

TRADEMARK ASSIGNMENT COVER SHEET

Electronic Version v1.1
Stylesheet Version v1.2

ETAS ID: TM763167

SUBMISSION TYPE:	RESUBMISSION
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST
RESUBMIT DOCUMENT ID:	900724277
SEQUENCE:	3

CONVEYING PARTY DATA

Name	Formerly	Execution Date	Entity Type
Wells Fargo Bank		08/12/2022	National Banking Association: UNITED STATES

RECEIVING PARTY DATA

Name:	Emcore Corporation
Street Address:	2015 Chestnut Street
City:	Alhambra
State/Country:	CALIFORNIA
Postal Code:	91083
Entity Type:	Corporation: DELAWARE
Name:	Emcore Solar Power, Inc.
Street Address:	2015 Chestnut Street
City:	Alhambra
State/Country:	CALIFORNIA
Postal Code:	91083
Entity Type:	Corporation: DELAWARE

PROPERTY NUMBERS Total: 3

Property Type	Number	Word Mark
Registration Number:	3322113	EMCORE
Registration Number:	1672445	ORTEL
Registration Number:	1670095	ORTEL CORPORATION

CORRESPONDENCE DATA

Fax Number: 6022544878

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.

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NAME OF SUBMITTER: Christina M. Noyes

SIGNATURE: /Christina M. Noyes/

DATE SIGNED: 10/24/2022

Total Attachments: 35

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RELEASE OF SECURITY INTEREST IN PATENTS AND TRADEMARKS

WHEREAS, Wells Fargo Bank, National Association (the "Secured Party"), entered into a Patent and Trademark Credit and Security Agreement, dated as of November 11, 2010 (the "Security Agreement"), with Emcore Corporation, pursuant to which Emcore Corporation and Emcore Solar Power, Inc., a Delaware corporation, (collectively, the "Debtor"), granted the Secured Party a security interest (the "Security Interest") in the patents and patent applications shown on *Schedule A (A-1 to A-4) and B*, to the Security Agreement (the "Selected Patents"), together with any patents, patent applications, trademarks, service marks, and collective membership marks thereafter acquired by Debtor (collectively with the Selected Patents, the "Intellectual Property"), including but not limited to those shown on Schedule A attached hereto; and

WHEREAS, the Secured Party wishes to (a) release all of its security interest covering the Selected Patents and any other patents, patent applications, trademarks, service marks, and collective membership marks to which the Security Interest may have attached, whether or not listed on Schedules A (A-1 to A-4) and B to this release; (b) restore all rights, title, and interest in and to the Intellectual Property to the Debtor; and (c) dissolve any and all liens and encumbrances it has with respect to the Intellectual Property.

NOW THEREFORE, for One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Secured Party does hereby release its Security Interest in the Selected Patents and the Intellectual Property, including those listed on Schedules A (A-1 to A-4) and B, and discharges, quit claims and relinquishes unto the Debtor any and all rights, title and interest it has in and to the Selected Patents and Intellectual Property.


[Signature / Notary Page Attached]

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IN WITNESS WHEREOF, the Secured Party has caused this Release to be executed as of the 12 day of August, 2022.

WELLS FARGO BANK, NATIONAL ASSOCIATION

By  _____

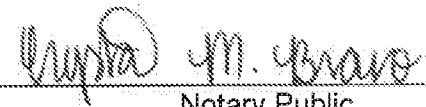
Joe Primack, Authorized Signatory

STATE OF ARIZONA

COUNTY OF MARICOPA

The foregoing instrument was acknowledged before me this 12th day of August, 2022, by Joe Primack, an Authorized Signatory of Wells Fargo Bank, National Association, on behalf of the association.

(Seal and Expiration Date)

 _____
Notary Public

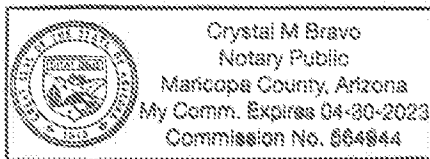


EXHIBIT A-1

UNITED STATES ISSUED PATENTS
[LISTED ON THE FOLLOWING PAGES]

EMCORE U. S. PATENT SUMMARY – CORPORATE (former END)

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
6404125	11 Jun 02	Garbuzov	Sarnoff	Wavelength Conversion Method	Method for wavelength conversion using phosphor layer	
6420252	16 Jul 02	Schwed		Isolating Barrier Metal	Deposition of barrier metal over semiconductor to isolate contact metal	
6413839	02 Jul 02	Brown		Patterned Laser Projection	Separating die by laser ablation	
6645848	11 Nov 03	Joseph		Adhesion Promoter Layer	Using patterned adhesion promoter layer	
6653215	25 Nov 03	Brown		Contact Annealing for N-type III-V	Al/Ti/Pt/Au layer sequence on n-type III-V semiconductor	
6727167	27 Apr 04	Gottfried		Self Aligned LED	Self alignment process for LED transparent electrode	
6746889	8 Jun 04	Eilashevich		Substrate Thinning	Improving light emissivity of LED by substrate thinning	
6849524	1 Feb 05	Shelton		Die Cleaning	Cleaning die before removing from mounting material	
6902990	7 Jun 05	Gottfried		Sapphire Laser Ablation	Partial cutting of sapphire substrate using laser ablation	
6946313	20 Sept 05	Gottfried		Self -Aligned Device	Self-alignment process for non-transparent electrode	
6958498	25 Oct 05	Shelton		Flip Chip LED	Pads around LED active area to allow flip-chip mounting	

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
7023022	04 Apr 06	Eliashevich		LED Package	LED package with concentric grating pattern	
7115896	03 Oct 06	Guo		GaN on Silicon	GaN semiconductor over GaN superlattice poly-nitride nucleation/Al/silicon substrate	
7439599	21 Oct 08	Gao		PIN Diode Etch	Structure to reduce delamination	
7538403	26 May 09	Gao		Undoped Diffusion Island	PIN diode with undoped island	

EMCORE U. S. PATENT SUMMARY - EFO

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
6493489	10 Dec 02	Mertz	Alvesta	Alignment Plate	Lens mounted on slot in alignment plate	
6677172	13 Jan 04	Hou		Thermal Rollover	Burn in test of VCSEL to predict infant mortality	
6765242	20 Jul 04	Chang	Sandia	InGaAsN DHBT	NPN double heterostructure (DHBT) transistor	
6936483	30 Aug 05	Hou		Burn-In for Stability	Stabilizing a semiconductor device by applying test current in incremental steps until current is over normal operating current	
7380993	3 Jun 08	Dallessasse		100 Gigabit PAM	PAM modulation for high speed	XFP
7547572	16 Jun 09	Carson		Guard Ring	Soft guard element around VCSEL	
7736068	15 Jun 10	Hudgins		Tunable module	Wirelessly tuning pluggable module	

EMCORE U. S. PATENT SUMMARY - Ortel

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
5179461	12 Jan 93	Blauvelt	Ortel	Impedance Matched Receiver	Transformer as impedance matching device between photodetector & amplifier	CATV transmitters
5430569	04 Jul 95	Blauvelt	Ortel	Chirp/RF Signal Combiner	Applying chirp to RF signal for broadening laser spectrum	CATV transmitters
5453868	26 Sep 95	Blauvelt	Ortel	Chirp/RF Signal Combiner	Applying chirp to RF signal for broadening laser spectrum	CATV transmitters
6356679	12 Mar 02	Kapany	K2	Fiber Routing	Optical routing element for use in fiber optic systems	
6463192	08 Oct 02	Kapany	K2	Non-blocking Switch	Non-blocking micro-optic switch matrix for use in fiber optic systems	
6480513	12 Nov 02	Kapany	K2	Tunable ECL	Tunable external cavity laser	
6549316	15 Apr 03	Blauvelt	Ortel/Agere	Laser Bias Control	Control circuit to clip amplitude of bias	
6590691	08 July 03	Nagra	Phasebridge	Hybrid Module	Hybrid integrated optical modulation devices	
6634811	23 Oct 03	Gertel	JDS	Optical Link	Distortion cancellation using combiner	
6728277	27 Apr 04	Wilson	Ortel	Envelope Biasing	Envelope of RF signal used to determine laser bias	
6748132	08 Jun 04	Kapany	K2	Add/Drop Element	Wavelength add/drop element for configurable add/drop multiplexing	
6892010	10 May 05	Miao	Ortel	Thick Film on PD	A thick film on photodetector to improve coupling efficiency to fiber	

TRADEMARK

REEL: 007831 FRAME: 0161

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
6917764	12 Jul 05	Wilson	Ortel	Odd-Even Predistortion Circuit	Predistortion circuit with single antiparallel diode pair for producing even and odd order distortion	
6941043	06 Sep 05	Major	K2	Wavelength Stabilization	Wavelength stabilization of an external cavity laser diode (ECLD)	
6996344	07 Feb 06	Caider	Opticomm	Video XMTR	Video transmitter with cable equalizer, reclocker, and level detector.	
7011455	14 Mar 06	Luo	Ortel	TO Laser Package with Mirror	TO-Package with mirror to reflect ray to center of fiber	
7034641	25 Apr 06	Clarke	K2	Substrate with Dielectric Layer	Low-thermal-conductivity dielectric layer on a high-thermal-conductivity (BeO) substrate	
7042921	09 May 06	Witzigmann	Ortel	Dual Active Region Laser	DFB laser with region of high reactivity forming a grating	
7075028	11 July 06	Demers	Phasebridge	Sub-micron Mount	Mounting technique and apparatus	
7083335	01 Aug 06	Miao		Epoxy Covered Plate	Fiber package with diffusion retarding plate covered by epoxy	
7095766	22 Aug 06	Witzigmann	Ortel	Pick and Place	Elevated surrounding region of laser to facilitate pick and place tool	
7118292	10 Oct 06	Miao		TEC TO-Module	TEC mounted in TO-Module	
7126078	24 Oct 06	Demers	Phasebridge	Spot Welding	Spot welding using biasing force	THz Systems
7136552	14 Nov 06	Luo	Ortel	Imaging Focal Lens	Photodiode offset from center of fiber	
D537044	20 Feb 07	Weitz		Prisma II Double Density	Double density Prisma II design	Prisma

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
7199446	3 Apr 07	Mei	K2	Resistor structure	Stacked composite resistors	
7291839	06 Nov 07	Demers	Phasebridge	Frequency Domain System	Frequency domain spectroscopy	THz Systems
D555104	13 Nov 07	Weitz		Prisma II Single Density	Single density Prisma II design	Prisma
7412174	12 Aug 08	Iannelli		Operation at Sweet Spot	FBG operational points	
7430081	30 Sep 08	Woodard	Phasebridge	Mount of THz component	Adjustable pivoting laser mount	THz Systems
7439511	21 Oct 08	Demers		Single Laser Heterodyne	Use of single laser in THz system	THz Systems
7463802	9 Dec 08	Witzel		DSP Lin Mod	Use of DSP chip in linearized transmitter	Lin Mod
7466925	16 Dec 08	Iannelli		1550nm ECL	Direct mod of laser	CATV
7504312	17 Mar 09	Mei	K2	Resistor structure	Composite resistors	
7509049	24 Mar 09	Lou		Satellite Signal Stacker	Optical carrier with stacked signals	
D592,137	12 May 09	Weitz		GPON Design	Design of GPON housing	GPON
7535005	19 May 09	Demers		Pulsed Heterodyne	Pulsed Terahertz spectrometer	
7548567	16 Jun 09	Kupersmidt	K2	FBG Distortion Dip	FBG set at distortion minima	
7596326	29 Sep 09	Peral		Post-distortion circuit	Receiver with post-distortion IC	
7634198	15 Dec 09	Peral		CSO/CSB Adjustment	Pre-distortion circuit with Schottky diode	
7633992	15 Dec 09	Miao		Integrated Isolator	Laser package with integrated isolator	1938/1958

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
7672068	02 Mar 10	Woodard	Phasebridge	Mount of THz component	Adjustment method pivoting laser mount	THz Systems

EMCORE U. S. PATENT SUMMARY - EPV

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
4915744	10 Apr 90	Ho	Tecstar	Substrate Orientation	Germanium substrate face oriented from 3° to 20° away from crystal axis	EXPIRED
5405453	11 Apr 95	Ho	Tecstar	Solar cell with grid line/layer contact	Cascade solar cells with grid lines contacting InAP layer	
6156967	05 Dec 00	Ralph	Tecstar	Glass Covered Solar Array	Solar cell array with cerian oxide coverglass overlying cells	
6188012	13 Feb 01	Ralph	Tecstar	Solar Concentrator	Solar cell concentrator with stowed and deployed positions	
6326540	4 Dec 01	Kilmer	Tecstar	Front Mounted Bypass Diode	Bypass diode mounted on front surface of solar cell	

EMCORE U. S. PATENT SUMMARY -- ESP

US Patent No.	Issue date	Inventor	Origin	Short Title	Claimed Subject Matter	Products
7381886	3 Jun 08	Aiken		Gen I Array	CPV Array optimum aspect/grid spacing	CPV arrays
7671270	2 Mar 10	Fang		Receiver	Receiver with backside traces	

ISSUED PATENTS ACQUIRED FROM INTEL

Emcore Docket Number	Patent No.	Issue Date	Lead Inventor	Title
3121	6,108,355	Aug. 22, 2000	Zorabedian	Continuously-Tunable External Cavity Laser
3122	6,661,814	Dec. 9, 2003	Chapman et al.	Method and Apparatus for Suppressing Stimulated Brillouin Scattering in Fiber Links
3123	6,661,815	Dec. 9, 2003	Kozlovsky et al.	Servo Technique for Concurrent Wavelength Locking and Stimulated Brillouin Scattering Suppression
3124	6,665,321	Dec. 16, 2003	Sochava et al.	Tunable Laser Operation with Locally Commensurate Condition
3125	6,747,819	Jun. 8, 2004	Zbinden et al.	Optoelectronic Assembly
3126	6,773,171	Aug. 10, 2004	Lake	Optoelectronic Housings and Methods of Assembling Optoelectronic Packages
3127	6,804,278	Oct. 12, 2004	Daiber et al.	Evaluation and Adjustment of Laser Losses According to Voltage Across Gain Medium
3128	6,816,323	Nov. 9, 2004	Colin et al.	Coupling with Strong Lens and Weak Lens on Flexure
3129	6,821,032	Nov. 23, 2004	Lake et al.	Methods of Sealing Electronic, Optical and Electro-Optical Packages and Related Package and Substrate Designs
3130	6,822,979	Nov. 23, 2004	Daiber	External Cavity Laser with Continuous Tuning of Grid Generator
3131	6,822,996	Nov. 23, 2004	Pace et al.	Mount Having High Mechanical Stiffness and Tunable External Cavity Laser Assembly Including Same
3132	6,829,268	Dec. 7, 2004	Pontis et al.	Synchronous Servo Control for a Tunable Laser
3133	6,838,658	Jan. 4, 2005	Colin et al.	Simple and Compact Laser Wavelength Locker
3135	6,886,993	May 3, 2005	Verdiell et al.	Optoelectronic Assembly Having a Flexure That Supports Multiple Optical Elements
3136	6,890,106	May 10, 2005	Verdiell et al.	OPTOELECTRONIC ASSEMBLY
3137	6,904,067	Jun. 7, 2005	Colin et al.	BACK FACET WAVELENGTH LOCKER TUNING AND ASSEMBLY METHOD
3138	6,940,887	Sep. 6, 2005	Sochava	Gain Optimizing for Stable Single Mode Operation of External Cavity Laser

Emcore Docket Number	Patent No.	Issue Date	Lead Inventor	Title
3139	6,950,594	Sep. 27, 2005	Lake	Method of Attaching an Optical Fiber to a Flexure
3140	6,980,439	Dec. 27, 2005	Schultz et al.	EMI Shield for Transceiver
3142	7,013,071	Mar. 14, 2006	Sell	Method and Device for Achieving Optical Alignment Using Laser Pulses
3145	7,092,639	Aug. 15, 2006	Schultz et al.	EMI Shield for Reducing Clock Jitter of a Transceiver
3147	7,215,558	May 8, 2007	Schultz et al.	EMI Shield for Transceiver
3150	7,257,142	Aug. 14, 2007	Sochava et al.	Semi-Integrated Designs For External Cavity Tunable Lasers
3153	7,350,987	Apr. 1, 2008	Finot et al.	Optical Package Fiber Pass-Through to Reduce Curvature of Optical Fiber During Threading
3155	7,377,961	May 27, 2008	McDonald	Hydrogen Vent for Optoelectronic Packages with Resistive Thermal Device (RTD)
3158	7,468,996	Dec. 23, 2008	Daiber	Dither Servo Control
3157	7,522,848	Apr. 21, 2009	Schulz	Dynamically Adjustable Receiver
3126B	7,534,053	May 19, 2009	Lake	Housing
3159	7,660,128	Feb. 9, 2010	Crews	Interconnection
3154A	7,661,886	Feb. 16, 2010	Wang	Optical Fiber Latch
3160	7,771,071	Aug. 10, 2010	Finot	Silicon Frame for Optical Filter

EXHIBIT A-2

UNITED STATES ISSUED PATENT APPLICATIONS
[LISTED ON THE FOLLOWING PAGES]

UPDATED AUGUST 2022 TO INCLUDE PATENT APPLICATION NUMBERS WHERE ISSUED,
AND PATENT APPLICATIONS DEEMED ABANDONED or EXPIRED BY THE USPTO

Docket	Company	Short Title	Inventor	Serial No.	Registration No.	Filing Date
3303	JDSU	LinMod Software	Kreig	11/301,215	7853155	12/12/2005
3305C		Multi-Spring		12/689,188	EXPIRED	1/18/2010
3309	Opticom	Optiva Daisy Chain	Dagan	12/047,888	8064773	3/13/2008
5002	EPV	Asterix Grids	Sharps	11/109,016	ABANDONED	4/19/2005
5004B		Via Diode	Meck	12/707,512	ABANDONED	2/17/2010
5102		Simple Fiducial Mark	Whitehead	11/240,400	ABANDONED	9/30/2005
5104A		Guard Element	Carson	12/476,895	EXPIRED	6/2/2009
5303		Phase Modulator	Iannelli	11/366,936	7848661	3/2/2006
6002		IMM Diode Method	Sharps	11/614,332	ABANDONED	12/21/2006
6002B		IMM Diode		12/768,457	ABANDONED	4/27/2010
6003		IMM Via	Sharps	11/701,741	ABANDONED	2/2/2007
6005		Strain Balanced Solar Cell	Sharps	11/788,315	ABANDONED	4/18/2007
6006		Solar Cell (IMM) on Kapton	Cornfeld	11/616,596	ABANDONED	12/27/2006
6103		RFID Tag for Transceiver	Hudgins	11/712,725	7856185	3/1/2007
6201C		BIFET device	Cooke	12/778,307	7893463	5/12/2010
6302		Feed Forward Direct Mod	Iannelli	11/701,742	7881621	2/2/2007
6303		Feed Forward Ex-Mod	Iannelli	11/729,255	7792432	3/28/2007
6303B		Feed Forward Method	Iannelli	12/848,683	EXPIRED	8/2/2010
6401	ESP	Terrestrial IMM	McGlynn	11/500,053	ABANDONED	8/7/2006
6401A		Heat Spreader IMM		12/549,340	ABANDONED	8/27/2009
7004		IMM Cut Off Substrate	Cornfeld	12/047,944	ABANDONED	3/13/2008
7005		IMM Exponential Device	Stan	11/956,069	ABANDONED	12/13/2007
7006		IMM Thin, Rigid	Varghese	11/860,142	ABANDONED	9/24/2007
7006X		IMM Brazing	Cornfeld	12/756,926	NO PAT #	4/8/2010
7009		High Bandgap Contact	Varghese	12/218,558	ABANDONED	7/16/2008

Docket	Company	Short Title	Inventor	Serial No.	Registration No.	Filing Date
7012		IMM Barrier Surfactant	Stan	12/102,550	ABANDONED	4/14/2008
7101	EFO	Protocol Adaptation	Hudgins	11/776,494	7918611	7/11/2007
7105		Tunable 300 Pin	Krusalick	12/077,609	8064778	3/20/2008
7107		Hermetic VCSEL	Li	11/835,834	ABANDONED	8/9/2007
7108		Parallel TOSA/ROSA	Wang	11/846,271	7794156	8/29/2007
7109		Lens Alignment	Wang	11/967,377	NO PAT #	12/31/2007
7303		Jitter Modulation	Dallesasse	11/932,374	8718484	10/31/2007
7304		Dual Laser Module	Demers	12/062,772	7936453	4/4/2008
7305		Optiva L-Band	Olson	12/180,966	8068745	7/28/2008
7401	ESP	Concentrator Module	Hering	12/069,642	8093492	2/11/2008
7401B		Module Divisional		12/264,369	ABANDONED	11/4/2008
7402B		Dielectric Coated Board	Fang	12/703,561	EXPIRED	2/10/2010
7403		Receiver	Fang	11/830,576	8148628	7/30/2007
7404B		Gen II Divisional	Aiken	12/024,489	ABANDONED	2/1/2008
8001	EPV	Tensile Window	Stan	12/123,864	ABANDONED	5/20/2008
8002		IMM Low Temp	Varghese	12/218,582	ABANDONED	10/16/2008
8004		Multi Terminal Cell	Gray	12/248,654	ABANDONED	10/9/2008
8005		IMM MQW	Cornfeld	12/253,051	ABANDONED	10/16/2008
8006		IMM Refractive Index	Cornfeld	12/258,190	ABANDONED	10/24/2008
8008		Reactive Nanofilm	Varghese	12/265,113	NO PAT #	11/5/2008
8010		IMM DBR	Stan	12/337,043	ABANDONED	12/17/2008
8011		IMM CTE Carrier	Newman	12/271,127	ABANDONED	11/14/2008
8012		IMM Vacuum	Cornfeld	12/262,201	ABANDONED	1/29/2009
8013		IMM Contacts	Cornfeld	12/262,213	ABANDONED	1/29/2009
8015		IMM Goretex	Cornfeld	12/262,225	ABANDONED	1/29/2009
8101	EFO	Tunable XFP	Hudgins	12/369,561	ABANDONED	2/11/2009
8102		Fiber-Wireless XCVR	McGlynn	12/218,940	ABANDONED	7/21/2008
8104		Split TEC	Johnson	12/252,925	7937952	10/16/2008
8105		Integrated Laser/Modulator	Sochava	12/537,026	ABANDONED	8/6/2009
8106		Analog Control Loop	Daiber	12/540,946	ABANDONED	8/13/2009

Docket	Company	Short Title	Inventor	Serial No.	Registration No.	Filing Date
8301	Ortel	GPON	Lou	12/045,541	8744268	3/10/2008
8303		GPON APD	Hufstедler	12/437,617	8145060	5/8/2009
8304		GPON Surge Protection	Lou	12/044,665	7855867	3/10/2008
8401	ESP	Gen II Array w/Truss	Kats	12/131,556	ABANDONED	6/2/2008
8402		Gen II Assembly	Kats	12/200,168	ABANDONED	8/28/2008
8403		Gen II Cell Cover Glass	Seel	12/246,295	ABANDONED	10/6/2008
8404		Parquet Laser Weld	Zawadzki	12/177,031	ABANDONED	7/21/2008
8405		Find Sun	Sherman	12/468,747	8193477	5/19/2009
8406		Tracking	Sherman	12/258,253	7795568	10/24/2008
8407		Gen III	Kats	12/257,670	8188413	10/24/2008
8408		Spectral Matching	McGlynn	12/349,244	ABANDONED	1/6/2009
8409		SOE Coating	Seel	12/402,814	ABANDONED	3/12/2009
8412		Tracking Initialization	Sherman	12/498,135	8513514	7/6/2009
9001		IMM Dual Metamorphic	Cornfeld	12/271,192	ABANDONED	11/14/2008
9001X		IMM InGaAlP Top Cell	Patel	12/813,408	ABANDONED	6/10/2010
9002		IMM Bonded Flexible Film	Varghese	12/401,137	ABANDONED	3/10/2009
9003		IMM Lift Off	Cornfeld	12/367,991	ABANDONED	2/9/2009
9005		IMM Milled	Chumney	12/389,053	ABANDONED	19-Feb-09
9006		IMM As-P Subcell	Newman	12/401,157	ABANDONED	3/10/2009
9007		IMM Coating Layer	Cornfeld	12/401,189	ABANDONED	3/10/2009
9008		IMM Flex Interconnect	Cornfeld	12/436,467	ABANDONED	5/6/2009
9009		Inverted GeSiSn	Sharps	12/463,205	ABANDONED	5/8/2009
9010		GeSiSn	Sharps	12/463,216	ABANDONED	5/8/2009
9011		Terrestrial GeSiSn	Sharps	12/463,226	ABANDONED	5/8/2009
9013		Textured Cover Glass	Cornfeld	12/507,996	ABANDONED	7/23/2009
9015		IMM Moly	Cornfeld	12/544,001	ABANDONED	8/19/2009
9017		IMM Peel Off	Cornfeld	12/607,544	ABANDONED	10/26/2009
9102		Tunable Network Unit	Hudgins	12/411,834	7794157	3/26/2009
9301		Mach Zehnder	Caton	12/428,935	8532499	4/23/2009
9302		Melamine Detector	Demers	12/813,359	8716666	6/10/2010
9303		Cooled Module	Miao	12/577,037	ABANDONED	10/9/2009
9304		Low Chirp Laser	Hui	12/632,625	ABANDONED	12/7/2009
9305		NPR Linearization	Blauvelt	12/403,172	7907649	3/12/2009
9306		Receiver	Blauvelt	12/616,594	8190035	11/11/2009
9308		Agar	Demers	12/634,922	8163847	12/11/2009

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9401		Counterweight	Kats	12/478,567	8188415	6/4/2009
9402		Encapsulated Receiver	Navygary	12/553,813	9806215	9/3/2009
9403		Gen III Board	Seel	12/485,684	ABANDONED	6/16/2009
9404		Gen III Module	Vaid	12/582,047	9331228	10/20/2009
9406		Power Sampling	Sherman	12/619,322	8507837	11/16/2009
9407		Gen III Center Motor	Kats	12/574,508	ABANDONED	10/7/2009
9408		Gen III Torque Alignment	Kats	12/623,134	8378281	11/20/2009
A001		IMM Moly Film	Sharps	12/637,241	ABANDONED	12/14/2009
A004		IMM LTHC Layer	Cornfeld	12/730,018	NO PAT #	3/23/2010
7006Y		IMM Dual Cover Glass	Stan	12/844,673	NO PAT #	7/26/2010
A102		Packaged Tunable Laser	Daiber	12/722,825	ABANDONED	3/12/2010
A105		Laser Housing Design	Daiber	29/363,600	0637637	6/11/2010
A301		1958 Laser	Miao	12/637,665	8189645	12/14/2009
A302		THz Freq Shift Heterodyne	Logan	12/861,651	8604433	8/23/2010
A401		Alignment Dimples	Yang	12/727,022	8097484	3/18/2010
A402		Gen III Alignment	Kats	12/791,580	8453328	6/1/2010
A403		Ceramic Sun Shield	Nagyvary	12/764,657	9018521	4/21/2010
A405		Alignment Photoconductor	Kozin	12/828,734	8592738	7/1/2010
A406		Kinematic Model	Sherman	12/830,926	8466399	7/6/2010

SCHEDULE
PATENTS AND PATENT APPLICATIONS

EXHIBIT A-1

UNITED STATES ISSUED PATENTS

EXHIBIT A-2

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UPDATED AUGUST 2022 TO INCLUDE PATENT APPLICATION NUMBERS WHERE ISSUED,
AND PATENT APPLICATIONS DEEMED ABANDONED OR EXPIRED BY THE USPTO

EXHIBIT A-3

FOREIGN ISSUED PATENTS

EXHIBIT A-4

FOREIGN PATENT APPLICATIONS

EXHIBIT B

UNITED STATES ISSUED TRADEMARKS, SERVICE MARKS
AND COLLECTIVE MEMBERSHIP MARKS

EXHIBIT A-3

FOREIGN ISSUED PATENTS

LISTED ON FOLLOWING PAGES

	Country	Short Title	Inventor	Patent No	Issue Date
<u>EPV</u>					
1001 JP	JP	Front Bypass Diode	Kilmer	3448743	25-Feb-02
1002X JP	JP	Integral Bypass Diode	Sharps	4119844	2-May-08
1002X EP	FR	I Layer Diode		1440480	8-Oct-08
	DE			1440480	8-Oct-08
	IT			1440480	8-Oct-08
	GB			1440480	8-Oct-08
1006B EP	FR	Bypass Diode	Ho	1443566	15-Oct-08
	DE			1443566	15-Oct-08
	IT			1443566	15-Oct-08
	NE			1443566	15-Oct-08
	GB			1443566	15-Oct-08
	ES				
7006 DE	DE	IMM Grinding Surrogate	Varghese	102008034071	
<u>ESP</u>					
7402 CN	CN	Receiver	Fang	ZL 200810094606.0	9-Jun-10
7404 PT	PT	Gen II Array	Aiken	103890	11-Mar-09
7404 GR	GR			1006269	18-Feb-09
7404 AU	AU			2007219267	12-Mar-09
8402 PT	PT	Gen II Assembly		104137	15-Jul-10
<u>EMD</u>					
1202 TW	TW	Quantum Well	Karlick	143338	21-Oct-01
1204 TW	TW	Patterned Projection	Nering	172360	21-Feb-03
4201 TW	TW	GaN Process	Guo	1249246	7-Jan-06
4201 KR	KR			773997	31-Oct-07
4201 JP	JP			4095066	14-Mar-08
<u>Ortel</u>					
1304 UK	UK	Suppression of Noise	Blauvelt	570984	5-Aug-98
1304 DE	DE			69320101	5-Aug-98
5304 SG	SG	CSO/CSB	Peral	138518	28-Nov-08
<u>EFO</u>					
4114 SG	SG	Rigid Flex	Wang	118369	29-Feb-08
4120 KR	KR	Modular Xovr	Dallesasse	92156	6-Oct-09

<u>EPV</u>	Country	Short Title	Inventor	Patent No	Issue Date
4315 TW	TW	Sweet Spot	Iannelli		
5106 SG	SG	X2 Latch	Chan	133466	30-Sep-09

Encore Ref.	Title	Inventor(s)	US Counterpart	Country of Filing	Foreign Patent #	Issue Date
3127	Evaluation and Adjustment of Laser Losses According to Voltage Across Gain Medium	Andrew Daiber, Hua Li, William B. Chapman and Mark McDonald	6,804,278	China	CN 1524324A	5/27/09
3127	Evaluation and Adjustment of Laser Losses According to Voltage Across Gain Medium	Andrew Daiber, Hua Li, William B. Chapman and Mark McDonald	6,804,278	Germany	DE 60215008.6	9/27/06
3127	Evaluation and Adjustment of Laser Losses According to Voltage Across Gain Medium	Andrew Daiber, Hua Li, William B. Chapman and Mark McDonald	6,804,278	Great Britain	1 405 378	9/27/06
3127	Evaluation and Adjustment of Laser Losses According to Voltage Across Gain Medium	Andrew Daiber, Hua Li, William B. Chapman and Mark McDonald	6,804,278	Hong Kong	HK 1063693	4/27/07
3127	Evaluation and Adjustment of Laser Losses According to Voltage Across Gain Medium	Andrew Daiber, Hua Li, William B. Chapman and Mark McDonald	6,804,278	Korea	KR 626632	9/14/06
3127	Evaluation and Adjustment of Laser Losses According to Voltage Across Gain Medium	Andrew Daiber, Hua Li, William B. Chapman and Mark McDonald	6,804,278	Netherlands	1 405 378	9/27/06

Encore Ref.	Title	Inventor(s)	US Counterpart	Country of Filing	Foreign Patent #	Issue Date
3130	External Cavity Laser with Continuous Tuning Grid Generator	Andrew Daiber	6,822,979	Japan	JP 4204972	10/24/08
3130	External Cavity Laser with Continuous Tuning Grid Generator	Andrew Daiber	6,822,979	Korea	KR 681543	2/5/07
3150	Semi-Integrated Designs for External Cavity Tunable Lasers	Sergei L. Sochava, William E. Chapman and William J. Kozlovsky	7,257,142	China	CN 100477419C	4/8/09
3151	Optical Device Latching Mechanism	Joshua Oen, Daehwan D. Kim and Ching-Ling Meng	7,281,862	Taiwan	TW 95111491	2/1/09
3130	Grid Tuning	Daiber et al	6,822,979	France	EP 1405381	5/19/10
3130	Grid Tuning	Daiber et al	6,822,979	Italy	EP 1405381	5/19/10
3130	Grid Tuning	Daiber et al	6,822,979	Germany	60236435.3	5/19/10

EXHIBIT A-4

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	DE	PIN Diode		10297371.7	10/24/2002
1002XB	EP	Schottky Diode		08017554.0	10/7/2008
1004	EP	Middle Cell	Fatemi	03810750.4	8/5/2003
1006C	JP	Integral Bypass Diode			
1006C	EP	Bypass Diode Features		9014641.6	11/24/2009
1007	EP	Schottky Bypass Diode	Ho	02765896.2	7/26/2002
1101	EP	Optical Transceiver	Anderson	1274175.7	11/20/2001
1102	EP	Coupling	Anderson	1988146.5	11/20/2001
3308	EP	Optiva		07254528.8	11/21/2007
4114	JP	Rigid Flex	Wang	2005-147784	5/20/2005
	TW			094108052	3/16/2005
	TH			098134	2/28/2005
4120					
	JP			2004-243031	7/27/2004
	TW			093122426	6/27/2004
	CN			2004-10071023.8	7/27/2004
	TH			092669	7/28/2004
	SG			2004-04314-7	7/22/2004
	HK			06101375.7	2/1/2006
4304					
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4306	CN	1550 nm ECL	Iannelli	200510055483.6	3/18/2005
	TW			94108415	3/18/2005
	JP			2005-081098	3/22/2005
	KR			10-2005-0022777	3/18/2005
4315	CN	Sweet Spot	Iannelli	200510103273.X	9/20/2005
	TW			94131951	9/16/2005
	JP			2005-306345	9/21/2005
	KR			10-2005-0087897	9/21/2005
4201	CN	GaN Process	Guo	200380100487.0	11/22/2004
	DE			10392313.6	12/2/2003
	TW			092134195	12/4/2003

New Dkt	Country	Short Title	Inventor	Ser. No.	Filing Date
5002	EP	Asterix Grids	Sharps	06004722.2	3/8/2006
	IN			380/DEL/2006	2/13/2006
5003	EP	Diode Interconnect	Stan	06016119.7	8/2/2006
	CN			200610128696.1	9/8/2006
	JP			2006-277649	10/11/2006
	IN			1770/DEL/2006	8/3/2006
5004	EP	VIA Diode	Meck	06016118.9	8/2/2006
	CN			200610128670.7	9/4/2006
	JP			2006-337609	11/16/2006
	IN			777/DEL/2006	8/4/2006
5106	EP	X2 Latch	Chan	06017922.3	8/28/2006
	TH			0601003570	7/28/2006
	SG			200605354-0	8/7/2006
5302	CN			200610128671.1	9/4/2006
	JP			2006-290849	10/26/2006
5303	CN	Hybrid Phase Modulator	Iannelli	200610170523.6	12/21/2006
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5304	EP	CSO/CSB	Peral	06023469.7	11/10/2006
	CN			200710003300.5	2/2/2007
	JP			2007-158462	
	KR				
	TH			0601006575	12/27/2006
5306	SG	Butterfly Pluto	Miao	EP	
	CN			200610140332.5	11/27/2006
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	KR			10-2006-0136811	12/28/2006
	IN			2298/DEL/2006	10/19/2006
6001	EP	IMM Process	Cornfeld	06024750.9	11/29/2006
	CN			200610170015.8	12/22/2006
	JP			2007-041930	2/22/2007

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	IN			2553/DEL/2006	11/28/2006
6002	EP	IMM Diode		07-024-239.1	12/13/2007
	IN			2083/DEL/2007	10/5/2007
	CN			200710170333.9	11/12/2007
	JP			2007-341829	12/18/2007
6003	EP	IMM Via		07020333.6	10/17/2007
	IN			2076/DEL/2007	10/4/2007
	CN			200710302234.1	12/20/2007
	JP			2008-022765	2/1/2008
6004	EP	Localized Si Doping		07 016 452.0	8/22/2007
	IN			1824/DEL/2007	8/29/2007
	CN			200710163384.9	10/19/2007
	JP				
6006	EP	Solar Cell on Kapton		07 016 453.8	8/22/2007
	IN			1827/DEL/2008	8/29/2007
	CN			200710164349.9	10/30/2007
	TW			097113117	4/10/2008
	JP			2007-334822	12/26/2007
6101	EP	VCSEL Optical Mouse	Collins	06025379.6	12/7/2006
	CN			200610162003.0	12/7/2006
	TW			095142463	11/16/2006
	JP			2006-331418	12/8/2006
6302	CN	Feed Forward Direct Mod	Iannelli	200710307153.0	12/27/2007
	JP			2008-051203	2/1/2008
6303	CN	Feed Forward Ex-Mod	Iannelli		
	JP			2008-114509	
7002	EP	IMM Barrier Layer		08013467.9	7/25/2008
	DE			102008034711.6	7/25/2008
	JP			2008-243637	9/24/2008
	CN			200810211416.2	9/22/2008
	TW			097128500	7/25/2008
7005	EP	IMM Expon Grading		08021551.0	12/11/2008
	JP			2008-269598	10/20/2008
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	TW			097132608	8/26/2008
7006	EP	IMM Thin, Rigid		08013466.1	7/25/2008
	DE			102008034701.9	7/25/2008
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7007	EP	IMM Heterojct		09000718.8	1/31/2009
	JP			2009-003363	1/9/2009
	CN			200810171863.X	11/12/2008
	TW			097140523	10/22/2008
7304	UK	Dual Laser Module		0905550.0	3/31/2009
	DE			102009015565.1	3/30/2009
	JP			2009-106996	4/3/2009
7401	DE	Concentrator/Receiver		1002009006286	1/27/2009
	ES			200803187	11/7/2008
	CN			200910009814.0	1/23/2009
	TW			098102103	1/20/2009
	JP			2009-052652	2/10/2009
	KR			10-2009-0003929	1/16/2009
7402	DE	Receiver	Fang	10-2008-012335.8	3/3/2008
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	CN			200810094606.0	4/22/2008
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7404	DE	Gen II Array		10 2007 044 477.1	9/17/2007
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	IT			MI2007AD01833	9/21/2007
	PT			103890	9/21/2007
	GR			20080100028	1/16/2008
	FR			0759719	12/11/2007
	AU			2007219267	9/24/2007
	IN			1981/DEL/2007	9/19/2007
	CN			200710163494.5	10/25/2007
	KR			10-2008-0010652	2/1/2008
8402	DE	Assembly Gen II Array		102008033647.5	7/17/2008
	ES			200802209	7/24/2008
	PT			104137	7/24/2008
	IT			MI2008A001496	8/7/2008
	CN			200810144472.9	7/31/2008
8403	ES	Gen II Cell Cover Glass		200900123	1/16/2009

New Dkt	Country	Short Title	Inventor	Ser. No.	Filing Date
7405/07	EP	III-V Terrestrial Solar Cell		08017412.1	10/2/2008
	JP			2009-002410	1/8/2009
	CN			200810180415.6	11/26/2008
	TW			097142404	11/3/2008
8011	DE	IMM SiAl Carrier		10-2009-049397.2	10/14/2009
	JP			2009-276954	11/13/2009
	CN			200910223616.4	11/13/2009
	TW			098138702	11/13/2009
9001	EP	IMM 4J		09013431.3	10/23/2009
	DE			102009050454.0	10/23/2009
	JP			2009-276955	11/13/2009
	CN			200910223615.X	11/13/2009
	TW			098138690	11/13/2009
9401	EP	Gen III		09013482.6	10/26/2009
	CN			200910206641.1	10/29/2009
	TW			0981134673	10/13/2009
	JP			2009-233206	10/7/2009
	KR IN			10-2009-0095240 1989/DEL/2009	10/7/2009
9405	EP	Solar Tracking		09013430.5	10/23/2009
	DE			10-2009-050-453.2	10/23/2009
	UK			0918669.3	10/23/2009
8009	DE	IMM SOITEC substrate		102009057020.9	
	FR			0959078	12/16/2009
9009	DE	Inverted GeSiSn		2010012080.4	3/19/2010
	CN			201010169548.0	4/28/2010
	TW			099107003	3/10/2010
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9010	DE	GeSiSn			
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	TW			099108399	3/22/2010
	JP			2010-107410	5/7/2010
9402	DE	Encapsulated Receiver			
	CN			201010269175.4	8/31/2010
9403	EP	Gen III Board			
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	TW			099111655	4/14/2010

New Dkt	Country	Short Title	Inventor	Ser. No.	Filing Date
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	KR			102010057094	6/16/2010
9404	DE	Gen III Module		102010013212.8	3/29/2010
	ES			201031151	7/26/2010
	IT			MI2010A 001392	7/28/2010
	CN			201010259060.7	8/19/2010
	IN				
A402	DE	Gen III Alignment		102010024546.1	6/22/2010
	IT			MI2010A001232	7/5/2010
8308	CN	Integrated Isolator	Miao	200910142991.6	5/20/2009

EXHIBIT B

**UNITED STATES ISSUED TRADEMARKS, SERVICE MARKS
AND COLLECTIVE MEMBERSHIP MARKS**

EXHIBIT B

UNITED STATES ISSUED TRADEMARKS, SERVICE MARKS
AND COLLECTIVE MEMBERSHIP MARKS

REGISTRATIONS

<u>Mark</u>	<u>Registration Number</u>	<u>Registration Date</u>
EMCORE	3,322,113	October 30, 2007
ORTEL ¹	1,672,445	January 21, 1992
ORTEL CORPORATION AND LOGO ²	1,670,095	December 31, 1991

APPLICATIONS

NONE

COLLECTIVE MEMBERSHIP MARKS

NONE

UNREGISTERED MARKS

NONE

¹ The registration of ORTEL was deemed Cancelled by the USPTO on 01-29-2016.

² The registration of ORTEL CORPORATION and LOGO was deemed Cancelled by the USPTO on 01-29-2016