

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4433486

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	SECURITY INTEREST	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	ROCKLEY PHOTONICS LIMITED	05/26/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	KREOS CAPITAL V (UK) LIMITED	
<b>Street Address:</b>	25-28 OLD BURLINGTON STREET	
<b>City:</b>	LONDON	
<b>State/Country:</b>	UNITED KINGDOM	
<b>Postal Code:</b>	W1S 3AN	
<b>PROPERTY NUMBERS Total: 43</b>		
<b>Property Type</b>	<b>Number</b>	
Application Number:	14601101	
Application Number:	14601107	
Application Number:	15042803	
Application Number:	14925924	
Application Number:	14629922	
Application Number:	15369804	
Application Number:	62057818	
Application Number:	14827200	
Application Number:	15256321	
Application Number:	15120861	
Application Number:	62254674	
Application Number:	62351189	
Application Number:	15321723	
Application Number:	62359595	
Application Number:	62429701	
Application Number:	62429703	
Application Number:	62435004	
Application Number:	62426117	
Application Number:	62427132	
Application Number:	14868116	

PATENT

Property Type	Number
Application Number:	14639041
Application Number:	62128949
Application Number:	62152696
Application Number:	14715448
Application Number:	14752476
Application Number:	14813081
Application Number:	62234454
Application Number:	15317897
Application Number:	62251572
Application Number:	15072314
Application Number:	62234451
Application Number:	15279267
Application Number:	62264537
Application Number:	62309425
Application Number:	62354600
Application Number:	62312428
Application Number:	62364233
Application Number:	14789489
Application Number:	62345671
Application Number:	62362012
Application Number:	62443576
Application Number:	62292519
Application Number:	62394114

**CORRESPONDENCE DATA**

**Fax Number:** (800)494-7512

*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:** 202-265-1516

**Email:** ipteam@cogencyglobal.com

**Correspondent Name:** MARYNA KOBERIDZE

**Address Line 1:** 1025 VERMONT AVE NW, SUITE 1130

**Address Line 2:** COGENCY GLOBAL INC.

**Address Line 4:** WASHINGTON, D.C. 20005

**ATTORNEY DOCKET NUMBER:** F170385

**NAME OF SUBMITTER:** ANDREW NASH

**SIGNATURE:** /Andrew Nash/

**DATE SIGNED:** 05/26/2017

**Total Attachments: 14**

source=Closing Copy - Intellectual Property Security Agreement (UK Borrower)#page1.tif  
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## INTELLECTUAL PROPERTY SECURITY AGREEMENT

This Intellectual Property Security Agreement (“Agreement”) is entered into as of May 26, 2017 by and between **KREOS CAPITAL V (UK) LIMITED**, a limited liability company incorporated under the laws of England & Wales with company number 09728300 and its registered office at 25-28 Old Burlington Street, London W1S 3AN (“Security Agent”) and **ROCKLEY PHOTONICS LIMITED**, a limited liability company with company number 08683015 and its registered office at Cooley (UK) LLP 10th Floor Dashwood, 69 Old Broad Street, London, EC2M 1QS (“Grantor”).

### RECITALS

A. Grantor has executed and delivered a certain Loan Agreement dated as of January 27, 2017 among Grantor, ROCKLEY PHOTONICS, INC., a Delaware corporation (“US Borrower”) and SILICON VALLEY BANK, a California corporation with its principal place of business at 3003 Tasman Drive, Santa Clara, California 9505 acting through its branch at Alphabeta, 14-18 Finsbury Square, London EC2A 1BR (“SVB”), as amended and restated pursuant to that certain First Loan Agreement Amendment and Restatement Agreement dated as of May 26, 2017 among Grantor, US Borrower, SVB (in its capacity as lender) and Security Agent (in its capacity as security agent, agent and lender) (as may be further amended, modified, supplemented, and/or restated from time to time, the “Loan Agreement”). Capitalized terms used herein but not otherwise defined herein shall have the meanings set forth in the Loan Agreement. Finance Parties have agreed to make certain advances of money and to extend certain financial accommodations to Grantor and US Borrower (each such party, including Grantor, an “Obligor”) (the “Loans”) in the amounts and manner set forth in the Loan Agreement. Finance Parties are willing to make the Loans, but only upon the condition, among others, that Grantor shall grant to Security Agent a security interest in its Copyrights, Trademarks, Patents, and Mask Works (as each term is described below) to secure the obligations of Obligor to Finance Parties.

B. Pursuant to the terms of the Loan Agreement and that certain Debenture by and between Grantor and Security Agent dated as of even date herewith (as the same may be amended, modified, supplemented, or restated from time to time, the “Debenture”), Grantor has granted to Security Agent (for the ratable benefit of the Finance Parties) a security interest in all of Grantor’s right, title and interest, whether presently existing or hereafter acquired, in, to and under all of the Collateral.

NOW, THEREFORE, for good and valuable consideration, receipt of which is hereby acknowledged, and intending to be legally bound, as collateral security for the prompt and complete payment when due of all obligations of Obligor to Finance Parties, Grantor hereby represents, warrants, covenants and agrees as follows:

### AGREEMENT

1. Grant of Security Interest. To secure the Obligations of Obligor to Finance Parties, Grantor grants and pledges to Security Agent (for the ratable benefit of the Finance Parties) a security interest in all of Grantor’s right, title and interest in, to and under its intellectual property (all of which shall collectively be called the “Intellectual Property Collateral”), including, without limitation, the following:

(a) Any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret, now or hereafter existing, created, acquired or held, including without limitation those set forth on Exhibit A attached hereto (collectively, the “Copyrights”);

(b) Any and all trade secrets, and any and all intellectual property rights in computer software and computer software products now or hereafter existing, created, acquired or held;

(c) Any and all design rights that may be available to Grantor now or hereafter existing, created, acquired or held;

(d) All patents, patent applications and like protections including, without limitation, improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same, including without limitation the patents and patent applications set forth on Exhibit B attached hereto (collectively, the "Patents");

(e) Any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Grantor connected with and symbolized by such trademarks, including without limitation those set forth on Exhibit C attached hereto (collectively, the "Trademarks");

(f) All mask works or similar rights available for the protection of semiconductor chips, now owned or hereafter acquired, including, without limitation those set forth on Exhibit D attached hereto (collectively, the "Mask Works");

(g) Any and all claims for damages by way of past, present and future infringements of any of the rights included above, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the intellectual property rights identified above;

(h) All licenses or other rights to use any of the Copyrights, Patents, Trademarks, or Mask Works and all license fees and royalties arising from such use to the extent permitted by such license or rights;

(i) All amendments, extensions, renewals and extensions of any of the Copyrights, Trademarks, Patents, or Mask Works; and

(j) All proceeds and products of the foregoing, including without limitation all payments under insurance or any indemnity or warranty payable in respect of any of the foregoing.

2. Recordation. Grantor authorizes the Commissioner for Patents, the Commissioner for Trademarks and the Register of Copyrights and any other government officials to record and register this Agreement upon request by Security Agent.

3. Loan Documents. This Agreement has been entered into pursuant to and in conjunction with the Loan Agreement and the Debenture, each of which are hereby incorporated by reference. The provisions of the Loan Agreement and the Debenture shall supersede and control over any conflicting or inconsistent provision herein. The rights and remedies of Finance Parties with respect to the Intellectual Property Collateral are as provided by the Loan Agreement, the Debenture and related documents, and nothing in this Agreement shall be deemed to limit such rights and remedies.

4. Execution in Counterparts. This Agreement may be executed in counterparts (and by different parties hereto in different counterparts), each of which shall constitute an original, but all of which when taken together shall constitute a single contract. Delivery of an executed counterpart of a signature page to this Agreement by facsimile or in electronic (i.e., "pdf" or "tif" format) shall be effective as delivery of a manually executed counterpart of this Agreement.

5. Successors and Assigns. This Agreement will be binding on and shall inure to the benefit of the parties hereto and their respective successors and assigns.

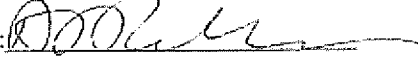
6. Governing Law. This Agreement and any claim, controversy, dispute or cause of action (whether in contract or tort or otherwise) based upon, arising out of or relating to this Agreement and the transactions contemplated hereby and thereby shall be governed by, and construed in accordance with, the laws of the United States and the Commonwealth of Massachusetts, without giving effect to any choice or conflict of law provision or rule (whether of the Commonwealth of Massachusetts or any other jurisdiction).

[Signature page follows.]

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed as a sealed instrument under the laws of the Commonwealth of Massachusetts by its officers thereunto duly authorized as of the first date written above.

GRANTOR:

ROCKLEY PHOTONICS LIMITED

By: 

Name: ANDREW G. RICKMAN

Title: DIRECTOR

SECURITY AGENT:

KREOS CAPITAL V (UK) LIMITED

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

IN WITNESS WHEREOF, the parties have caused this Intellectual Property Security Agreement to be duly executed as a sealed instrument under the laws of the Commonwealth of Massachusetts by its officers thereunto duly authorized as of the first date written above.

GRANTOR:

ROCKLEY PHOTONICS LIMITED

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

SECURITY AGENT:

KREOS CAPITAL V(UK) LIMITED

By: \_\_\_\_\_  
Name: LUCA COCCIA  
Title: DIRECTOR



EXHIBIT A

Copyrights

Description

Registration/  
Application  
Number

Registration/  
Application  
Date

None.

EXHIBIT B

Patents

**See Attached**

Title as filed	Date created	Status	Jurisdiction	Application number	Earliest priority date	Date filed	Publication date	Publication number	Grant/Issue Date	Patent Number
TUNABLE SOI LASER	Tuesday, 5 November 2013	Published - GB	GB	1400904.7	-	Monday, 20 January 2014	Wednesday, 29 July 2015	2522410		
TUNABLE SOI LASER	Tuesday, 5 November 2013	Published - PCT	WO	PCT/GB2015/050104	Monday, 20 January 2014	Monday, 19 January 2015	Thursday, 23 July 2015	WO2015/107365		
TUNABLE SOI LASER	Tuesday, 5 November 2013	Granted - US	US	14/601101	Monday, 20 January 2014	Tuesday, 20 January 2015	Thursday, 23 July 2015	US-2015-0207296-A1	19/01/2016	9,240,673
TUNABLE SOI LASER	Tuesday, 5 November 2013	Published CN national phase	CN - from PCT	2015800002672.9	Monday, 20 January 2014	Wednesday, 18 May 2016	Friday, 2 December 2016	CN 106068586 A		
TUNABLE SOI LASER	Tuesday, 5 November 2013	Granted - GB	GB	1400909.6	-	Monday, 20 January 2014	Wednesday, 22 July 2015	2522252	20/04/2016	2522252 B
TUNABLE SOI LASER	Tuesday, 5 November 2013	Granted - US	US	14/601107	Monday, 20 January 2014	Tuesday, 20 January 2015	Saturday, 23 July 2016	US-2015-0207291-A1	23/02/2016	9,270,078
TUNABLE SOI LASER	Tuesday, 5 November 2013	Published - PCT	WO	PCT/GB2015/050105	Monday, 20 January 2014	Monday, 19 January 2015	Thursday, 23 July 2015	WO2015/107366		
TUNABLE SOI LASER	Tuesday, 5 November 2013	Published - US cont	US	15/042803	Monday, 20 January 2014	Friday, 12 February 2016	Thursday, 9 June 2016	US-2016-0164246 A1		
TUNABLE SOI LASER	Tuesday, 5 November 2013	Published CN national phase	CN - from PCT	201580012694.3	Monday, 20 January 2014	Thursday, 8 September 2016	Wednesday, 9 November 2016	CN 106104947 A		
DISCRETE WAVELENGTH TUNABLE LASER	Wednesday, 11 March 2015	Filed GB application	GB	1602947.2	-	Friday, 19 February 2016				
DISCRETE WAVELENGTH TUNABLE LASER	Wednesday, 11 March 2015	Not yet filed	WO		Friday, 19 February 2016					
DISCRETE WAVELENGTH TUNABLE LASER	Wednesday, 11 March 2015	Filed US application	US	14/925924	-	Wednesday, 28 October 2015	4/5/2017	US 2017-0125977 A1	18/04/2017	9,627,851
DISCRETE WAVELENGTH TUNABLE LASER	Wednesday, 11 March 2015	Filed GB application	GB	1522542.8	Wednesday, 28 October 2015	Monday, 21 December 2015				
DISCRETE WAVELENGTH TUNABLE LASER	Wednesday, 11 March 2015	PCT	WO	PCT/GB2016/053350	Wednesday, 28 October 2015	Friday, 28 October 2016				
TUNABLE LASER	Monday, 24 August 2015	Filed GB application	GB	1602950.6	-	Friday, 19 February 2016				
TUNABLE LASER	Monday, 24 August 2015	Not yet filed	WO		Friday, 19 February 2016					
DETECTOR REMODULATOR	Tuesday, 5 November 2013	Granted - GB	GB	1403191.8	-	Monday, 24 February 2014	Wednesday, 26 August 2015	2523383	14/09/2016	2523383
DETECTOR REMODULATOR	Tuesday, 5 November 2013	Granted - US	US	14/629922	Monday, 24 February 2014	Tuesday, 24 February 2015	Thursday, 1 October 2015	US-2015-0277157-A1	06/12/2016	9513498
DETECTOR REMODULATOR	Tuesday, 5 November 2013	Published - PCT	WO	PCT/GB2015/050523	Monday, 24 February 2014	Tuesday, 24 February 2015	Thursday, 27 August 2015	WO2015/124953		
DETECTOR REMODULATOR	Tuesday, 5 November 2013	CN national phase	CN - from PCT	201580009951.1	Monday, 24 February 2014	Tuesday, 23 August 2016				
DETECTOR REMODULATOR	Tuesday, 5 November 2013	Published EP national phase	EP - from PCT	15707725.6	Monday, 24 February 2014	Wednesday, 21 September 2016	Wednesday, 4 January 2017	3111571		
DETECTOR REMODULATOR	Tuesday, 5 November 2013	Filed US CIP	US - CIP	15/369,804	Monday, 24 February 2014	Monday, 5 December 2016				
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Filed US Provisional app'n - priority	US Prev	62/057818	Monday, 24 February 2014	Tuesday, 30 September 2014				
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Granted - GB	GB	1420063.8	Monday, 24 February 2014	Tuesday, 11 November 2014	Wednesday, 26 August 2015	2523433	10/02/2016	2523433 B
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Published - PCT	WO	PCT/GB2015/050524	Monday, 24 February 2014	Tuesday, 24 February 2015	Thursday, 27 August 2015	WO2015/124954		
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Granted - US NP	US - from PCT	14/827200	Monday, 24 February 2014	Friday, 14 August 2015	Thursday, 17 March 2016	US-2016-0080844 A1	06/09/2016	9438970
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Published - Filed CN national phase	CN - from PCT	2015800002793.3	Monday, 24 February 2014	Friday, 27 May 2016	Wednesday, 31 August 2016	105917257 A		

DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Published - US Cont	US	15/256,321	Monday, 24 February 2014	Friday, 2 September 2016	Thursday, 22 December 2016	US-2016-0373843 A1		
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Published EP national phase	EP - from PCT	15/707726.4	Monday, 24 February 2014	Wednesday, 21 September 2016	Wednesday, 4 January 2017	3111261		
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Published - GB	GB	1420064.6	Monday, 24 February 2014	Tuesday, 11 November 2014	Wednesday, 26 August 2015	2523434		
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	Published - PCT	WO	PCT/GB2015/050520	Monday, 24 February 2014	Tuesday, 24 February 2015	Thursday, 27 August 2015	WO2015/124952		
DETECTOR REMODULATOR AND OPTOELECTRONIC SWITCH	Wednesday, 4 December 2013	US national phase	US - from PCT	15/120,861	Monday, 24 February 2014	Tuesday, 23 August 2016				
AN OPTOELECTRONIC COMPONENT	Thursday, 16 July 2015	Filed US provisional appln	US Prov	62/254674	-	Thursday, 12 November 2015				
AN OPTOELECTRONIC COMPONENT	Thursday, 16 July 2015	Filed US provisional appln	US Prov	62/351189	Thursday, 12 November 2015	Thursday, 16 June 2016				
AN OPTOELECTRONIC COMPONENT	Thursday, 16 July 2015	Filed GB application	GB	1611427.4	Thursday, 12 November 2015	Thursday, 30 June 2016				
AN OPTOELECTRONIC COMPONENT	Thursday, 16 July 2015	PCT	WO	PCT/EP2016/077338	Thursday, 12 November 2015	Thursday, 10 November 2016				
AN OPTOELECTRONIC COMPONENT	Thursday, 16 July 2015	US national phase	US - from PCT	15/321,723	Thursday, 12 November 2015	Thursday, 22 December 2016				
QUANTUM CONFINED STARK EFFECT ELECTROABSORPTION MODULATORS ON A SOI PLATFORM	Thursday, 31 March 2016	Filed US provisional appln	US Prov	62/359595	-	Thursday, 7 July 2016				
	Thursday, 31 March 2016	Not yet filed	US		Thursday, 7 July 2016					
	Thursday, 31 March 2016	Not yet filed	PCT		Thursday, 7 July 2016					
	Thursday, 31 March 2016	Not yet filed	GB		Thursday, 7 July 2016					
WAVEGUIDE OPTOELECTRONIC DEVICE	Thursday, 28 April 2016	Filed US Provisional appln	US Prov	62/429701	-	Friday, 2 December 2016				
WAVEGUIDE DEVICE AND METHOD OF DOPING A WAVEGUIDE DEVICE	Thursday, 2 June 2016	Filed US Provisional appln	US Prov	62/429703	-	Friday, 2 December 2016				
ELECTRO-OPTIC MODULATORS	Monday, 6 June 2016	Filed US Provisional	US Prov	62/435,004	-	Thursday, 15 December 2016				
	Monday, 6 June 2016	Not yet filed	US		Thursday, 15 December 2016					
	Monday, 6 June 2016	Not yet filed	GB		Thursday, 15 December 2016					
ELECTRO-OPTICALLY ACTIVE DEVICE	Thursday, 15 September 2016	Filed US provisional appln	US Prov	62/426117	-	Wednesday, 23 November 2016				
ELECTRO-OPTICALLY ACTIVE DEVICE	Thursday, 15 September 2016	Filed US provisional appln	US Prov	62/427132	-	Monday, 28 November 2016				
	Friday, 13 November 2015	Not yet filed	US Prov							
	Monday, 14 November 2016	Not yet filed	US Prov							
OPTICAL BRIDGE	Sunday, 1 June 2014	Published - GB	GB	1420070.3	Tuesday, 30 September 2014	Tuesday, 11 November 2014	Wednesday, 6 April 2016	2530814		
OPTICAL BRIDGE	Sunday, 1 June 2014	Granted - US	US	14/066116	Tuesday, 30 September 2014	Monday, 28 September 2015	Thursday, 31 March 2016	US-2016-0091665-A1	24/01/2017	9,551,838
OPTOELECTRONIC SWITCH	R10 28Jul14, R12 23Sep14	Granted - US	US	14/639041	Tuesday, 30 September 2014	Wednesday, 4 March 2015	Thursday, 31 March 2016	US-2016-0091666-A1	16/08/2016	9417396

OPTOELECTRONIC SWITCH	R10 28Jul14, R12 23Sep14	Granted - GB	GB	1506729.1	Tuesday, 30 September 2014	Tuesday, 21 April 2015	Wednesday, 6 April 2016	2530833	07/12/2016	2530833
OPTOELECTRONIC SWITCH	R10 28Jul14, R12 23Sep14	Published - PCT	WO	PCT/EP2015/072565	Tuesday, 30 September 2014	Wednesday, 30 September 2015	Thursday, 7 April 2016	WO2016/05 0849		
NOVEL WAVEGUIDE MODULATOR AND PHOTODIODE STRUCTURES	R15 15Dec14, R21 22Jan15	Filed US provisional appln	US Prov	62/128949	Thursday, 5 March 2015	Thursday, 5 March 2015				
OPTOELECTRONIC SWITCHES	11 Feb 2015 and 24 Apr 2015	Filed US provisional appln	US Prov	62/152696	Friday, 24 April 2015	Friday, 24 April 2015				
WAVEGUIDE MODULATOR STRUCTURES	Wednesday, 11 February 2015	Published - PCT	WO	PCT/GB2016/050570	Thursday, 5 March 2015	Friday, 4 March 2015	Friday, 9 September 2016	WO2016/13 9484		
OPTOELECTRONIC SWITCH	Wednesday, 11 February 2015	Published - US	US	14/715448	Tuesday, 30 September 2014	Monday, 18 May 2015	Thursday, 31 March 2016	US-2016- 0094487 A1		
OPTOELECTRONIC SWITCH	Wednesday, 11 February 2015	Published - PCT	WO	PCT/EP2015/072607	Tuesday, 30 September 2014	Wednesday, 30 September 2015	Thursday, 7 April 2016	WO2016/05 0868		
ELECTRONIC/PHOTONIC CHIP INTEGRATION AND BONDING	Saturday, 15 August 2014	Published - US	US	14/752476	Tuesday, 11 November 2014	Friday, 26 June 2015	Thursday, 12 May 2016	US-2016- 0131862 A1		
ELECTRONIC/PHOTONIC CHIP INTEGRATION AND BONDING	Saturday, 16 August 2014	Published - GB	GB	1512430.8	Tuesday, 11 November 2014	Thursday, 16 July 2015	Wednesday, 18 May 2016	2532306		
ELECTRONIC/PHOTONIC CHIP INTEGRATION AND BONDING	Saturday, 16 August 2014	Published - PCT	WO	PCT/EP2015/076362	Tuesday, 11 November 2014	Wednesday, 11 November 2015	Thursday, 19 May 2016	WO2016/07 5210		
BURST-MODE RECEIVER	Tuesday, 12 May 2015	Allowed US application	US	14/813081		Wednesday, 29 July 2015	2/2/2017	US 2017- 0034607 A1	11/4/2017	9,621,972
BURST-MODE RECEIVER	Tuesday, 12 May 2015	Filed GB application	GB	1514929.7	Wednesday, 29 July 2015	Friday, 21 August 2015				
BURST-MODE RECEIVER	Tuesday, 12 May 2015	PCT	WO	PCT/GB2016/052395	Wednesday, 29 July 2015	Friday, 29 July 2016				
OPTOELECTRONIC SWITCH	Monday, 13 April 2015	Filed US provisional appln	US Prov	62/234454		Tuesday, 29 September 2015				
OPTOELECTRONIC SWITCH	Monday, 13 April 2015	PCT	WO	PCT/GB2016/053030	Tuesday, 29 September 2015	Thursday, 29 September 2016				
OPTOELECTRONIC SWITCH	Monday, 13 April 2015	US national phase	US - from PCT	15/317,897	Tuesday, 29 September 2015	Friday, 9 December 2016				
OPTICAL SWITCH ARCHITECTURES	Friday, 10 April 2015	Filed US provisional appln	US Prov	62/251572		Thursday, 5 November 2015				
OPTOELECTRONIC SWITCH	Sunday, 1 November 2015	Filed US application	US	15/072,314	Thursday, 5 November 2015	Wednesday, 16 March 2016	9/2/2017	US 2017- 0041691 A1		
OPTOELECTRONIC SWITCH	Sunday, 1 November 2015	Filed GB application	GB	1611197.3	Thursday, 5 November 2015	Tuesday, 28 June 2015				
OPTOELECTRONIC SWITCH	Sunday, 1 November 2015	PCT	WO	PCT/EP2016/076755	Thursday, 5 November 2015	Friday, 4 November 2016				
	Sunday, 1 November 2015	Not yet filed - awaiting confirmation from LRRC	US		Thursday, 5 November 2015					
ROUTING METHODOLOGY	Friday, 25 September 2015	Filed US provisional appln	US Prov	62/234451		Tuesday, 29 September 2015				
SYSTEM AND METHOD FOR ROUTING	Friday, 25 September 2015	Filed US application	US	15/279267	Tuesday, 29 September 2015	Wednesday, 28 September 2016	30/03/2017	US 2017- 0093717 A1		
SYSTEM AND METHOD FOR ROUTING	Friday, 25 September 2015	PCT	WO	PCT/US16/54514	Tuesday, 29 September 2015	Wednesday, 28 September 2016				
	Friday, 9 September 2016	Not yet filed	US							
LAYOUT OF MULTI-DIMENSIONAL OPTICAL PACKET SWITCHES	Monday, 12 October 2015	Abandoned	US Prov	62/264,537		Tuesday, 8 December 2015				
LAYOUT OF MULTI-DIMENSIONAL OPTICAL PACKET SWITCHES	Monday, 12 October 2015	Abandoned	GB	1611436.5	Thursday, 8 December 2016	Thursday, 30 June 2016				
	Friday, 5 June 2015	Not yet filed	GB							
		Not yet filed	GB							
SWITCH MODULE AND OPTOELECTRONIC SWITCH INCORPORATING THE SAME	Wednesday, 23 December 2015	Filed US provisional appln	US Prov	62/309,425		Wednesday, 16 March 2016				

OPTOELECTRONIC SWITCH	Wednesday, 23 December 2015	Filed US provisional appln	US Prov	62/354600	-	Friday, 24 June 2016				
OPTOELECTRONIC SWITCH	Wednesday, 23 December 2015	Filed GB application	GB	1611433.2	Thursday, 5 November 2015	Thursday, 30 June 2016				
OPTOELECTRONIC SWITCH	Wednesday, 23 December 2015	PCT	WO	PCT/EP2016/076756	Thursday, 5 November 2015	Friday, 4 November 2016				
	Wednesday, 23 December 2015	Filed US application - continuation /CIP	US - cont		Thursday, 5 November 2015					
PROJECT BLACK SQUIRREL: A PROPOSAL FOR TIME SYNCHRONIZATION AND RANGING	Friday, 23 October 2015	Filed US provisional appln	US Prov	62/312,428	-	Wednesday, 23 March 2016				
OPTOELECTRONIC SWITCH ARCHITECTURES	Friday, 10 April 2015	Published - PCT	WO	PCT/GB2016/051127	Friday, 24 April 2015	Friday, 22 April 2016	Thursday, 27 October 2016	WO2016/170357		
OPTICAL SWITCH ARCHITECTURE	Tuesday, 29 March 2016	Filed US provisional appln	US Prov	62/364,233	-	Tuesday, 19 July 2016				
	Thursday, 1 September 2016	Not yet filed	GB		-					
INTERPOSER BEAM EXPANDER CHIP	Friday, 1 May 2015	Filed US application	US	14/789489	Wednesday, 1 July 2015	Wednesday, 1 July 2015	Thursday, 5 January 2017	US-2017-0003450		
INTERPOSER BEAM EXPANDER CHIP	Friday, 1 May 2015	Filed GB application	GB	1512931.5	Wednesday, 1 July 2015	Wednesday, 22 July 2015				
INTERPOSER BEAM EXPANDER CHIP	Friday, 1 May 2015	Published - PCT	WO	PCT/GB2016/052006	Wednesday, 1 July 2015	Friday, 1 July 2016	Thursday, 5 January 2017	WO2017/001869 A1		
	Tuesday, 26 May 2015	Not yet filed	US		-					
EFFICIENT HIGH ORDER MODES (HOMS) CONTROL IN ARRAYED WAVEGUIDE GRATINGS (AWGES) USING ADIABATIC BENDS	Wednesday, 6 April 2016	Filed US provisional appln	US Prov	62/345,671	-	Friday, 3 June 2016				
BURIED INVERTED TAPER AND MONOLITHIC INTEGRATION OF PHOTONICS WITH CMOS	Saturday, 18 June 2016	Filed US provisional appln	US Prov	62/362,012	-	Wednesday, 13 July 2016				
COPACKAGING OF A SIC AND SILICON PHOTONICS	Monday, 10 October 2016	Filed US provisional appph	US Prov	62/443,576		Friday, 6 January 2017				
LINE CODE SCHEME	Tuesday, 12 January 2016	Filed US provisional appln	US Prov	62/292,519	-	Monday, 8 February 2016				
EFFICIENT METHOD OF LOAD BALANCING USING A RANDOM NUMBER	Thursday, 5 May 2016	Filed US Provisional	US Prov	62/394114	-	Tuesday, 13 September 2016				

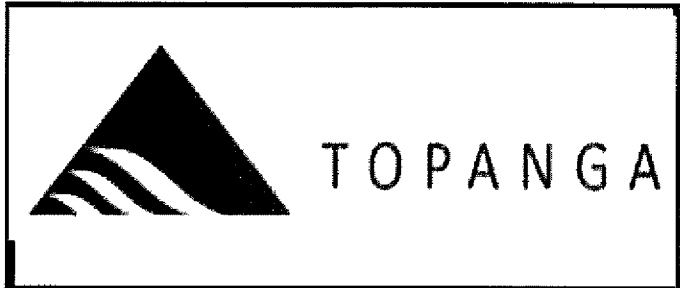
EXHIBIT C

Trademarks

<u>Description</u>	<u>Jurisdiction</u>	<u>Registration/ Application Number</u>	<u>Registration/ Application Date</u>
ROCKLEY	GB	UK00003162898	05/08/2016
ROCKLEY	EU/ International	None Issued	19/09/2016
TOPANGA	GB	UK00003181636	02/12/2016
洛克利	CHINA (9)	20239696	08/06/2016
洛克利	CHINA (42)	20239695	08/06/2016
RPSTACK	CHINA (9)	18/11/2016	
RPSTACK	CHINA (42)	18/11/2016	N/A

RPFABRIC	CHINA (9)	18/11/2016	N/A
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RPFABRIC	CHINA (42)	18/11/2016	N/A
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GB	Not available to date
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CHINA	Not available to date
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EXHIBIT D

Mask Works

Description

Registration/  
Application  
Number

Registration/  
Application  
Date

None.