which Shares may be issued from time to time in accordance with the terms of the Applied Optoelectronics, Inc. Amended and Restated 2013 Equity Incentive Plan (the "Plan").

In reaching the opinions set forth herein, we have examined and are familiar with originals or copies, certified or otherwise identified to our satisfaction, of such documents and records of the Company and such statutes, regulations and other instruments as we deemed necessary or advisable for purposes of this opinion, including (i) the Registration Statement, (ii) certain resolutions adopted by the board of directors of the Company, (iii) the Plan, and (iv) such other certificates, instruments, and documents as we have considered necessary for purposes of this opinion letter. As to any facts material to our opinions, we have made no independent investigation or verification of such facts and have relied, to the extent that we deem such reliance proper, upon certificates of public officials and officers or other representatives of the Company.

We have assumed (i) the legal capacity of all natural persons, (ii) the genuineness of all signatures, (iii) the authority of all persons signing all documents submitted to us on behalf of the parties to such documents, (iv) the authenticity of all documents submitted to us as originals, (v) the conformity to authentic original documents of all documents submitted to us as copies, (vi) that all information contained in all documents reviewed by us is true, correct and complete, and (vii) that the Shares will be issued in accordance with the terms of the Plan.

Based on the foregoing and subject to the limitations set forth herein, and having due regard for the legal considerations we deem relevant, we are of the opinion that the Shares have been duly authorized and, when the Shares are issued by the Company in accordance with the terms of the Plan and the instruments executed pursuant to the Plan, as applicable, that govern the awards to which any Share relates, the Shares will be legally and validly issued, fully paid and non-assessable.

This opinion is limited in all respects to the General Corporation Law of the State of Delaware. We express no opinion as to any other law or any matter other than as expressly set forth above, and no opinion as to any other law or matter may be inferred or implied herefrom. The opinions expressed herein are rendered as of the date hereof and we expressly disclaim any obligation to update this letter or advise you of any change in any matter after the date hereof.

Vinson & Elkins LLP Attorneys at Law Austin Beijing Dallas Dubai Hong Kong Houston London Moscow New York Palo Alto Richmond Riyadh San Francisco Taipei Tokyo Washington

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This opinion letter may be filed as an exhibit to the Registration Statement. In giving this consent, we do not thereby admit that we come within the category of persons whose consent is required under Section 7 of the Act.

Very truly yours,

/s/ Vinson & Elkins L.L.P.

Vinson & Elkins L.L.P.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 9, 2017 with respect to the consolidated financial statements of Applied Optoelectronics, Inc. included in the Annual Report on Form 10-K for the year ended December 31, 2016, which is incorporated by reference in this Registration Statement. We consent to the incorporation by reference of the aforementioned report in this Registration Statement.

/s/ Grant Thornton LLP

Houston, Texas May 10, 2017