PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

EPAS ID: PAT4339988

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	SECURITY INTEREST

CONVEYING PARTY DATA

Name	Execution Date
ZENA TECHNOLOGIES, INC.	03/20/2017

RECEIVING PARTY DATA

Name:	PILLSBURY WINTHROP SHAW PITTMAN LLP
Street Address:	1650 TYSONS BOULEVARD
City:	MCLEAN
State/Country:	VIRGINIA
Postal Code:	22102

PROPERTY NUMBERS Total: 1

Property Type	Number
Patent Number:	8229255

CORRESPONDENCE DATA

Fax Number: (703)770-7901

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 7037707900
Email: docket_ip@pillsburylaw.com
Correspondent Name: PILLSBURY WINTHROP SHAW PITTMAN LLP
Address Line 1: 1650 TYSONS BOULEVARD
Address Line 4: MCLEAN, VIRGINIA 22102

ATTORNEY DOCKET NUMBER:	095035-0383857
NAME OF SUBMITTER:	RAJ S. DAVE
SIGNATURE:	/Raj S. Dave/
DATE SIGNED:	03/28/2017

Total Attachments: 16
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ZENA TECHNOLOGIES, INC.
SECURED PROMISSORY NOTE

March 20, 2017

$1,439,015.00

FOR VALUE RECEIVED, ZENA TECHNOLOGIES, INC., a Delaware corporation (the "Company"), hereby promises to pay to the order of Pillsbury Winthrop Shaw Pittman LLP or any subsequent holder of this Note (collectively, the "Holder"), under the terms herein, the principal amount of One Million Four Hundred Thirty Nine Thousand Fifteen DOLLARS ($1,439,015.00) (the "Principal Amount"), plus interest accrued thereon as herein provided with respect to the Principal Amount. Interest shall accrue on the unpaid Principal Amount from the date of original issuance at a fixed rate equal to five percent (5%) per annum payable at maturity. The unpaid Principal Amount, together with any then-unpaid accrued interest thereon, shall be due and payable on the earliest of (i) December 31, 2017, unless otherwise extended by the Company and the Holder (the "Maturity Date"), or (ii) when such amounts are made due and payable upon or after the occurrence of an Event of Default in accordance with Section 1 hereof. All payments due on this Note shall be made in the form of a certified check or other immediately available funds.

Interest shall be calculated on the basis of actual number of days elapsed over a year of 365 days. Notwithstanding any other provision of this Note, the Holder will not charge and the Company shall not be required to pay any interest or other fees or charges in excess of the maximum rates or amounts permitted by applicable law and in the event any payments are made in excess of such maximum, such payments shall be refunded to the Company or credited to reduce the Principal Amount. All payments received by the Holder hereunder will be applied first to reasonable costs of collection, if any, then to interest and the balance to the Principal Amount.

To secure payment and performance of this Notes, the Company hereby grants security interest in and lien upon all personal property of debtor, wherever located, and now owned or hereafter acquired, including accounts, chattel paper, deposit accounts, documents, equipment, general intangibles (including the intellectual property described on Exhibit A hereto), instruments, inventory, investment property, letter-of-credit rights and commercial tort claims, and the proceeds and products of the foregoing (the "Collateral").

(1) Events of Default. An "Event of Default" will occur if any of the following occurs:

(a) the Company fails to make any payment of the Principal Amount or interest when due hereunder within five (5) business days following demand therefor;

(b) involuntary proceedings shall have been commenced against the Company (i) under federal bankruptcy law or under any applicable federal or state bankruptcy, insolvency, or similar law, which seek the general adjustment of the Company's debts, (ii) seeking the appointment of a receiver, liquidator, assignee, custodian, trustee, sequestrator (or similar official) of the Company or for any material part of the Company's property, or (iii) seeking an order winding up or liquidating the assets of the Company are initiated and continue for a period of sixty (60) days;

(c) (i) a voluntary proceeding shall have been commenced under federal bankruptcy law, or any other applicable federal or state bankruptcy, insolvency, or other similar law, (ii) the consent by the Company to the appointment of, or taking possession by, a receiver, liquidator, assignee, trustee, custodian, sequestrator (or other similar official) of the Company or for any material part of the Company's property, (iii) the Company making any assignment for the benefit of creditors, (iv) the admission in writing of the Company generally to pay the Company's debts as they become due, (v) the failure of the Company generally to pay the Company's debts as they become due (which failure results in an acceleration of, a default under or breach of any agreement for such indebtedness), or (vi) the taking of any formal action by the Company in furtherance of any of the foregoing;

(d) there occurs a liquidation, dissolution or winding up of the Company; or

(e) judgment(s) for the payment of money in excess of $250,000, individually or in the aggregate, shall have been rendered by a court of record against the Company, and such judgment shall continue unsatisfied and in effect for a period of ninety (90) consecutive days without being stayed, vacated, discharged, satisfied or bonded pending appeal; provided, however, that no Event of Default shall exist under this Section 1(e) if the Company is in good faith contesting such judgment.

(2) Remedies on Default, Etc. Upon the occurrence of an Event of Default, (i) the entire unpaid Principal Amount and accrued and unpaid interest on this Note shall, without presentment, demand, protest or notice of any kind, all of which are hereby expressly waived, be forthwith due and payable (provided that if an Event of Default specified in Sections 1(c) or 1(d) above occurs, this Note shall become immediately due and payable without any declaration or other act on the part of the Holder) and (ii) interest shall accrue on the unpaid Principal Amount from and after the date of such Event of Default at a rate equal to eighteen percent (18%) per annum, and the Holder may, among other things, proceed to protect and enforce its rights hereunder by an action at law, suit in equity or other appropriate proceeding, whether for the specific performance of any agreement contained herein, or for an injunction against a violation of any of the terms hereof or thereof or in the exercise of any power granted hereby or thereby or by law. No right conferred upon the Holder hereby shall be exclusive of any other right referred to herein or therein or now or hereafter available at law, in equity, by statute or otherwise.

(3) Prepayment. The Company may prepay this Note, in whole or in part, subject to paying a penalty in an amount equal to five percent (5%) of the remaining principal balance due under the Note at the time of prepayment.

(4) Severability. In the event any one or more of the provisions of this Note shall for any reason be held to be invalid, illegal or unenforceable, in whole or in part or in any respect, or in the event that any one or more of the provisions of this Note operate or would prospectively operate to invalidate this Note, then and in any such event, such provision(s) only shall be deemed null and void and shall not affect any other provision of this Note and the remaining

provisions of this Note shall remain operative and in full force and effect and in no way shall be affected, prejudiced, or disturbed thereby.

(5) Defenses. The obligations of the Company under this Note shall not be subject to reduction, limitation, impairment, termination, defense, set-off, counterclaim or recoupment for any reason.

(6) Attorneys' and Collection Fees. Should the indebtedness evidenced by this Note or any part hereof be collected at law or in equity or in bankruptcy, receivership or other court proceedings, or this Note be placed in the hands of attorneys for collection, the Company agrees to pay, in addition to the Principal Amount and accrued interest due and payable hereon, all costs of collection, including, without limitation, reasonable attorneys' fees and expenses, incurred by the Holder in collecting such indebtedness or enforcing this Note.

(7) Waiver of Presentment. The Company hereby waives presentment, demand for payment, notice of dishonor, notice of protest and all other notices or demands in connection with the delivery, acceptance, performance or default of this Note.

(8) Governing Law. This Note shall be governed by and construed and enforced in accordance with the laws of the State of New York, without regard to conflict of law principles that would result in the application of any law other than the law of the State of New York.

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IN WITNESS WHEREOF, the Company has caused this Secured Promissory Note to be signed by its duly authorized officer.

ZENA TECHNOLOGIES, INC.

By: ______________________________
Jeff Liao
President

Exhibit A: ZENA Patents and Applications as of February 17, 2017

Case Ref.	Official No.	Title	Case Status	Case Type	Country
095035-0378305	8269985	DETERMINATION OF OPTIMAL DIAMETERS FOR NANOWIRES	Registered	Properties	United States of America
095035-0378317	8546742	ARRAY OF NANOWIRES IN A SINGLE CAVITY WITH ANTI-REFLECTIVE COATING ON SUBSTRATE	Registered	Properties	United States of America
095035-0379088	8274039	VERTICAL WAVEGUIDES WITH VARIOUS FUNCTIONALITY ON INTEGRATED CIRCUITS	Registered	Properties	United States of America
095035-0379089	8791470	NANO STRUCTURED LEDS	Registered	Properties	United States of America
095035-0379145	7646943	OPTICAL WAVEGUIDES IN IMAGE SENSOR	Registered	Properties	United States of America
095035-0379532	8384007	NANO WIRE BASED PASSIVE PIXEL IMAGING SENSOR	Registered	Properties	United States of America
095035-0380239	8735797	NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Registered	Properties	United States of America
095035-0380241	8519379	NANOWIRE STRUCTURED PHOTODIODE WITH A SURROUNDING EPITAXIALLY GROWN P OR N LAYER	Registered	Properties	United States of America
095035-0380564	12/633313	VERTICAL PHOTOGATE (VPG) PIXEL STRUCTURE WITH NANOWIRES	Published	Properties	United States of America
095035-0381954	8299472	ACTIVE PIXEL SENSOR WITH NANOWIRE STRUCTURED PHOTODETECTORS	Registered	Properties	United States of America
095035-0382350	I501388	IMAGE SENSOR, METHOD OF MANUFACTURING THE SAME AND COMPOUND PIXEL COMPRISING IMAGE SENSORS	Registered	Properties	Taiwan
095035-0383381	I482270	VERTICAL WAVEGUIDES WITH VARIOUS FUNCTIONALITY ON INTEGRATED CIRCUITS	Registered	Properties	Taiwan

095035-0383507	8889455	MANUFACTURING NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Registered	Properties	United States of America
095035-0383857	8229255	OPTICAL WAVEGUIDES IN IMAGE SENSOR	Registered	Properties	United States of America
095035-0386842	9299866	NANOWIRE ARRAY BASED SOLAR ENERGY HARVESTING DEVICE	Registered	Properties	United States of America
095035-0386861	I426225	DETERMINATION OF OPTIMAL DIAMETERS FOR NANOWIRES	Registered	Properties	Taiwan
095035-0386863	I426601	ARRAY OF NANOWIRES IN A SINGLE CAVITY WITH ANTI-REFLECTIVE COATING ON SUBSTRATE	Registered	Properties	Taiwan
095035-0387184	8866065	NANOWIRE ARRAYS COMPRISING FLUORESCENT NANOWIRES	Registered	Properties	United States of America
095035-0387185	8748799	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Registered	Properties	United States of America
095035-0387187	8507840	VERTICALLY STRUCTURED PASSIVE PIXEL ARRAYS AND METHODS FOR FABRICATING THE SAME	Registered	Properties	United States of America
095035-0389974	9000353	LIGHT ABSORPTION AND FILTERING PROPERTIES OF VERTICALLY ORIENTED SEMICONDUCTOR NANO WIRES	Registered	Properties	United States of America
095035-0390041	I470783	NANO STRUCTURED LEDS	Registered	Properties	Taiwan
095035-0390050	I435444	NANO WIRE BASED PASSIVE PIXEL IMAGING SENSOR	Registered	Properties	Taiwan
095035-0390075	9515218	VERTICAL PILLAR STRUCTURED PHOTOVOLTAIC DEVICES WITH MIRRORS AND OPTICAL CLADDINGS	Registered	Properties	United States of America
095035-0391133	9406709	METHODS FOR FABRICATING AND USING NANOWIRES	Registered	Properties	United States of America

095035-0391160	8890271	SILICON NITRIDE LIGHT PIPES FOR IMAGE SENSORS	Registered	Properties	United States of America
095035-0391290	I466279	LIGHT DETECTING DEVICE, COMPOUND LIGHT DETECTOR AND WAVEGUIDE	Registered	Properties	Taiwan
095035-0391292	I450407	NANO WIRE STRUCTURED PHOTO DIODE WITH A SURROUNDING EPITAXIALLY GROWN P OR N LAYER	Registered	Properties	Taiwan
095035-0391294	099142971	VERTICAL PHOTOGATE (VPG) PIXEL STRUCTURE WITH NANOWIRES	Published	Properties	Taiwan
095035-0391296	I427781	ACTIVE PIXEL SENSOR WITH NANOWIRE STRUCTURED PHOTODETECTORS	Registered	Properties	Taiwan
095035-0391298	I459548	MANUFACTURING NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Registered	Properties	Taiwan
095035-0392127	8835831	POLARIZED LIGHT DETECTING DEVICE AND FABRICATION METHODS OF THE SAME	Registered	Properties	United States of America
095035-0392544	8835905	SOLAR BLIND ULTRA VIOLET (UV) DETECTOR AND FABRICATION METHODS OF THE SAME	Registered	Properties	United States of America
095035-0392796	ZL200980142671.9	OPTICAL WAVEGUIDES IN IMAGE SENSOR	Registered	Properties	China
095035-0395397	9082673	PASSIVATED UPSTANDING NANOSTRUCTURES AND METHODS OF MAKING THE SAME	Registered	Properties	United States of America
095035-0395666	101102011	PASSIVATED UPSTANDING NANOSTRUCTURES AND METHODS OF MAKING THE SAME	To be abandoned	Properties	Taiwan
095035-0396469	13/288131	VERTICAL PILLAR STRUCTURED PHOTOVOLTAIC DEVICES WITH WAVELENGTH-SELECTIVE MIRRORS	Published	Properties	United States of America
095035-0399547	14/334848	BIFACIAL PHOTOVOLTAIC DEVICES	Published	Properties	United States of America

095035-0400466	100138526	LIGHT ABSORPTION AND FILTERING PROPERTIES OF VERTICALLY ORIENTED SEMICONDUCTOR NANO WIRES	Published	Properties	Taiwan
095035-0400893	I559565	VERTICAL PILLAR STRUCTURED PHOTOVOLTAIC DEVICES WITH MIRRORS AND OPTICAL CLADDINGS	Registered	Properties	Taiwan
095035-0400948	14/032166	PILLAR STRUCTURED MULTIJUNCTION PHOTOVOLTAIC DEVICES	Published	Properties	United States of America
095035-0401067	ZL201080032638.3	DETERMINATION OF OPTIMAL DIAMETERS FOR NANOWIRES	Registered	Properties	China
095035-0401333	I472020	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Registered	Properties	Taiwan
095035-0401335	I482272	VERTICALLY STRUCTURED PASSIVE PIXEL ARRAYS AND METHODS FOR FABRICATING THE SAME	Registered	Properties	Taiwan
095035-0401424	13/543307	MULTI-JUNCTION PHOTOVOLTAIC DEVICES	Published	Properties	United States of America
095035-0402577	100149997	NANOWIRE ARRAY BASED SOLAR ENERGY HARVESTING DEVICE	Published	Properties	Taiwan
095035-0404125	ZL201080043180.1	NANO WIRE BASED PASSIVE PIXEL IMAGING SENSOR	Registered	Properties	China
095035-0407760	8471190	VERTICAL WAVEGUIDES WITH VARIOUS FUNCTIONALITY ON INTEGRATED CIRCUITS	Registered	Properties	United States of America
095035-0407761	8754359	NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Registered	Properties	United States of America
095035-0409017	5684281	VERTICAL PHOTOGATE (VPG) PIXEL STRUCTURE WITH NANOWIRES	Registered	Properties	Japan

095035-0409019	5576943	ACTIVE PIXEL SENSOR WITH NANOWIRE STRUCTURED PHOTODETECTORS	Registered	Properties	Japan
095035-0410440	8766272	ACTIVE PIXEL SENSOR WITH NANOWIRE STRUCTURED PHOTODETECTORS	Registered	Properties	United States of America
095035-0412463	9429723	OPTICAL WAVEGUIDES IN IMAGE SENSORS	Registered	Properties	United States of America
095035-0417851	8514411	DETERMINATION OF OPTIMAL DIAMETERS FOR NANOWIRES	Registered	Properties	United States of America
095035-0419277	9343490	NANOWIRE STRUCTURED COLOR FILTER ARRAYS AND FABRICATION METHOD OF THE SAME	Registered	Properties	United States of America
095035-0419278	13/693207	MULTI-JUNCTION MULTI-TAB PHOTOVOLTAIC DEVICES	Published	Properties	United States of America
095035-0422343	201180051048.X	LIGHT ABSORPTION AND FILTERING PROPERTIES OF VERTICALLY ORIENTED SEMICONDUCTOR NANO WIRES	Registered	Properties	China
095035-0422347	10-1377795	LIGHT ABSORPTION AND FILTERING PROPERTIES OF VERTICALLY ORIENTED SEMICONDUCTOR NANO WIRES	Registered	Properties	Republic of Korea
095035-0422348	ZL201180054442.9	VERTICAL PILLAR STRUCTURED PHOTOVOLTAIC DEVICES WITH MIRRORS AND OPTICAL CLADDINGS	Registered	Properties	China
095035-0422349	10-1464681	VERTICAL PILLAR STRUCTURED PHOTOVOLTAIC DEVICES WITH MIRRORS AND OPTICAL CLADDINGS	Registered	Properties	Republic of Korea
095035-0422378	9263613	NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Registered	Properties	United States of America

095035-0423272	5540161	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Registered	Properties	Japan
095035-0423273	102124069	MULTI-JUNCTION PHOTOVOLTAIC DEVICES	Pending	Properties	Taiwan
095035-0423276	10-2013-0077022	MULTI-JUNCTION PHOTOVOLTAIC DEVICES	Pending	Properties	Republic of Korea
095035-0423278	201310284409.6	MULTI-JUNCTION PHOTOVOLTAIC DEVICES	Published	Properties	China
095035-0423309	ZL201180067519.6	VERTICALLY STRUCTURED PASSIVE PIXEL ARRAYS AND METHODS FOR FABRICATING THE SAME	Registered	Properties	China
095035-0423310	101468369	VERTICALLY STRUCTURED PASSIVE PIXEL ARRAYS AND METHODS FOR FABRICATING THE SAME	Registered	Properties	Republic of Korea
095035-0423311	201180066970.6	NANO WIRE ARRAY BASED SOLAR ENERGY HARVESTING DEVICE	Published	Properties	China
095035-0423312	10-1537020	NANO WIRE ARRAY BASED SOLAR ENERGY HARVETING DEVICE	Registered	Properties	Republic of Korea
095035-0423314	9304035	VERTICAL WAVEGUIDES WITH VARIOUS FUNCTIONALITY ON INTEGRATED CIRCUITS	Registered	Properties	United States of America
095035-0423703	ZL201180065814.8	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Registered	Properties	China
095035-0423705	10-1422144	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Registered	Properties	Republic of Korea
095035-0424637	8810808	DETERMINATION OF OPTIMAL DIAMETERS FOR NANOWIRES	Registered	Properties	United States of America

095035-0424734	201280030352.0	PASSIVATED UPSTANDING NANOSTRUCTURES AND METHODS OF MAKING THE SAME	To be abandoned	Properties	China
095035-0424735	10-1579548	PASSIVATED UPSTANDING NANOSTRUCTURES AND METHODS OF MAKING THE SAME	Registered	Properties	Republic of Korea
095035-0424805	8710488	NANO WIRE STRUCTURED PHOTODIODE WITH A SURROUNDING EPITAXIALLY GROWN P OR N LAYER	Registered	Properties	United States of America
095035-0425277	9177985	ARRAY OF NANOWIRES IN A SINGLE CAVITY WITH ANTI-REFLECTIVE COATING ON SUBSTRATE	Registered	Properties	United States of America
095035-0426629	14/322503	VERTICAL PILLAR STRUCTURED PHOTOVOLTAIC DEVICES WITH THIN MONO-CRYSTALLINE SUBSTRATE	Published	Properties	United States of America
095035-0427980	9478685	VERTICAL PILLAR STRUCTURED INFRARED DETECTOR AND FABRICATION METHOD FOR THE SAME	Registered	Properties	United States of America
095035-0428346	14/563781	Pillar Based Amorphous and Polycrystalline Photoconductors for X-ray Image Sensors	Published	Properties	United States of America
095035-0428369	102144356	MULTI-JUNCTION MULTI-TAB PHOTOVOLTAIC DEVICES	Published	Properties	Taiwan
095035-0428370	201310664921.3	MULTI-JUNCTION MULTI-TAB PHOTOVOLTAIC DEVICES	Published	Properties	China
095035-0428371	10-2013-0150056	MULTI-JUNCTION MULTI-TAB PHOTOVOLTAIC DEVICES	Pending	Properties	Republic of Korea
095035-0429238	102149110	ACTIVE PIXEL SENSOR WITH NANOWIRE STRUCTURED PHOTODETECTORS	Published	Properties	Taiwan
095035-0429352	103102171	NANO WIRE PHOTO-DETECTOR GROWN ON A BACK SIDE ILLUMINATED CMOS IMAGE SENSOR	Application allowed	Properties	Taiwan
095035-0431008	14/274448	NANO STRUCTURED LEDS	Published	Properties	United States of America

095035-0431707	2014-094365	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Pending	Properties	Japan
095035-0431845	201410264248.9	OPTICAL WAVEGUIDES IN IMAGE SENSOR	Published	Properties	China
095035-0431846	201410265340.7	OPTICAL WAVEGUIDES IN IMAGE SENSOR	Published	Properties	China
095035-0431849	9543458	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Registered	Properties	United States of America
095035-0431850	I482299	NANO WIRE STRUCTURED PHOTO DIODE WITH A SURROUNDING EPITAXIALLY GROWN P OR N LAYER	Registered	Properties	Taiwan
095035-0431851	9123841	NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Registered	Properties	United States of America
095035-0432016	9490283	ACTIVE PIXEL SENSOR WITH NANOWIRE STRUCTURED PHOTODETECTORS	Registered	Properties	United States of America
095035-0432510	14/516402	BACK-LIT PHOTODETECTOR	Published	Properties	United States of America
095035-0432740	2014-138265	ACTIVE PIXEL SENSOR WITH NANOWIRE STRUCTURED PHOTODETECTORS	To be abandoned	Properties	Japan
095035-0432884	14/501983	MANUFACTURING NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Published	Properties	United States of America
095035-0433035	14/516162	MULTISPECTRAL AND POLARIZATION-SELECTIVE DETECTOR	Published	Properties	United States of America
095035-0433129	14/450812	POLARIZED LIGHT DETECTING DEVICE AND FABRICATION METHODS OF THE SAME	Application allowed	Properties	United States of America
095035-0433539	201410469627.1	DETERMINATION OF OPTIMAL DIAMETERS FOR NANOWIRES	Published	Properties	China

095035-0433667	103127484	NANOWIRE STRUCTURED COLOR FILTER ARRAYS AND FABRICATION METHOD OF THE SAME	Published	Properties	Taiwan
095035-0433683	9410843	NANOWIRE ARRAYS COMPRISING FLUORESCENT NANOWIRES AND SUBSTRATE	Registered	Properties	United States of America
095035-0433684	14/459398	DETERMINATION OF OPTIMAL DIAMETERS FOR NANOWIRES	Application allowed	Properties	United States of America
095035-0434098	9054008	SOLAR BLIND ULTRA VIOLET (UV) DETECTOR AND FABRICATION METHODS OF THE SAME	Registered	Properties	United States of America
095035-0434119	103131815	MANUFACTURING NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Application allowed	Properties	Taiwan
095035-0434150	103132453	NANO-STRUCTURED MULTI-JUNCTION PHOTOVOLTAIC DEVICES	Pending	Properties	Taiwan
095035-0435193	I559516	NANO WIRE PHOTO-DETECTOR GROWN ON A BACK SIDE ILLUMINATED CMOS IMAGE SENSOR	Registered	Properties	Taiwan
095035-0435570	103143553	NANO STRUCTURED LEDS	Published	Properties	Taiwan
095035-0435958	103145582	FULL COLOR SINGLE PIXEL INCLUDING DOUBLET OR QUADRUPLET SI NANOWIRES FOR IMAGE SENSORS	Published	Properties	Taiwan
095035-0436217	5985670	VERTICAL PHOTOGATE (VPG) PIXEL STRUCTURE WITH NANOWIRES	Registered	Properties	Japan
095035-0436880	14/632739	LIGHT ABSORPTION AND FILTERING PROPERTIES OF VERTICALLY ORIENTED SEMICONDUCTOR NANO WIRES	Application allowed	Properties	United States of America
095035-0437772	I562341	VERTICAL WAVEGUIDES WITH VARIOUS FUNCTIONALITY ON INTEGRATED CIRCUITS	Registered	Properties	Taiwan

095035-0439044	14/704143	PASSIVATED UPSTANDING NANOSTRUCTURES AND METHODS OF MAKING THE SAME	Pending	Properties	United States of America
095035-0439082	9337220	SOLAR BLIND ULTRA VIOLET (UV) DETECTOR AND FABRICATION METHODS OF THE SAME	Registered	Properties	United States of America
095035-0440320	104121576	VERTICAL PILLAR STRUCTURE PHOTOVOLTAIC DEVICES AND METHOD FOR MAKING THE SAME	Pending	Properties	Taiwan
095035-0440609	104123757	IMAGE SENSOR, METHOD OF MANUFACTURING THE SAME AND COMPOUND PIXEL COMPRISING IMAGE SENSORS	Pending	Properties	Taiwan
095035-0440790	14/929890	ARRAY OF NANOWIRES IN A SINGLE CAVITY WITH ANTI-REFLECTIVE COATING ON SUBSTRATE	Published	Properties	United States of America
095035-0443915	PCT/US2015/055710	BACK-LIT PHOTODETECTOR	Published	Properties	Patent Cooperation Treaty
095035-0443916	104134015	BACK-LIT PHOTODETECTOR	Published	Properties	Taiwan
095035-0443917	PCT/US2015/055728	MULTISPECTRAL AND POLARIZATION-SELECTIVE DETECTOR	Published	Properties	Patent Cooperation Treaty
095035-0443918	104134013	MULTISPECTRAL AND POLARIZATION-SELECTIVE DETECTOR	Published	Properties	Taiwan
095035-0445378	15/225264	METHODS FOR FABRICATING AND USING NANOWIRES	Published	Properties	United States of America
095035-0445660	201480055533.8	NANOWIRE STRUCTURED COLOR FILTER ARRAYS AND FABRICATION METHOD OF THE SAME	Published	Properties	China
095035-0445661	2016-533492	NANOWIRE STRUCTURED COLOR FILTER ARRAYS AND FABRICATION METHOD OF THE SAME	Pending	Properties	Japan
095035-0445662	10-2016-7005780	NANOWIRE STRUCTURED COLOR FILTER ARRAYS AND FABRICATION METHOD OF THE SAME	Pending	Properties	Republic of Korea

095035-0445766	15/042922	NANOWIRE PHOTO-DETECTOR GROWN ON A BACK-SIDE ILLUMINATED IMAGE SENSOR	Published	Properties	United States of America
095035-0445767	15/057153	OPTICAL WAVEGUIDES IN IMAGE SENSORS	Published	Properties	United States of America
095035-0445768	15/082514	NANOWIRE ARRAY BASED SOLAR ENERGY HARVESTING DEVICE	Published	Properties	United States of America
095035-0446100	15/090155	VERTICAL WAVEGUIDES WITH VARIOUS FUNCTIONALITY ON INTEGRATED CIRCUITS	Published	Properties	United States of America
095035-0446269	62/307018	NOVEL TECHNOLOGIES IN NANOWIRE DEVICES	Pending	Properties	United States of America
095035-0446386	201480062046.4	NANO-STRUCTURED MULTI-JUNCTION PHOTOVOLTAIC DEVICES	Published	Properties	China
095035-0446595	15/149252	SOLAR BLIND ULTRA VIOLET (UV) DETECTOR AND FABRICATION METHODS OF THE SAME	Published	Properties	United States of America
095035-0446596	15/093928	NANOWIRE STRUCTURED COLOR FILTER ARRAYS AND FABRICATION METHOD OF THE SAME	Published	Properties	United States of America
095035-0447211	PCT/US2016/032774	METAL MICRO-GRID ELECTRODE FOR HIGHLY EFFICIENT SI MICROWIRE SOLAR CELLS WITH OVER 80% FILL FACTOR	Published	Properties	Patent Cooperation Treaty
095035-0447212	105115110	METAL MICRO-GRID ELECTRODE FOR HIGHLY EFFICIENT SI MICROWIRE SOLAR CELLS WITH OVER 80% FILL FACTOR	Pending	Properties	Taiwan

UCC FINANCING STATEMENT

FOLLOW INSTRUCTIONS

A. NAME & PHONE OF CONTACT AT FILER (optional)

B. E-MAIL CONTACT AT FILER (optional)

C. SEND ACKNOWLEDGMENT TO: (Name and Address)

Delaware Department of State
U.C.C. Filing Section
Filed: 04:09 PM 03/21/2017
U.C.C. Initial Filing No: 2017 1845798

Service Request No: 20171902131

THE ABOVE SPACE IS FOR FILING OFFICE USE ONLY

1. DEBTOR'S NAME: Provide only one Debtor name (1a or 1b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 1b, leave all of item 1 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

1a. ORGANIZATION'S NAME **Zena Technologies, Inc.**					
OR 1b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)		SUFFIX	
1c. MAILING ADDRESS **174 Haverhill Rd.**	CITY **Topsfield**	STATE **MA**	POSTAL CODE **01983**	COUNTRY	

2. DEBTOR'S NAME: Provide only one Debtor name (2a or 2b) (use exact, full name; do not omit, modify, or abbreviate any part of the Debtor's name); if any part of the Individual Debtor's name will not fit in line 2b, leave all of item 2 blank, check here ☐ and provide the Individual Debtor information in item 10 of the Financing Statement Addendum (Form UCC1Ad)

2a. ORGANIZATION'S NAME				
OR 2b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)		SUFFIX
2c. MAILING ADDRESS	CITY	STATE	POSTAL CODE	COUNTRY

3. SECURED PARTY'S NAME (or NAME of ASSIGNEE of ASSIGNOR SECURED PARTY): Provide only one Secured Party name (3a or 3b)

3a. ORGANIZATION'S NAME **Pillsbury Winthrop Shaw Pittman LLP**				
OR 3b. INDIVIDUAL'S SURNAME	FIRST PERSONAL NAME	ADDITIONAL NAME(S)/INITIAL(S)		SUFFIX
3c. MAILING ADDRESS **1650 Tysons Boulevard, 14th Floor**	CITY **McLean**	STATE **VA**	POSTAL CODE **22102**	COUNTRY

4. COLLATERAL: This financing statement covers the following collateral:

All personal property of the Debtor, wherever located, now owned or hereafter acquired.

5. Check only if applicable and check only one box: Collateral is ☐ held in a Trust (see UCC1Ad, item 17 and Instructions) ☐ being administered by a Decedent's Personal Representative

6a. Check only if applicable and check only one box:
☐ Public-Finance Transaction ☐ Manufactured-Home Transaction ☐ A Debtor is a Transmitting Utility

6b. Check only if applicable and check only one box:
☐ Agricultural Lien ☐ Non-UCC Filing

7. ALTERNATIVE DESIGNATION (if applicable): ☐ Lessee/Lessor ☐ Consignee/Consignor ☐ Seller/Buyer ☐ Bailee/Bailor ☐ Licensee/Licensor

8. OPTIONAL FILER REFERENCE DATA:
To be filed in Delaware - Debtor: Zena Technologies, Inc.

FILING OFFICE COPY — UCC FINANCING STATEMENT (Form UCC1) (Rev. 04/20/11)

International Association of Commercial Administrators (IACA)

RECORDED: 03/28/2017