

PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT4718525

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	FIRST LIEN INTELLECTUAL PROPERTY SECURITY AGREEMENT	
CONVEYING PARTY DATA		
Name		Execution Date
EXCELITAS TECHNOLOGIES CORP.		12/01/2017
RECEIVING PARTY DATA		
Name:	JPMORGAN CHASE BANK, N.A., AS COLLATERAL AGENT	
Street Address:	10 S. DEARBORN	
Internal Address:	7TH FLOOR	
City:	CHICAGO	
State/Country:	ILLINOIS	
Postal Code:	60603	
PROPERTY NUMBERS Total: 62		
Property Type	Number	
Patent Number:	6047643	
Patent Number:	6274970	
Patent Number:	6178888	
Patent Number:	6158347	
Patent Number:	6400067	
Patent Number:	6181084	
Patent Number:	6230625	
Patent Number:	6114842	
Patent Number:	6316867	
Patent Number:	6602104	
Patent Number:	6597087	
Patent Number:	6376993	
Patent Number:	6483240	
Patent Number:	6470802	
Patent Number:	6546837	
Patent Number:	6806627	
Patent Number:	7300185	
Patent Number:	7679096	
Patent Number:	7176633	

PATENT

Property Type	Number
Patent Number:	7372201
Patent Number:	7301262
Patent Number:	7067967
Patent Number:	7291981
Patent Number:	7217022
Patent Number:	7157710
Patent Number:	7172320
Patent Number:	7209373
Patent Number:	7141927
Patent Number:	7637629
Patent Number:	7675244
Patent Number:	9534875
Patent Number:	8033683
Patent Number:	7859872
Patent Number:	7923748
Patent Number:	8616785
Patent Number:	8408772
Patent Number:	8096677
Patent Number:	8475009
Patent Number:	8467208
Patent Number:	8616751
Patent Number:	8651695
Patent Number:	9222628
Patent Number:	9748086
Patent Number:	9576785
Patent Number:	9373494
Patent Number:	9741553
Patent Number:	9791636
Patent Number:	D537550
Patent Number:	D629947
Patent Number:	D693501
Application Number:	13895943
Application Number:	14296564
Application Number:	15069242
Application Number:	15232161
Application Number:	15288063
Application Number:	15333634
Application Number:	15340067

Property Type	Number
Application Number:	15352652
Application Number:	15409702
Application Number:	15584318
Application Number:	15604925
Application Number:	62443222

CORRESPONDENCE DATA

Fax Number: (212)751-4864

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: 212-906-1216

Email: angela.amaru@lw.com

Correspondent Name: LATHAM & WATKINS LLP C/O ANGELA M. AMARU

Address Line 1: 885 THIRD AVENUE

Address Line 4: NEW YORK, NEW YORK 10022

ATTORNEY DOCKET NUMBER: 045494-0215

NAME OF SUBMITTER: ANGELA M. AMARU

SIGNATURE: /S/ Angela M. Amaru

DATE SIGNED: 12/05/2017

Total Attachments: 13

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FIRST LIEN INTELLECTUAL PROPERTY SECURITY AGREEMENT

This FIRST LIEN INTELLECTUAL PROPERTY SECURITY AGREEMENT (as amended, amended and restated, supplemented or otherwise modified from time to time, this “**IP Security Agreement**”), dated as of December 1, 2017, is among the Persons listed on the signature pages hereof (collectively, the “**Grantors**”) and JPMorgan Chase Bank N.A., as collateral agent (the “**Collateral Agent**”) for the ratable benefit of the Secured Parties (as defined in the Credit Agreement referred to below).

WHEREAS, EXC Holdings III Corp., a Delaware corporation (the “**Borrower**”), has entered into the First Lien Credit Agreement, dated as of December 1, 2017 (as amended, amended and restated, supplemented or otherwise modified from time to time, the “**Credit Agreement**”), with EXC Holdings II Corp., a Delaware corporation, each Lender from time to time party thereto, and JPMorgan Chase Bank N.A., as Administrative Agent and as Collateral Agent.

WHEREAS, as a condition precedent to the making of the Loans and the making of L/C Credit Extensions by the Lenders and the L/C Issuers under the Credit Agreement, the entry into Secured Hedge Agreements by the Hedge Banks from time to time and the entry into Secured Cash Management Agreements by the Cash Management Banks from time to time, each Grantor has executed and delivered that certain First Lien Security Agreement, dated as of December 1, 2017, among the Grantors from time to time party thereto and the Collateral Agent (as amended, amended and restated, supplemented or otherwise modified from time to time in accordance with the terms thereof, the “**Security Agreement**”). Terms defined in the Credit Agreement or the Security Agreement and not otherwise defined herein are used herein as defined in the Credit Agreement or the Security Agreement, as applicable.

WHEREAS, under the terms of the Security Agreement, the Grantors have granted to the Collateral Agent, for the ratable benefit of the Secured Parties, a security interest in, among other property, certain intellectual property of the Grantors, and have agreed as a condition thereof to execute this IP Security Agreement for recording with the U.S. Patent and Trademark Office, the United States Copyright Office and any other appropriate governmental authorities.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each Grantor agrees as follows:

SECTION 1. Grant of Security. Each Grantor hereby grants to the Collateral Agent, for the ratable benefit of the Secured Parties, a security interest in all of such Grantor’s right, title and interest in and to the following (the “**Collateral**”):

(i) all Patents, patent applications and utility models, all inventions and improvements claimed therein and the right to claim any inventions disclosed but unclaimed therein, including, without limitation, the Patents and Patent applications set forth in Schedule A hereto;

(ii) all Trademarks, service marks, domain names, trade dress, logos, designs, slogans, trade names, business names, corporate names and other source identifiers, whether registered or unregistered, together, in each case, with the goodwill of the business connected with the use thereof and symbolized thereby, including, without limitation, the Trademark and service mark registrations and applications set forth in Schedule B hereto (provided that no security interest shall be granted in United States intent-to-use Trademark applications, prior to the filing and acceptance of a “Statement of Use” or an “Amendment to Allege Use” with respect thereto, solely to the extent that,

and solely during the period in which, the grant of a security interest therein would impair the validity or enforceability of such intent-to-use Trademark applications or any registrations that issue therefrom under applicable federal law);

(iii) all Copyrights, including, without limitation, Copyrights in Computer Software, internet web sites and the content thereof, whether registered or unregistered, including, without limitation, the Copyright registrations set forth in Schedule C hereto;

(iv) all registrations and applications for registration for any of the foregoing;

(v) all agreements, permits, consents, orders and franchises relating to the license, development, use or disclosure of any of the foregoing to which such Grantor, now or hereafter, is a party or a beneficiary, including, without limitation, the agreements granting any exclusive right to the Grantor in or to any registered Copyright set forth in Schedule D hereto;

(vi) all reissues, divisions, continuations, continuations-in-part, extensions, renewals and reexaminations of any of the foregoing, all rights in the foregoing provided by international treaties or conventions, all rights corresponding thereto throughout the world and all other rights of any kind whatsoever of such Grantor accruing thereunder or pertaining thereto;

(vii) any and all claims for damages, other payments and/or injunctive relief for past, present and future infringement, dilution, misappropriation, violation, misuse or breach with respect to any of the foregoing, with the right, but not the obligation, to sue for and collect, or otherwise recover, such damages, payments or other relief; and

(viii) any and all Proceeds of, collateral for, income, royalties and other payments now or hereafter due and/or payable with respect to, and supporting obligations relating to, any and all of the foregoing, and, to the extent not otherwise included, all payments under insurance (whether or not the Collateral Agent is the loss payee thereof), or any indemnity, warranty or guaranty, payable by reason of loss or damage or otherwise with respect to any of the foregoing.

provided that, notwithstanding anything to the contrary contained in the foregoing clauses (i) through (viii), the security interest created hereby shall not extend to, and the term "Collateral" shall not include, any lease, license or other agreement to the extent that a grant of a security interest therein would violate or invalidate such lease, license or agreement, or create a right of termination in favor of any other party thereto (other than any Grantor or any Subsidiary of any Grantor), in each case to the extent not rendered unenforceable pursuant to the applicable provisions of the Uniform Commercial Code or other applicable law and so long as the applicable provision giving rise to such violation or invalidity or such right of termination was not incurred in anticipation of the entering into of the Credit Agreement; provided, further, that (x) the Collateral includes Proceeds and receivables of any property excluded under this provision, the assignment of which is expressly deemed effective under the Uniform Commercial Code notwithstanding such prohibition and (y) such excluded lease, license or other agreement shall otherwise be subject to the security interest created by the Security Agreement upon receiving any necessary approvals or waivers permitting the assignment thereof.

SECTION 2. Security for Obligations. The grant of a security interest in the Collateral by each Grantor under this IP Security Agreement secures the payment and performance of all Obligations of such Grantor now or hereafter existing under or in respect of the Loan Documents (as such

Loan Documents may be amended, amended and restated, supplemented, replaced, refinanced, re-tranched, extended, increased or otherwise modified from time to time (including any extensions of maturity dates and increases of the principal amount outstanding thereunder)), including, without limitation, any extensions, increases, modifications, substitutions, amendments, refinancings, refundings, replacements or renewals of any or all of the foregoing Obligations (whether or not such action is committed, contemplated or provided for by the Loan Documents on the date hereof), whether direct or indirect, absolute or contingent, and whether for principal, reimbursement obligations, interest, fees, premiums, penalties, indemnifications, contract causes of action, costs, expenses or otherwise.

SECTION 3. Recordation. Each Grantor authorizes and requests that the Register of Copyrights, the Commissioner for Patents and the Commissioner for Trademarks and any other applicable government officer record this IP Security Agreement.

SECTION 4. Grants, Rights and Remedies. This IP Security Agreement has been entered into in conjunction with the provisions of the Security Agreement. Each Grantor does hereby acknowledge and confirm that the grant of the security interest hereunder to, and the rights and remedies of, the Collateral Agent with respect to the Collateral are more fully set forth in the Security Agreement, the terms and provisions of which are incorporated herein by reference as if fully set forth herein. In the event that any provision of this IP Security Agreement is deemed to conflict with the Security Agreement, the provisions of the Security Agreement shall control.

SECTION 5. Execution in Counterparts. This IP Security Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and all of which taken together shall constitute one and the same agreement. Delivery of an executed counterpart of a signature page to this IP Security Agreement by telecopier or other electronic method shall be effective as delivery of an original executed counterpart of this IP Security Agreement.

SECTION 6. Notices, Etc. All notices and other communications provided for hereunder shall be in writing (including telegraphic, telecopy or telex communication or facsimile transmission) and mailed, telegraphed, telecopied, telexed, faxed or delivered, if to any Grantor, addressed to it in care of the Borrower at the Borrower's address specified in Section 10.02 of the Credit Agreement, or if to the Collateral Agent, to its address specified in Section 10.02 of the Credit Agreement. All such notices and other communications shall be deemed to be given or made at such time as shall be set forth in Section 10.02 of the Credit Agreement. Delivery by telecopier of an executed counterpart of any amendment or waiver of any provision of this IP Security Agreement or Schedule hereto shall be effective as delivery of an original executed counterpart thereof.

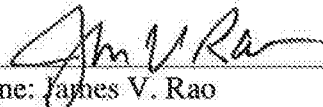
SECTION 7. Governing Law. This IP Security Agreement shall be governed by, and construed in accordance with, the laws of the State of New York.

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IN WITNESS WHEREOF, each Grantor has caused this IP Security Agreement to be duly executed and delivered by its officer thereunto duly authorized as of the date first above written.

GRANTOR:

EXCELITAS TECHNOLOGIES CORP.

By: 
Name: James V. Rao
Title: Executive Vice President, Chief
Financial Officer and Treasurer

JPMORGAN CHASE BANK N.A., as Collateral
Agent

By: Robert P. Kellas
Name: Robert P. Kellas
Title: Executive Director

SCHEDULE A

Patents

Patent Title	Application Number Application Date	Patent Number Grant Date	Status
HERMETICALLY SEALED LASER ACTUATOR/DETONATOR AND METHOD OF MANUFACTURING THE SAME	08989544 12/12/1997	6047643 4/11/2000	Issued
IMPROVED ARC LAMP	09000704 12/30/1997	6274970 8/14/2001	Issued
DETONATOR	09009784 1/20/1998	6178888 1/30/2001	Issued
DETONATOR	09017283 2/2/1998	6158347 12/12/2000	Issued
HIGH POWER SHORT ARC DISCHARGE LAMP WITH HEAT SINK	09170269 10/13/1998	6400067 6/4/2002	Issued
BALLAST CIRCUIT FOR HIGH INTENSITY DISCHARGE LAMPS	09258003 2/25/1999	6181084 1/30/2001	Issued
DISARMABLE FIRING MODULE	09286522 4/6/1999	6230625 5/15/2001	Issued
PRECISION VOLTAGE REGULATOR FOR CAPACITOR-CHARGING POWER SUPPLY	09427221 10/26/1999	6114842 9/5/2000	Issued
LOW-COST XENON ARC LAMP WITH IMPROVED MOUNTING MEANS FOR CATHODE AND ANODE	09427851 10/26/1999	6316867 11/13/2001	Issued
SIMPLIFIED MINIATURE XENON ARC LAMP	09525996 3/15/2000	6602104 8/5/2003	Issued
MINIATURE XENON ARC LAMP WITH CATHODE SLOT-MOUNTED TO STRUT	09789878 2/20/2001	6597087 7/22/2003	Issued
POWER SUPPLY TO XENON ARC LAMP INTERFACE	09789951 2/20/2001	6376993 4/23/2002	Issued

Patent Title	Application Number Application Date	Patent Number Grant Date	Status
COMPACT AND STABILIZED ARC HIGH-PRESSURE MERCURY LAMP	09801085 3/6/2001	6483240 11/19/2002	Issued
MULTILAYER CHIP SLAPPER	09885146 6/20/2001	6470802 10/29/2002	Issued
DUAL LOAD CHARGE MANUFACTURING METHOD AND PRESS THEREFORE	10002550 11/2/2001	6546837 4/15/2003	Issued
PROBE STABILIZED ARC DISCHARGE LAMP	10120975 4/11/2002	6806627 10/19/2004	Issued
QUADRILATERAL SYMMETRICAL LIGHT SOURCE	10612612 7/2/2003	7300185 11/27/2007	Issued
INTEGRATED LED HEAT SINK	10645474 8/21/2003	7679096 3/26/2010	Issued (Will be abandoned in due course; Grantor does not intend to pay required maintenance fees)
ARC LAMP WITH AN INTERNALLY MOUNTED FILTER	10732787 12/9/2003	7176633 2/13/2007	Issued
SUB-MINIATURE ARC LAMP	10732792 12/9/2003	7372201 5/13/2008	Issued
METHOD AND AN APPARATUS FOR COOLING AN ARC LAMP	10850135 5/19/2004	7301262 11/27/2007	Issued
AN ARC LAMP HAVING WINDOW FLANGE WITH SLOTS	10890968 7/13/2004	7067967 6/27/2006	Issued
SHORT ARC LAMP WITH IMPROVED MANUFACTURABILITY	10891956 7/13/2004	7291981 11/6/2007	Issued
OPTIC FIBER LED LIGHT SOURCE	10930283 8/31/2004	7217022 5/15/2007	Issued
CORONA DISCHARGE DETECTION	10988052 11/12/2004	7157710 1/2/2007	Issued
LOW PROFILE MODULE AND FRAME ASSEMBLY FOR ARC LAMPS	11001984 12/1/2004	7172320 2/6/2007	Issued



Patent Title	Application Number Application Date	Patent Number Grant Date	Status
HIGH VOLTAGE PULSE GENERATOR	11023851 12/28/2004	7209373 4/24/2007	Issued
ARC LAMP WITH INTEGRATED SAPPHIRE ROD	11031213 1/7/2005	7141927 11/28/2006	Issued
THREADED-STUD XENON SHORT-ARC LAMP SYSTEM	11400706 4/6/2006	7637629 12/29/2009	Issued
SYSTEM AND METHOD FOR POWER SUPPLY FOR LAMP WITH IMPROVED CONSTANT POWER MODE CONTROL AND IMPROVED BOOST CURRENT CIRCUIT	11444716 6/1/2006	7675244 3/9/2010	Issued
INITIATOR	11977068 10/23/2007	9534875 1/3/2017	Issued
STAGGERED LED BASED HIGH-INTENSITY LIGHT	12370793 2/13/2009	8033683 10/11/2011	Issued
LOAD VOLTAGE-INDEPENDENT ACTIVE POWER CONTROL OF POWER CONVERTERS	12471390 5/24/2009	7859872 12/28/2010	Issued
INTEGRATED LED HEAT SINK	12649631 12/30/2009	7923748 4/12/2011	Issued
FIBER OPTIC COUPLER	12705392 2/12/2010	8616785 12/31/2013	Issued
LED ILLUMINATION DEVICE	12705411 2/12/2010	8408772 4/2/2013	Issued
STAGGERED LED BASED HIGH-INTENSITY LIGHT	12771505 4/30/2010	8096677 1/17/2012	Issued
TAILORED SIDE-EMITTER PERIMETER BEACON	12832216 7/8/2010	8475009 7/2/2013	Issued
INPUT VOLTAGE-INDEPENDENT ACTIVE POWER CONTROL OF DC TO AC POWER CONVERTERS	12978809 12/27/2010	8467208 6/18/2013	Issued
LIGHT GUIDE FOR COUPLING DIFFERENTLY SHAPED LIGHT SOURCE AND RECEIVER	13045111 3/10/2011	8616751 12/31/2013	Issued
LED BASED HIGH-INTENSITY LIGHT WITH SECONDARY DIFFUSER	13053649 3/22/2011	8651695 2/18/2014	Issued

Patent Title	Application Number Application Date	Patent Number Grant Date	Status
COLOR TEMPERATURE TUNABLE LED-BASED LAMP MODULE	13886703 5/3/2013	9222628 12/29/2015	Issued
VISIBLE LIGHT PHOTO-DISINFECTION PATCH	13895943 5/16/2013	---	Pending
ILLUMINATION DEVICE WITH INTEGRATED THERMAL IMAGING SENSOR	14296564 6/5/2014	---	Pending
LASER DRIVEN SEALED BEAM LAMP	14712196 5/14/2015	9748086 8/29/2017	Issued
ELECTRODELESS SINGLE CW LASER DRIVEN XENON LAMP	14712304 5/14/2015	9576785 2/21/2017	Issued
SPARKER FOR FLASH LAMP	14739206 6/15/2015	9373494 6/21/2016	Issued
ELLIPTICAL AND DUAL PARABOLIC LASER DRIVEN SEALED BEAM LAMPS	14938353 11/11/2015	9741553 8/22/2017	Issued
LASER DRIVEN SEALED BEAM LAMP WITH IMPROVED STABILITY	15069242 3/14/2016	---	Pending
FIBER OPTIC FERRULE COUPLING SYSTEM	15192184 6/24/2016	9791636 10/17/2017	Issued
APPARATUS AND A METHOD FOR OPERATING A SEALED BEAM LAMP CONTAINING AN IONIZABLE MEDIUM	15232161 8/9/2016	---	Pending
APPARATUS AND METHOD FOR DYNAMIC ADJUSTMENT OF THE BANDWIDTH OF A POWER CONVERTER	15288063 10/7/2016	---	Pending Not yet published
APPARATUS AND A METHOD FOR OPERATING A VARIABLE PRESSURE SEALED BEAM LAMP	15333634 10/25/2016	---	Pending
LOAD SHARING BETWEEN PARALLEL CONNECTED POWER CONVERTERS	15340067 11/1/2016	---	Pending Not yet published
INITIATOR	15352652 11/16/2016	---	Pending
ELECTRODELESS SINGLE LOW POWER CW LASER DRIVEN	15409702 1/19/2017	---	Pending

Patent Title	Application Number Application Date	Patent Number Grant Date	Status
LUMINAIRE WITH INDEPENDENTLY- CONTROLLABLE FOCUS-TUNABLE LENSES	15584318 5/2/2017	---	Pending Not yet published
DUAL PARABOLIC LASER DRIVEN SEALED BEAM LAMPS	15604925 5/25/2017	---	Pending
OPTICAL FIBER LIGHT SOURCE HOUSING	29234527 7/19/2005	D537550 2/27/2007	Issued
LED-BASED FIBER ILLUMINATOR	29332373 2/13/2009	D629947 12/28/2010	Issued
LED BASED HAZARDOUS AREA FLOOD LIGHT	29407031 11/22/2011	D693501 11/12/2013	Issued
NOVEL LED ENCAPSULATION FOR LUMINAIRE	62443222 1/6/2017	---	Pending Provisional application not published

SCHEDULE B

Trademarks

Trademark/Image if any	Application Number Application Date	Registration Number Registration Date	Status
ACULED	78740612 10/26/2005	3309016 10/9/2007	Registered
A-ZOOM μ 	86780956 10/7/2015	4968340 5/31/2016	Registered
A-ZOOM2	76195088 1/17/2001	2623658 9/24/2002	Registered
BLUE CHIP	87092025 7/2/2016	5137530 2/7/2017	Registered
CERMAX	73392743 9/29/1982	1267034 2/14/1984	Registered
CURX	86013126 7/17/2013	4571014 7/22/2014	Registered
EXCELITAS	85226622 1/26/2011	4518064 4/22/2014	Registered
EXCELITAS TECHNOLOGIES 	85236364 2/8/2011	4529883 5/13/2014	Registered
EXCELITAS TECHNOLOGIES	85155171 10/18/2010	4195259 8/21/2012	Registered
FETURA	77800926 8/10/2009	3763102 3/23/2010	Registered
HELIX	87579659 8/22/2017	---	Pending
LYNX	85700142 8/9/2012	4526433 5/6/2014	Registered

Trademark/Image if any	Application Number Application Date	Registration Number Registration Date	Status
OMNIBLOCK	76170113 11/24/2000	2806940 1/20/2004	Registered
OPTEM	75512679 7/2/1998	2342423 4/18/2000	Registered
OPTIGRID	75456029 3/24/1998	2406738 11/21/2000	Registered
PAX-6	78902923 6/7/2006	3469652 7/15/2008	Registered
Q	79106225 9/6/2011	4370376 7/23/2013	Registered
QIOPTIQ 	86478106 12/11/2014	5018540 8/9/2016	Registered
QIOPTIQ 	86477744 12/11/2014	4961109 5/17/2016	Registered
QIOPTIQ	78680577 7/28/2005	3673051 8/25/2009	Registered
QIOPTIQ PHOTONICS FOR INNOVATION 	86478358 12/11/2014	4961111 5/17/2016	Registered
QIOPTIQ PHOTONICS FOR INNOVATION 	86478343 12/11/2014	4961110 5/17/2016	Registered
THE HIGH VOLTAGE POWER SUPPLIES THAT WORK	75290991 5/13/1997	2167468 6/23/1998	Registered
VIGI-LUX	77018731 10/11/2006	3481198 8/5/2008	Registered
X. 	86070626 9/20/2013	4643511 11/25/2014	Registered

SCHEDULE C

Copyrights

None.