PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Warren P. Pumyea	02/18/2011
Michael Lim	10/29/2009
Hong Lu	12/10/2009
Alexei A. Erchak	10/28/2009

RECEIVING PARTY DATA

Name:	Luminus Devices, Inc.	
Street Address:	100 Technology Park Drive	
City:	Billerica	
State/Country:	MASSACHUSETTS	
Postal Code:	01821	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	12566642

CORRESPONDENCE DATA

Fax Number: (617)646-8646

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 6176468000

Email: mchiusano@wolfgreenfield.com

Correspondent Name: Robert H. Walat
Address Line 1: 600 Atlantic Avenue

Address Line 2: Wolf, Greenfield & Sacks, P.C.

Address Line 4: Boston, MASSACHUSETTS 02210-2206

ATTORNEY DOCKET NUMBER: L0655.70097US01

NAME OF SUBMITTER: Melanie L. Chiusano

Total Attachments: 15

PATENT REEL: 026501 FRAME: 0343 **JP** \$40.00 12566642

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PATENT REEL: 026501 FRAME: 0344

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

- Sell, assign and transfer to Luminus Devices, Inc., a Delaware corporation having a place of business at 1100 Technology Park Drive; Billerica, Massachusetts 01821, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office on September 24, 2009 under No. 12/566,642, bearing Attorney Docket No. L0655.70097US01, and entitled LIGHT-EMITTING DEVICE INCLUDING INDEPENDENTLY ADDRESSABLE ELECTRICAL REGIONS, and in and to the application and all corresponding provisional, non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea, as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent;
- 2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions in its own name; and when requested, without charge to but at the expense of the Assignee, I agree to carry out in good faith the intent and purpose of this assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and for vesting title to the inventions and all applications for patents and all patents on the inventions, in the Assignee;
- 3. Request the Director of the United States Patent and Trademark Office and non-US patent authorities to issue the Letters Patent to the Assignee;
- 4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing patent/application information or correct any errors in the patent/application identification information provided above, whether discovered prior to or after recordation;
- 5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
- 6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

1795582.1

PATENT REEL: 026501 FRAME: 0345

Address: 41 Moran Street Gardner, Massachusetts 01440 Citizenship: US COMMONWEALTH OF MASSACHUSETTS			
Commonwealth of Massachusetts 01440 Commonwealth of Massachusetts County of day of personally appeared Warren P. Pumyea , proved to me through satisfactory evidence of identification, which were to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.	Date	Inventor:	Warren P. Pumyea
COMMONWEALTH OF MASSACHUSETTS COUNTY OF		Address:	41 Moran Street
COMMONWEALTH OF MASSACHUSETTS COUNTY OF			Gardner, Massachusetts 01440
On this day of,, before me, the undersigned notary public, personally appeared Warren P. Pumyea, proved to me through satisfactory evidence of identification, which were, to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.	:	Citizenship:	
On this day of,, before me, the undersigned notary public, personally appeared Warren P. Pumyea, proved to me through satisfactory evidence of identification, which were, to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.			
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On this day of,, before me, the undersigned notary public, personally appeared Warren P. Pumyea, proved to me through satisfactory evidence of identification, which were, to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.	COMMONWEALTH O	F MASSACHUSETTS	
personally appeared Warren P. Pumyea, proved to me through satisfactory evidence of identification, which were, to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.	COUNTY OF	•	
personally appeared Warren P. Pumyea, proved to me through satisfactory evidence of identification, which were, to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.	On this	day of	hefore me, the undersigned notary public
identification, which were		 	
to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.			_, provod to the unrough baddadaty ovidence of
to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.	•		document in my presence and swore or affirmed
and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.			
SEAL			
SEAL			
SEAL			
	SEAL		
Notary Public		Notary Public	
My commission expires:	My commission ex	nires·	

10/24/2004 Date

	Unit 3
	Cambridge, Massachusetts 02138
Citizenship:	US
COMMONWEALTH OF MASSACHUSETTS	
COUNTY OF MIDDLESEX :	
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	9, before me, the undersigned notary public,
	_, proved to me through satisfactory evidence of
identification, which were PERSONALLY KNOWN	
to be the person who signed the preceding or attached of	
to me that the contents of the document are truthful and	
and belief and acknowledged to me that (he) (she) signed	ed it voluntarily for its stated purpose.
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	11-
SEAL Since Wardague Notary Public	The boundary of the same of th
rectary readings	17
My commission expires:	
DAMP MONTA	GUE APPLETON
	y Public
A TA P Commonwealth	of Massachusetts

My Commission Expires September 10, 2015

Inventor: Mickael Lim

Address: 25 Aberdeen Avenue

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Date	Inventor:	Hong Lu	
	Address:	19 Winslow Road	
		Belmont, Massachusetts 02	2478
	Citizenship:	People's Republic of China	
	ACHUCETTO		
COMMONWEALTH OF MASS	ACHUSETTS		
COUNTY OF	:		
On this day of		, before me, the undersi	
personally appeared	Hong Lu	_, proved to me through sati	sfactory evidence of
identification, which were		<u> </u>	
to be the person who signed th to me that the contents of the c		e diget a figure de la companya de	
to me that the contents of the c and belief and acknowledged to			
and belief and acknowledged to	o me that (ne) (she) sign	oute voluntarily for no olated p	parpoor, a server
SEAL			
	Notary Public		
My commission expires:			
my commission expires.			
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1795582.1

Date / /	inventor:	Alexei A. Elchak
	Address:	10 Museum Way, Unit #1422
		Cambridge, Massachusetts 02141
	Citizenship:	US
COMMONWEALTH OF MASS	· · • · · · · · · · · · · · · · · · · ·	
COUNTY OF MIDDLESEY	<u> </u>	
identification, which were reto be the person who signed the to me that the contents of the decimal retords.	Alexei A. Erchak 2 South Y Known In preceding or attached of the comment are truthful and	9_, before me, the undersigned notary public, _, proved to me through satisfactory evidence of, document in my presence and swore or affirmed accurate to the best of (his) (her) knowledge ed it voluntarily for its stated purpose.
SLAL	Notary Public	
	7.1	
My commission expires:		
	DAVID MONTAGU Notary P Commonwealth of M My Commission September	ublic Massachuselts on Expires

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

- 1. Sell, assign and transfer to Luminus Devices, Inc., a Delaware corporation having a place of business at 1100 Technology Park Drive; Billerica, Massachusetts 01821, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office on September 24, 2009 under No. 12/566,642, bearing Attorney Docket No. L0655,70097US01, and entitled LIGHT-EMITTING DEVICE INCLUDING INDEPENDENTLY ADDRESSABLE ELECTRICAL REGIONS, and in and to the application and all corresponding provisional, non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea, as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent;
- 2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions in its own name; and when requested, without charge to but at the expense of the Assignee, I agree to carry out in good faith the intent and purpose of this assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and for vesting title to the inventions and all applications for patents and all patents on the inventions, in the Assignee;
- 3. Request the Director of the United States Patent and Trademark Office and non-US patent authorities to issue the Letters Patent to the Assignee;
- 4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing patent/application identification information or correct any errors in the patent/application identification information provided above, whether discovered prior to or after recordation;
- 5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
- 6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

1795582.1

 Date	Inventor:	Warren P. Pumyea
Date	Address:	·
		Gardner, Massachusetts 01440
	Citizenship:	US
COMMONWEALTH O	F MASSACHUSETTS	
COUNTY OF	·	
On this	day of,	, before me, the undersigned notary public,
personally appeared	Warren P. Pumyea	, proved to me through satisfactory evidence of
	ere	
		document in my presence and swore or affirmed
		d accurate to the best of (his) (her) knowledge
and belief and acknow	rledged to me that (ne) (sne) sign	ned it voluntarily for its stated purpose.
SEAL		
	Notary Public	
My commission ex	xpires:	

Date		Inventor:	Michael Lim
		Address:	25 Aberdeen Avenue
			Unit 3
			Cambridge, Massachusetts 02138
		Citizenship:	US
COMMONWEALTH O	F MASSA	CHUSETTS	
COUNTY OF		<u>.</u> :	
On this	day of		, before me, the undersigned notary public,
personally appeared	_ uay oi	Michael Lim	, proved to me through satisfactory evidence of
to be the person who	signed the	e preceding or attached	document in my presence and swore or affirmed
			d accurate to the best of (his) (her) knowledge
and belief and acknow	/ledged to	me that (he) (she) sign	ed it voluntarily for its stated purpose.
SEAL			
SEAL		Notary Public	
		.10.6.17	
My commission ex	xpires:		

12/10/2009 Date

Inventor: Hong Lu

Address:

19 Winslow Road

Belmont, Massachusetts 02478

Citizenship: People's Republic of China

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF MIDDLES EX

day of December, 2009, before me, the undersigned notary public,

Hong Lu , proved to me through satisfactory evidence of

personally appeared identification, which were MASS DRIVE LICENSE

to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

SEAL

My commission expires:

DAVID MONTAGUE APPLETON

Notary Public Commonwealth of Massachusetts My Commission Expires September 10, 2015

		lavonto»	Alexei A. Erchak
Date			
	P	Address:	, ,
			Cambridge, Massachusetts 02141
	Citi	izenship:	US
COMMONWEALTH O	F MASSACHUSETTS		
	:		
O . Mata	day of		hefore me, the undersigned notary public
On this	_ day or	'	, before me, the undersigned notary public,, proved to me through satisfactory evidence of
	ere Alexer A. Licha		
			document in my presence and swore or affirmed
			d accurate to the best of (his) (her) knowledge
			ed it voluntarily for its stated purpose.
		, -	
SEAL			
	Notary Pu	blic	
My commission ex	rpires:		

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, the undersigned Assignor, hereby:

- Sell, assign and transfer to Luminus Devices, Inc., a Delaware corporation having a place of business at 1100 Technology Park Drive; Billerica, Massachusetts 01821, its successors, assigns and legal representatives, all hereinafter referred to as the Assignee, my entire right, title and interest for the United States and all foreign countries, in and to any and all inventions and designs which are disclosed in the application for United States Letters Patent filed in the United States Patent and Trademark Office on September 24, 2009 under No. 12/566,642, bearing Attorney Docket No. L0655.70097US01, and entitled LIGHT-EMITTING DEVICE INCLUDING INDEPENDENTLY ADDRESSABLE ELECTRICAL REGIONS, and in and to the application and all corresponding provisional, non-provisional, divisional, continuing, substitute, renewal, reissue and all other applications for Letters Patent, utility models, industrial designs or similar intellectual property rights which have been or shall be filed in the United States, internationally, and in any foreign country, including but not limited to China, Japan and Korea, on any of the inventions; and in and to all original and reissued patents which have been or shall be issued in the United States or any other jurisdiction on the inventions, including the right to apply for patent rights in each foreign country and all rights to priority, including the right to claim priority for China, Japan and Korea, as well as the right to sue in its own name and recover damages for past infringement of any United States Letters Patent and foreign patent;
- 2. Agree that the Assignee may apply for and receive Letters Patent and utility model and industrial design registrations for the inventions in its own name; and when requested, without charge to but at the expense of the Assignee, I agree to carry out in good faith the intent and purpose of this assignment, by executing all non-provisional, divisional, continuing, substitute, renewal, reissue, and all other patent, utility model and industrial design applications on any and all the inventions, by executing all rightful oaths, assignments, powers of attorney and other papers, by communicating to the Assignee all facts known to me relating to the inventions and the history thereof, and generally by doing everything reasonably possible which the Assignee shall consider desirable for aiding in securing and maintaining proper protection for the inventions and for vesting title to the inventions and all applications for patents and all patents on the inventions, in the Assignee;
- 3. Request the Director of the United States Patent and Trademark Office and non-US patent authorities to issue the Letters Patent to the Assignee;
- 4. Authorize and request Wolf, Greenfield & Sacks, P.C. to supply any missing patent/application identification information or correct any errors in the patent/application identification information provided above, whether discovered prior to or after recordation;
- 5. Covenant with the Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by me and that full right to convey the same as herein expressed is possessed by me; and
- 6. Appoint Assignee, through its designee, my attorney-in-fact to execute, in my name and on my behalf, any and all documents required to effectuate this Assignment, specifically including, but not limited to, those documents specified above and any necessary corrective assignments.

This instrument is executed under seal and signed under the pains and penalties of perjury under the laws of the United States of America.

1795582.1

Date 2/18/11

Inventor: Warren P. Pumyea

Address: 41 Moran Street

Gardner, Massachusetts 01440

Citizenship: US

COMMONWEALTH OF MASSACHUSETTS

COUNTY OF Middlesex

On this 18th day of February, 2011, before me, the undersigned notary public, personally appeared Warren P. Pumyea, proved to me through satisfactory evidence of identification, which were Drivers License.

to be the person who signed the preceding or attached document in my presence and swore or affirmed to me that the contents of the document are truthful and accurate to the best of (his) (her) knowledge and belief and acknowledged to me that (he) (she) signed it voluntarily for its stated purpose.

SEAL

My commission expires:

CAROL A. MOORE
Notary Public
Commonwealth of Massachusetts
My Commission Expires
February 27, 2015

Date		Inventor:	Michael Lim
		Address:	25 Aberdeen Avenue
			Unit 3
			Cambridge, Massachusetts 02138
		Citizenship:	US
COMMONWEALTH O	F MASS	ACHUSETTS	
COUNTY OF	1 1017 (007		
COUNTY OF		•	
On this	day of	,	, before me, the undersigned notary public,
personally appeared			, proved to me through satisfactory evidence of
identification, which we			
to be the person who	signed the	preceding or attached	document in my presence and swore or affirmed
			d accurate to the best of (his) (her) knowledge
and belief and acknow	/ledged to	me that (he) (she) sign	ed it voluntarily for its stated purpose.
SEAL			
		Notary Public	
My commission ex	opires:		

Date	Inventor:	Hong Lu
	Address:	19 Winslow Road
		Belmont, Massachusetts 02478
	Citizenship:	People's Republic of China
COMMONWEALTH OF	MASSACHUSETTS	
COUNTY OF		
On this		, before me, the undersigned notary public,
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identification, which we		document in my presence and swore or affirmed
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		ed it voluntarily for its stated purpose.
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SEAL		
	Notary Public	
My commission exp	niros:	
wy commission exp	/II C3.	

Date	Inventor:	Alexei A. Erchak
	Address:	10 Museum Way, Unit #1422
		Cambridge, Massachusetts 02141
	Citizenship:	•
	Oluzensinp.	
COMMONWEALTH O	E MASSACHUSETTS	
COUNTY OF		
On this	_ day of,	, before me, the undersigned notary public,
personally appeared		_, proved to me through satisfactory evidence of
identification, which we	ere	,
to be the person who s	signed the preceding or attached	document in my presence and swore or affirmed
to me that the contents	s of the document are truthful and	accurate to the best of (his) (her) knowledge
and belief and acknow	ledged to me that (he) (she) sign	ed it voluntarily for its stated purpose.
SEAL		
	Notary Public	
My commission ex	nires:	
wy commission cx	P.1.00.	

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PATENT REEL: 026501 FRAME: 0359