

<b>TRADEMARK ASSIGNMENT COVER SHEET</b>
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Electronic Version v1.1  
 Stylesheet Version v1.2

ETAS ID: TM529135

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT		
<b>NATURE OF CONVEYANCE:</b>	Security Agreement		
<b>CONVEYING PARTY DATA</b>			
<b>Name</b>	<b>Formerly</b>	<b>Execution Date</b>	<b>Entity Type</b>
CURRENT LIGHTING SOLUTIONS, LLC		04/01/2019	Limited Liability Company: DELAWARE
<b>RECEIVING PARTY DATA</b>			
<b>Name:</b>	Ally Bank, as Collateral Agent		
<b>Street Address:</b>	300 Park Avenue, 4th Floor		
<b>City:</b>	New York		
<b>State/Country:</b>	NEW YORK		
<b>Postal Code:</b>	10022		
<b>Entity Type:</b>	Utah State Bank: UTAH		
<b>PROPERTY NUMBERS Total: 37</b>			
<b>Property Type</b>	<b>Number</b>	<b>Word Mark</b>	
Serial Number:	87195118	ACE	
Serial Number:	72268042	ALGLAS	
Serial Number:	87582036	ALLSITES	
Serial Number:	87067695	ARIZE	
Serial Number:	87549593	ARIZE ELEMENT	
Serial Number:	87350985	CITYIQ	
Serial Number:	74190883	CONSTANTCOLOR	
Serial Number:	75157145	ECOLUX	
Serial Number:	77375301	EVOLVE	
Serial Number:	87187373	EYES ON TRACK	
Serial Number:	73048566	E-Z LUX	
Serial Number:	73740531	GHB	
Serial Number:	77306300	INFUSION	
Serial Number:	85554560	INTRINSX	
Serial Number:	85517916	LIGHTSWEEP	
Registration Number:	3603057	LUMINATION	
Serial Number:	87746579	LUMENCHOICE	
Serial Number:	73180988	MOD-U-LINE	
Serial Number:	72205278	MULTI-VAPOR	
<b>TRADEMARK</b>			

OP \$940.00 87195118

Property Type	Number	Word Mark
Serial Number:	73740530	PERMA GARD
Serial Number:	72086958	POWER GROOVE
Serial Number:	78377097	PROLINE
Serial Number:	78352339	PROLINE
Serial Number:	75389493	PRO-LINE
Serial Number:	76099257	PROSYS
Serial Number:	75290545	PULSEARC
Serial Number:	72091372	QUARTZLINE
Serial Number:	87169040	RADIANTRED
Serial Number:	73521391	SBF
Serial Number:	87357843	SELECT TX
Serial Number:	78078190	SKYGARD
Serial Number:	75632103	STARCOAT
Serial Number:	78435902	STREETDREAMS
Serial Number:	75817212	ULC
Serial Number:	73308994	UNIMOUNT
Serial Number:	78453794	ULTRASTART
Serial Number:	73042671	VERSAGLOW

**CORRESPONDENCE DATA**

**Fax Number:** 8009144240

*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:** 800-713-0755

**Email:** Michael.Violet@wolterskluwer.com

**Correspondent Name:** CT Corporation

**Address Line 1:** 4400 Easton Commons Way

**Address Line 2:** Suite 125

**Address Line 4:** Columbus, OHIO 43219

<b>NAME OF SUBMITTER:</b>	Corenda Lewis
<b>SIGNATURE:</b>	/Corenda Lewis/
<b>DATE SIGNED:</b>	06/25/2019

**Total Attachments: 110**

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### RECORDATION FORM COVER SHEET TRADEMARKS ONLY

To the Director of the U. S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies):**

CURRENT LIGHTING SOLUTIONS, LLC

- Individual(s)
- Partnership
- Corporation- State: \_\_\_\_\_
- Other LLC

Citizenship (see guidelines) Delaware

Additional names of conveying parties attached?  Yes  No

**3. Nature of conveyance/Execution Date(s) :**

Execution Date(s) April 1, 2019

- Assignment
- Security Agreement
- Other \_\_\_\_\_
- Merger
- Change of Name

**2. Name and address of receiving party(ies)**

Additional names, addresses, or citizenship attached?  Yes  No

Name: Ally Bank, as Collateral Agent

Street Address: 300 Park Avenue, 4th Floor

City: New York

State: New York

Country USA Zip: 10022

- Individual(s) Citizenship \_\_\_\_\_
- Association Citizenship \_\_\_\_\_
- Partnership Citizenship \_\_\_\_\_
- Limited Partnership Citizenship \_\_\_\_\_
- Corporation Citizenship \_\_\_\_\_
- Other Utah State Bank Citizenship Utah

If assignee is not domiciled in the United States, a domestic representative designation is attached:  Yes  No  
(Designations must be a separate document from assignment)

**4. Application number(s) or registration number(s) and identification or description of the Trademark.**

A. Trademark Application No.(s) Text

See Schedule B attached

B. Trademark Registration No.(s)

See Schedule B attached

Additional sheet(s) attached?  Yes  No

C. Identification or Description of Trademark(s) (and Filing Date if Application or Registration Number is unknown):

**5. Name & address of party to whom correspondence concerning document should be mailed:**

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

Internal Address: \_\_\_\_\_

Street Address: \_\_\_\_\_

City: \_\_\_\_\_

State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Docket Number: \_\_\_\_\_

Email Address: \_\_\_\_\_

**6. Total number of applications and registrations involved:**

**7. Total fee (37 CFR 2.6(b)(6) & 3.41) \$** \_\_\_\_\_

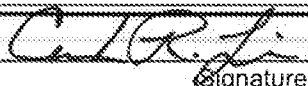
- Authorized to be charged to deposit account
- Enclosed

**8. Payment Information:**

Deposit Account Number \_\_\_\_\_

Authorized User Name \_\_\_\_\_

**9. Signature:**



Corenda R. Lewis

Name of Person Signing

June 25, 2019

Date

Total number of pages including cover sheet, attachments, and document:

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Branch, Director of the USPTO, P.O. Box 1450, Alexandria, VA 22313-1450

## INTELLECTUAL PROPERTY SECURITY AGREEMENT

This **INTELLECTUAL PROPERTY SECURITY AGREEMENT** (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “IP Security Agreement”), dated as of April 1, 2019, is among the Persons listed on the signature pages hereof (collectively, the “Grantors”) and Ally Bank, as collateral agent (the “Collateral Agent”) for the Secured Parties (as defined in the Credit Agreement referred to below).

WHEREAS, CURRENT LIGHTING HOLDCO, INC., a Delaware corporation, and CURRENT LIGHTING HOLDCO INTERMEDIATE, INC., a Delaware corporation, have entered into the Term Loan Credit Agreement, dated as of April 1, 2019 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Credit Agreement”), with the lenders party thereto and ALLY BANK, as Administrative Agent and Collateral Agent. Capitalized terms defined in the Credit Agreement or in the Security Agreement (as defined below) and not otherwise defined herein are used herein as defined in the Credit Agreement or the Security Agreement, as the case may be (and in the event of a conflict, the applicable definition shall be the one given to such term in the Security Agreement).

WHEREAS, as a condition precedent to the making of the Loans by the Lenders from time to time, 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 Security Agreement, dated as of April 1, 2019 (as amended, restated, amended and restated, supplemented or otherwise modified from time to time, the “Security Agreement”), among the Grantors from time to time party thereto and the Collateral Agent.

WHEREAS, under the terms of the Security Agreement, the Grantors have granted to the Collateral Agent, for the benefit of the Secured Parties, a security interest in, among other property, certain intellectual property of the Grantors, and have agreed thereunder to execute this IP Security Agreement for recording with the USPTO and/or the USCO, as applicable.

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 collaterally assigns and pledges to the Collateral Agent (and its successors and permitted assigns), for the benefit of the Secured Parties, and each Grantor hereby grants to the Collateral Agent (and its successors and permitted assigns), for the benefit of the Secured Parties, a security interest in and to all of such Grantor’s right, title and interest in and to the following, whether now owned or hereafter acquired by the undersigned (the “Collateral”):

(i) all Patents, including the patents and patent applications set forth in Schedule A hereto;

(ii) all Trademarks, including 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 of a “Statement of Use” pursuant to Section 1(d) of the Lanham Act or an “Amendment to Allege Use” pursuant to Section 1(c) of the Lanham Act with respect thereto, to the extent that, and solely during the period, if any, in which, the grant of a security interest therein or the assignment thereof would impair the validity or enforceability of any registration that issues from such intent-to-use application under applicable federal law), together with the goodwill symbolized thereby;

(iii) all Copyrights, whether registered or unregistered, including, without limitation, the copyright registrations and applications set forth in Schedule C hereto;

(iv) all reissues, divisionals, 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;

(v) any and all claims for damages and 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; and

(vi) any and all proceeds of, collateral for, income, royalties and other payments now or hereafter due and payable with respect to, and supporting obligations relating to, any and all of the Collateral of or arising from any of the foregoing;

provided that notwithstanding anything to the contrary contained in the foregoing clauses (i) through (vi), the security interest created hereby shall not extend to, and the term "Collateral" shall not include, any Excluded Property.

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 of all Secured Obligations of such Grantor now or hereafter existing under or in respect of the Secured Documents (as such Secured Documents may be amended, restated, amended and restated, supplemented, replaced, refinanced or otherwise modified from time to time (including any increases of the principal amount outstanding thereunder)), whether direct or indirect, absolute or contingent, and whether for principal, reimbursement obligations, interest, premiums, penalties, fees, indemnifications, contract causes of action, costs, expenses or otherwise. Without limiting the generality of the foregoing, this IP Security Agreement secures, as to each Grantor, the payment of all amounts that constitute part of the Secured Obligations that would be owed by such Grantor to any Secured Party under the Secured Documents but for the fact that they are unenforceable or not allowable due to the existence of a bankruptcy, or reorganization or similar proceeding involving a Loan Party.

Section 3. Recordation. Each Grantor authorizes and requests that the Register of Copyrights, the Commissioner for Patents and the Commissioner for Trademarks record this IP Security Agreement.

Section 4. 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.

Section 5. 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 of any conflict between the terms of this IP Security Agreement and the terms of the Security Agreement, the terms of the Security Agreement shall govern.



Section 6. Governing Law; Jurisdiction; Etc.

(a) THIS IP SECURITY AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH, THE LAW OF THE STATE OF NEW YORK WITHOUT GIVING EFFECT TO THE CONFLICTS OF LAWS PRINCIPLES THEREOF, BUT INCLUDING SECTIONS 5-1401 AND 5-1402 OF THE NEW YORK GENERAL OBLIGATIONS LAW.

(b) EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY SUBMITS, FOR ITSELF AND ITS PROPERTY, TO THE EXCLUSIVE JURISDICTION OF THE COURTS OF THE STATE OF NEW YORK SITTING IN NEW YORK CITY IN THE BOROUGH OF MANHATTAN AND OF THE UNITED STATES DISTRICT COURT FOR THE SOUTHERN DISTRICT OF NEW YORK SITTING IN THE BOROUGH OF MANHATTAN, AND ANY APPELLATE COURT FROM ANY THEREOF, IN ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS IP SECURITY AGREEMENT, OR FOR RECOGNITION OR ENFORCEMENT OF ANY JUDGMENT, AND EACH OF THE PARTIES HERETO IRREVOCABLY AND UNCONDITIONALLY AGREES THAT ALL CLAIMS IN RESPECT OF ANY SUCH ACTION OR PROCEEDING MAY BE HEARD AND DETERMINED IN SUCH NEW YORK STATE COURT OR, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, IN SUCH FEDERAL COURT. EACH OF THE PARTIES HERETO AGREES THAT A FINAL JUDGMENT IN ANY SUCH ACTION OR PROCEEDING SHALL BE CONCLUSIVE AND MAY BE ENFORCED IN OTHER JURISDICTIONS BY SUIT ON THE JUDGMENT OR IN ANY OTHER MANNER PROVIDED BY LAW. NOTHING IN THIS IP SECURITY AGREEMENT SHALL AFFECT ANY RIGHT THAT THE COLLATERAL AGENT OR ANY LENDER MAY OTHERWISE HAVE TO BRING ANY ACTION OR PROCEEDING RELATING TO THIS IP SECURITY AGREEMENT OR THE RECOGNITION OR ENFORCEMENT OF ANY JUDGMENT AGAINST ANY LOAN PARTY OR ITS PROPERTIES IN THE COURTS OF ANY JURISDICTION.

(c) EACH PARTY HERETO IRREVOCABLY AND UNCONDITIONALLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY OBJECTION THAT IT MAY NOW OR HEREAFTER HAVE TO THE LAYING OF VENUE OF ANY ACTION OR PROCEEDING ARISING OUT OF OR RELATING TO THIS IP SECURITY AGREEMENT IN ANY COURT REFERRED TO IN CLAUSE (b) OF THIS SECTION 6. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, THE DEFENSE OF AN INCONVENIENT FORUM TO THE MAINTENANCE OF SUCH ACTION OR PROCEEDING IN ANY SUCH COURT.

(d) EACH PARTY HERETO IRREVOCABLY CONSENTS TO SERVICE OF PROCESS IN THE MANNER PROVIDED FOR NOTICES IN SECTION 10.02 OF THE CREDIT AGREEMENT. NOTHING IN THIS IP SECURITY AGREEMENT WILL AFFECT THE RIGHT OF ANY PARTY HERETO TO SERVE PROCESS IN ANY OTHER MANNER PERMITTED BY APPLICABLE LAW.

(e) EACH PARTY TO THIS IP SECURITY AGREEMENT HEREBY EXPRESSLY WAIVES ANY RIGHT TO TRIAL BY JURY OF ANY CLAIM, DEMAND, ACTION OR CAUSE OF ACTION ARISING UNDER THIS IP SECURITY AGREEMENT OR IN ANY WAY CONNECTED WITH OR RELATED OR

**INCIDENTAL TO THE DEALINGS OF THE PARTIES HERETO OR ANY OF THEM WITH RESPECT TO THIS IP SECURITY AGREEMENT, OR THE TRANSACTIONS RELATED THERETO, IN EACH CASE WHETHER NOW EXISTING OR HEREAFTER ARISING, AND WHETHER FOUNDED IN CONTRACT OR TORT OR OTHERWISE; AND EACH PARTY HEREBY AGREES AND CONSENTS THAT ANY SUCH CLAIM, DEMAND, ACTION OR CAUSE OF ACTION SHALL BE DECIDED BY COURT TRIAL WITHOUT A JURY, AND THAT ANY PARTY TO THIS IP SECURITY AGREEMENT MAY FILE AN ORIGINAL COUNTERPART OR A COPY OF SECTION 10.17 OF THE CREDIT AGREEMENT WITH ANY COURT AS WRITTEN EVIDENCE OF THE CONSENT OF THE SIGNATORIES HERETO TO THE WAIVER OF THEIR RIGHT TO TRIAL BY JURY.**

[Remainder of page intentionally left blank; signature page follows]

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

CURRENT LIGHTING HOLDCO, INC.

By: Maryrose Sylvester  
Name: Maryrose Sylvester  
Title: President & Chief Executive Officer

ALLY BANK, as Collateral Agent

By:   
Name: Justin Cosentino  
Title: Authorized Signatory

**Schedule A**  
**Patents**

See attached.

Schedule A

**TRADEMARK**  
**REEL: 006677 FRAME: 0482**

## Patents of Current Lighting Solutions, LLC

CO	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	A LIGHTING ASSEMBLY FOR A REFRIGERATION APPLIANCE	ORD-UTILITY PATENT FILING	09/683062	11/14/2001	11/12/2002	US6478445
US	Issued	ELECTRONIC DEVICES AND METHODS FOR MAKING SAME USING NANOTUBE REGIONS TO ASSIST IN THERMAL HEAT-SINKING	ORD-UTILITY PATENT FILING	10/614497	7/7/2003	3/8/2005	US6864571
JP	Issued	ELECTRONIC DEVICES AND METHODS FOR MAKING SAME USING NANOTUBE REGIONS TO ASSIST IN THERMAL HEAT-SINKING	ORD-UTILITY PATENT FILING	2006-518865	7/7/2004	6/3/2011	JP4754483
US	Issued	METHOD AND APPARATUS FOR NETWORKED LIGHTING SYSTEM CONTROL	PRI-PRIORITY APPLICATION	10/435984	5/12/2003	3/15/2005	US6867558
US	Issued	LED ILLUMINATION DEVICE WITH LAYERED PHOSPHOR PATTERN	ORD-UTILITY PATENT FILING	10/813338	3/30/2004	2/5/2008	US7327078
US	Issued	ROUTING COST BASED NETWORK CONGESTION CONTROL FOR QUALITY OF SERVICE	ORD-UTILITY PATENT FILING	10/950149	9/24/2004	2/10/2009	US7489635
US	Issued	GARNET PHOSPHOR MATERIALS HAVING ENHANCED SPECTRAL CHARACTERISTICS	ORD-UTILITY PATENT FILING	10/696637	10/29/2003	8/22/2006	US7094362
JP	Issued	PHOSPHORS CONTAINING OXIDES OF ALKALINE-EARTH AND GROUP-13 METALS, AND LIGHT SOURCES INCORPORATING THE SAME	ORD-UTILITY PATENT FILING	2005-131123	4/28/2005	1/24/2014	JP5461752
US	Issued	GARNET PHOSPHOR MATERIALS HAVING ENHANCED SPECTRAL CHARACTERISTICS	CIP-CONTINUATION IN PART	10/910991	8/4/2004	8/7/2007	US7252787
TW	Issued	ORGANIC ILLUMINATION SOURCE AND METHOD FOR CONTROLLED ILLUMINATION	ORD-UTILITY PATENT FILING	96115929	5/4/2007	4/1/2018	TW1620463

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Issued	ORGANIC ILLUMINATION SOURCE AND METHOD FOR CONTROLLED ILLUMINATION	PCT-PATENT COOPERATION TREATY	200780024535	12/29/2008	6/29/2011	CN200780024535.0
EP	Filed	ORGANIC ILLUMINATION SOURCE AND METHOD FOR CONTROLLED ILLUMINATION	PCT-PATENT COOPERATION TREATY	7760633.3	12/16/2008		
JP	Issued	ORGANIC ILLUMINATION SOURCE AND METHOD FOR CONTROLLED ILLUMINATION	PCT-PATENT COOPERATION TREATY	2009-518411	4/13/2007	11/20/2015	JP5840344
KR	Filed	ORGANIC ILLUMINATION SOURCE AND METHOD FOR CONTROLLED ILLUMINATION	PCT-PATENT COOPERATION TREATY	1020087031784	12/29/2008		
TW	Issued	COLOR TUNABLE OLED ILLUMINATION DISPLAY AND METHOD FOR CONTROLLED DISPLAY ILLUMINATIONS	ORD-UTILITY PATENT FILING	96143596	11/16/2007	12/21/2014	TW1466077
CN	Issued	COLOR TUNABLE OLED ILLUMINATION DISPLAY AND METHOD FOR CONTROLLED DISPLAY ILLUMINATION	PCT-PATENT COOPERATION TREATY	200780050954.1	8/5/2009	7/3/2013	CN200780050954.1
KR	Issued	COLOR TUNABLE OLED ILLUMINATION DISPLAY AND METHOD FOR CONTROLLED DISPLAY ILLUMINATIONS	PCT-PATENT COOPERATION TREATY	1020097014092	7/6/2009	1/15/2015	KR10-1485204
US	Issued	METHOD FOR PRODUCING A PALETTE OF COLORS FOR PERSISTENT PHOSPHORS AND PHOSPHORS MADE BY SAME	CIP-CONTINUATION IN PART	12/057496	3/28/2008	8/23/2011	US8003012
US	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	ORD-UTILITY PATENT FILING	11/986340	11/21/2007	1/11/2011	US7868558
PL	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	EPC-EUROPEAN PATENT CONVENTION	8852217.2	9/30/2008	4/3/2013	EP2213143
CN	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	PCT-PATENT COOPERATION TREATY	200880117890.7	5/20/2010	10/2/2013	CN200880117890.7

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
JP	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	ORD-UTILITY PATENT FILING	2010-534989	9/30/2008	6/6/2014	JP5554243
MX	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	PCT-PATENT COOPERATION TREATY	MX/a/2010/005414	9/30/2008	2/1/2012	MX295428
AT	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	EPC-EUROPEAN PATENT CONVENTION	8852217.2	9/30/2008	4/3/2013	ATE605410
DE	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	EPC-EUROPEAN PATENT CONVENTION	8852217.2	9/30/2008	4/3/2013	EP2213143
FI	Issued	ORGANIC LIGHT EMITTING DIODE POWER CONVERTER	EPC-EUROPEAN PATENT CONVENTION	8852217.2	9/30/2008	4/3/2013	EP2213143
US	Issued	ULTRA-THIN MULTI-SUBSTRATE COLOR TUNABLE OLED DEVICE	ORD-UTILITY PATENT FILING	12/192262	8/15/2008	9/20/2011	US8022623
TW	Issued	ULTRA-THIN MULTI-SUBSTRATE COLOR TUNABLE OLED DEVICE	ORD-UTILITY PATENT FILING	98126072	8/3/2009	6/11/2017	TW1587740
CN	Issued	ULTRA-THIN MULTI-SUBSTRATE COLOR TUNABLE OLED DEVICE	PCT-PATENT COOPERATION TREATY	200980141553.6	4/15/2011	10/29/2014	CN200980141553.6
EP	Filed	ULTRA-THIN MULTI-SUBSTRATE COLOR TUNABLE OLED DEVICE	PCT-PATENT COOPERATION TREATY	9790593.9	7/17/2009		
JP	Issued	ULTRA-THIN MULTI-SUBSTRATE COLOR TUNABLE OLED DEVICE	ORD-UTILITY PATENT FILING	2011-523025	7/17/2009	8/14/2015	JP5793421
KR	Issued	ULTRA-THIN MULTI-SUBSTRATE COLOR TUNABLE OLED DEVICE	ORD-UTILITY PATENT FILING	1020117006052	7/17/2009	3/9/2016	KR10-1603811
CN	Issued	Display light	PRI-PRIORITY APPLICATION	200720001855.1	1/16/2007	2/27/2008	CN200720001855.1



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	ORANGE-RED PERSISTENT PHOSPHORS	ORD-UTILITY PATENT FILING	12/606237	10/27/2009	7/3/2012	US8211334
US	Issued	WHITE EMITTING PERSISTENT PHOSPHOR	ORD-UTILITY PATENT FILING	12/971569	12/17/2010	8/13/2013	US8506843
DE	Filed	WHITE EMITTING PERSISTENT PHOSPHOR	PCT-PATENT COOPERATION TREATY	102011104387.2	6/17/2013		
CN	Issued	WHITE EMITTING PERSISTENT PHOSPHOR	PCT-PATENT COOPERATION TREATY	201180060705.7	6/17/2013	6/17/2015	CN201180060705.7
JP	Issued	WHITE EMITTING PERSISTENT PHOSPHOR	PCT-PATENT COOPERATION TREATY	2013-544664	6/13/2013	12/22/2016	JP6063388
US	Issued	LED POWER SOURCE AND DC-DC CONVERTER	PRI-PRIORITY APPLICATION	12/479312	6/5/2009	8/2/2011	US7990070
CN	Issued	LED POWER SOURCE AND DC-DC CONVERTER	PCT-PATENT COOPERATION TREATY	201080025850.7	12/5/2011	12/24/2014	CN201080025850.7
EP	Filed	LED POWER SOURCE AND DC-DC CONVERTER	PCT-PATENT COOPERATION TREATY	10719473	11/25/2011		
US	Issued	UNIFIED 0-10V AND DALI DIMMING INTERFACE CIRCUIT	PRI-PRIORITY APPLICATION	12/259492	10/28/2008	12/6/2011	US8072164
CA	Filed	UNIFIED 0-10V AND DALI DIMMING INTERFACE CIRCUIT	ORD-UTILITY PATENT FILING	2740629	9/22/2009		
CN	Issued	UNIFIED 0-10V AND DALI DIMMING INTERFACE CIRCUIT	PCT-PATENT COOPERATION TREATY	200980143735.7	4/28/2011	10/29/2014	CN200980143735.7
EP	Filed	UNIFIED 0-10V AND DALI DIMMING INTERFACE CIRCUIT	PCT-PATENT COOPERATION TREATY	9792828.7	9/22/2009		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
IN	Filed	UNIFIED 0-10V AND DALI DIMMING INTERFACE CIRCUIT	ORD-UTILITY PATENT FILING	2729/DEL/NP/2011	9/22/2009		
JP	Issued	UNIFIED 0-10V AND DALI DIMMING INTERFACE CIRCUIT	ORD-UTILITY PATENT FILING	2011-533208	9/22/2009	12/27/2013	JP5444361
MX	Issued	UNIFIED 0-10V AND DALI DIMMING INTERFACE CIRCUIT	ORD-UTILITY PATENT FILING	MX/a/2011/004145	9/22/2009	8/24/2012	MX302724
US	Issued	WHITE PERSISTENT PHOSPHOR BLEND OR LAYERED STRUCTURE	ORD-UTILITY PATENT FILING	12/971504	12/17/2010	3/26/2013	US8404153
DE	Filed	WHITE PERSISTENT PHOSPHOR BLEND OR LAYERED STRUCTURE	PCT-PATENT COOPERATION TREATY	112011104395.3	6/3/2013		
CN	Issued	WHITE PERSISTENT PHOSPHOR BLEND OR LAYERED STRUCTURE	PCT-PATENT COOPERATION TREATY	201180060653.3	6/17/2013	5/27/2015	CN201180060653.3
JP	Filed	WHITE PERSISTENT PHOSPHOR BLEND OR LAYERED STRUCTURE	PCT-PATENT COOPERATION TREATY	2013-544662	6/14/2013		
JP	Filed	Method for producing white long persisting phosphor	DIV-DIVISIONAL FILING	2016-119508	6/16/2016		
US	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	PRI-PRIORITY APPLICATION	12/256142	10/22/2008	12/11/2012	US8329060
FR	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	EPC-EUROPEAN PATENT CONVENTION	9167926.6	8/14/2009	10/16/2013	EP2180032
GB	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	EPC-EUROPEAN PATENT CONVENTION	9167926.6	8/14/2009	10/16/2013	EP2180032
IT	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	EPC-EUROPEAN PATENT CONVENTION	9167926.6	8/14/2009	10/16/2013	EP2180032

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
NL	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	EPC-EUROPEAN PATENT CONVENTION	9167926.6	8/14/2009	10/16/2013	EP2180032
SE	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	EPC-EUROPEAN PATENT CONVENTION	9167926.6	8/14/2009	10/16/2013	EP2180032
CN	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	ORD-UTILITY PATENT FILING	200910167355.9	8/21/2009	9/17/2014	CN200910167355.9
JP	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	ORD-UTILITY PATENT FILING	2009-188805	8/18/2009	5/9/2014	JP5555548
KR	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	ORD-UTILITY PATENT FILING	1020090076547	8/19/2009	5/2/2016	KR101619520
US	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	CONTINUATION IN PART	13/170615	6/28/2011	4/22/2014	US8703016
DE	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	EPC-EUROPEAN PATENT CONVENTION	9167926.6	8/14/2009	10/16/2013	EP2180032
ES	Issued	BLUE-GREEN AND GREEN PHOSPHORS FOR LIGHTING APPLICATIONS	EPC-EUROPEAN PATENT CONVENTION	9167926.6	8/14/2009	10/16/2013	EP2180032
US	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	ORD-UTILITY PATENT FILING	12/273131	11/18/2008	5/17/2011	US7944155
GB	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	EPC-EUROPEAN PATENT CONVENTION	9747991.9	11/2/2009	1/8/2014	EP2359666
NL	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	EPC-EUROPEAN PATENT CONVENTION	9747991.9	11/2/2009	1/8/2014	EP2359666
FR	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	EPC-EUROPEAN PATENT CONVENTION	9747991.9	11/2/2009	1/8/2014	EP2359666

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CA	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	ORD-UTILITY PATENT FILING	2742843	11/2/2009	6/11/2013	CA2742843
CN	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	PCT-PATENT COOPERATION TREATY	200980146786.5	5/18/2011	7/10/2013	CN200980146786.5
IN	Filed	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	ORD-UTILITY PATENT FILING	3274/DELNP/2011	11/2/2009		
JP	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	ORD-UTILITY PATENT FILING	2011-536381	11/2/2009	8/1/2014	JP5586622
MX	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	PCT-PATENT COOPERATION TREATY	MX/a/2011/005204	5/17/2011	9/10/2012	MX303278
DE	Issued	LED DRIVER WITH SINGLE INVERTER CIRCUIT WITH ISOLATED MULTI-CHANNEL OUTPUTS	EPC-EUROPEAN PATENT CONVENTION	9747991.9	11/2/2009	1/8/2014	EP2359666
US	Issued	WIRELESS BALLAST CONTROL UNIT	ORD-UTILITY PATENT FILING	12/691798	1/22/2010	6/11/2013	US8463454
CN	Issued	WIRELESS BALLAST CONTROL UNIT	PCT-PATENT COOPERATION TREATY	201180015243.7	9/21/2012	2/25/2015	CN201180015243.7
EP	Appeal	WIRELESS BALLAST CONTROL UNIT	PCT-PATENT COOPERATION TREATY	11701415.9	7/17/2012		
WO	Filed	POST-MOUNTED LIGHT EMITTING DIODE (LED) DEVICE-BASED LAMP AND POWER SUPPLY FOR SAME	ORD-UTILITY PATENT FILING	US11/49264	8/26/2011		
US	Issued	POST-MOUNTED LIGHT EMITTING DIODE (LED) DEVICE-BASED LAMP AND POWER SUPPLY FOR SAME	PCT-PATENT COOPERATION TREATY	13/878769	4/11/2013	8/1/2017	US9723660
CA	Filed	POST-MOUNTED LIGHT EMITTING DIODE (LED) DEVICE-BASED LAMP AND POWER SUPPLY FOR SAME	PCT-PATENT COOPERATION TREATY	2813727	4/4/2013		

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
JP	Issued	POST-MOUNTED LIGHT EMITTING DIODE (LED) DEVICE-BASED LAMP AND POWER SUPPLY FOR SAME	PCT-PATENT COOPERATION TREATY	2013-533854	4/11/2013	12/2/2016	JP6050755
KR	Filed	POST-MOUNTED LIGHT EMITTING DIODE (LED) DEVICE-BASED LAMP AND POWER SUPPLY FOR SAME	PCT-PATENT COOPERATION TREATY	1020137009474	8/26/2011		
US	Issued	LED LIGHT FIXTURE	DES-DESIGN	29/350044	11/10/2009	9/28/2010	USD624686
US	Issued	LED LIGHT FIXTURE	ORD-UTILITY PATENT FILING	12/615967	11/10/2009	7/17/2012	US8220961
CA	Filed	LED LIGHT FIXTURE	PCT-PATENT COOPERATION TREATY	2780510	9/16/2010		
MX	Issued	LED LIGHT FIXTURE	PCT-PATENT COOPERATION TREATY	MX/a/2012/005483	9/16/2010	10/28/2013	MX314669
CN	Issued	THREE-PHASE LED POWER SUPPLY	PRI-PRIORITY APPLICATION	200910162218.6	7/29/2009	12/3/2014	CN200910162218.6
US	Issued	THREE-PHASE LED POWER SUPPLY	PCT-PATENT COOPERATION TREATY	13/128936	5/12/2011	11/26/2013	US8593070
US	Issued	KIMZEYITE GARNET PHOSPHORS	ORD-UTILITY PATENT FILING	12/582969	10/21/2009	5/14/2013	US8440104
US	Issued	HOSPITAL LIGHTING WITH SOLID STATE EMITTERS	ORD-UTILITY PATENT FILING	12/818460	6/18/2010	3/26/2013	US8405324
US	Issued	A DIMMING BRIDGE MODULE	ORD-UTILITY PATENT FILING	12/634764	12/10/2009	7/3/2012	US8212485
EP	Filed	A DIMMING BRIDGE MODULE	PCT-PATENT COOPERATION TREATY	10776039.9	6/13/2012		

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	PRE-PROGRAMMED ENERGY MANAGEMENT BALLAST OR DRIVER	ORD-UTILITY PATENT FILING	12/561645	9/17/2009	3/15/2011	US7908037
US	Filed	PRE-PROGRAMMED ENERGY MANAGEMENT BALLAST OR DRIVER	CON-CONTINUATION	13/034375	2/24/2011		
BR	Filed	PRE-PROGRAMMED ENERGY MANAGEMENT BALLAST OR DRIVER	PCT-PATENT COOPERATION TREATY	PI 1006499-0	2/9/2010		
CN	Issued	PRE-PROGRAMMED ENERGY MANAGEMENT BALLAST OR DRIVER	PCT-PATENT COOPERATION TREATY	201080015646.7	9/27/2011	4/2/2014	CN201080015646.7
EP	Issued	PRE-PROGRAMMED ENERGY MANAGEMENT BALLAST OR DRIVER	PCT-PATENT COOPERATION TREATY	10704062.8	9/15/2011	5/16/2018	EP2412207
MX	Issued	PRE-PROGRAMMED ENERGY MANAGEMENT BALLAST OR DRIVER	PCT-PATENT COOPERATION TREATY	MX/a/2011/010152	2/9/2010	4/2/2013	MX308342
US	Issued	KNOWLEDGE-BASED DRIVER APPARATUS FOR HIGH LUMEN MAINTENANCE AND END-OF-LIFE ADAPTATION	PRI-PRIORITY APPLICATION	12/582864	10/21/2009	12/6/2011	US8072163
TW	Issued	KNOWLEDGE-BASED DRIVER APPARATUS FOR HIGH LUMEN MAINTENANCE AND END-OF-LIFE ADAPTATION	ORD-UTILITY PATENT FILING	99135991	10/21/2010	4/21/2016	TW1531279
CN	Issued	KNOWLEDGE-BASED DRIVER APPARATUS FOR HIGH LUMEN MAINTENANCE AND END-OF-LIFE ADAPTATION	PCT-PATENT COOPERATION TREATY	201080049047.7	4/23/2012	11/5/2014	CN201080049047.7
EP	Filed	KNOWLEDGE-BASED DRIVER APPARATUS FOR HIGH LUMEN MAINTENANCE AND END-OF-LIFE ADAPTATION	PCT-PATENT COOPERATION TREATY	10762824	4/24/2012		
JP	Issued	KNOWLEDGE-BASED DRIVER APPARATUS FOR HIGH LUMEN MAINTENANCE AND END-OF-LIFE ADAPTATION	PCT-PATENT COOPERATION TREATY	2012-535216	9/28/2010	10/2/2015	JP5814924

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
	Issued	KNOWLEDGE-BASED DRIVER APPARATUS FOR HIGH LUMEN MAINTENANCE AND END-OF-LIFE ADAPTATION	PCT-PATENT COOPERATION TREATY	1020127012854	9/28/2010	6/8/2017	KR10-1747471
US	Issued	ROADWAY LIGHT FIXTURE	DES-DESIGN	29/352443	12/21/2009	8/24/2010	USD622433
CN	Issued	ROADWAY LIGHT FIXTURE	DES-DESIGN	201030223302.8	6/21/2010	1/12/2011	CN201030223302.8
US	Issued	COATED PHOSPHORS, METHODS OF MAKING THEM, AND ARTICLES COMPRISING THE SAME	ORD-UTILITY PATENT FILING	12/646205	12/23/2009	2/19/2013	US8377334
CN	Issued	OXYNITRIDE PHOSPHORS, METHOD OF PREPARATION, AND LIGHT EMITTING INSTRUMENT	PCT-PATENT COOPERATION TREATY	201180035925.4	1/22/2013	1/27/2016	CN103003390
EP	Filed	OXYNITRIDE PHOSPHORS, METHOD OF PREPARATION, AND LIGHT EMITTING INSTRUMENT	PCT-PATENT COOPERATION TREATY	11730796.7	1/15/2013		
JP	Issued	OXYNITRIDE PHOSPHORS, METHOD OF PREPARATION, AND LIGHT EMITTING INSTRUMENT	PCT-PATENT COOPERATION TREATY	2013-520709	1/18/2013	4/1/2016	JP5909230
KR	Filed	OXYNITRIDE PHOSPHORS, METHOD OF PREPARATION, AND LIGHT EMITTING INSTRUMENT	PCT-PATENT COOPERATION TREATY	1020137004344	2/21/2013		
US	Issued	COLOR MIXING USING THE REFLECTIVE PROPERTIES OF OLEDs	PRI-PRIORITY APPLICATION	13/416400	3/9/2012	4/28/2015	US9016894
US	Issued	ELECTRONIC DRIVER DIMMING CONTROL USING RAMPED PULSED MODULATION FOR LARGE AREA SOLID-STATE OLEDs	ORD-UTILITY PATENT FILING	12/634911	12/10/2009	12/18/2012	US8334659
TW	Issued	ELECTRONIC DRIVER DIMMING CONTROL USING RAMPED PULSED MODULATION FOR LARGE AREA SOLID-STATE OLEDs	ORD-UTILITY PATENT FILING	99143323	12/10/2010	3/1/2018	TW1617218

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Issued	ELECTRONIC DRIVER DIMMING CONTROL USING RAMPED PULSED MODULATION FOR LARGE AREA SOLID-STATE OLEDs	PCT-PATENT COOPERATION TREATY	201080063556.5	8/10/2012	9/16/2015	CN201080063556.5
EP	Filed	ELECTRONIC DRIVER DIMMING CONTROL USING RAMPED PULSED MODULATION FOR LARGE AREA SOLID-STATE OLEDs	PCT-PATENT COOPERATION TREATY	10779882.9	6/13/2012		
JP	Issued	ELECTRONIC DRIVER DIMMING CONTROL USING RAMPED PULSED MODULATION FOR LARGE AREA SOLIDSTATE OLEDs	PCT-PATENT COOPERATION TREATY	2012-543117	11/9/2010	10/9/2015	JP5819313
KR	Issued	ELECTRONIC DRIVER DIMMING CONTROL USING RAMPED PULSED MODULATION FOR LARGE AREA SOLID-STATE OLEDs	PCT-PATENT COOPERATION TREATY	1020127017822	11/9/2010	12/8/2017	KR10-1809285
US	Issued	APPLIANCE WITH AN IMPROVED SOLID STATE DEVICE LIGHTING	PRI-PRIORITY APPLICATION	12/818272	6/18/2010	3/5/2013	US8388158
US	Issued	RAMP CONTROLLED DRIVER FOR SERIES/PARALLEL SOLID STATE LIGHTING DEVICES	ORD-UTILITY PATENT FILING	12/966184	12/13/2010	7/15/2014	US8779689
CN	Issued	RAMP CONTROLLED DRIVER FOR SERIES/PARALLEL SOLID STATE LIGHTING DEVICES	PCT-PATENT COOPERATION TREATY	201180059837.8	6/13/2013	5/11/2016	CN103250466
JP	Issued	RAMP CONTROLLED DRIVER FOR SERIES/PARALLEL SOLID STATE LIGHTING DEVICES	PCT-PATENT COOPERATION TREATY	2013-543170	6/10/2013	4/8/2016	JP5911887
KR	Filed	RAMP CONTROLLED DRIVER FOR SERIES/PARALLEL SOLID STATE LIGHTING DEVICES	PCT-PATENT COOPERATION TREATY	1020137015077	6/12/2013		
GB	Issued	RAMP CONTROLLED DRIVER FOR SERIES/PARALLEL SOLID STATE LIGHTING DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	11779066.7	6/20/2013	4/26/2017	EP2653010
GB	Issued	DIMMABLE OUTDOOR LUMINAIRES	EPP-EUROPEAN PATENT - PCT ORIGINATED	11784848.1	6/17/2013	12/21/2016	EP2646750



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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
WO	Filed	DIMMABLE OUTDOOR LUMINAIRES	PCT-PATENT COOPERATION TREATY	PCT/US11/058234	10/28/2011		
KR	Filed	DIMMABLE OUTDOOR LUMINAIRES	PCT-PATENT COOPERATION TREATY	1020137014142	5/31/2013		
CA	Filed	DIMMABLE OUTDOOR LUMINAIRES	PCT-PATENT COOPERATION TREATY	2820596	5/23/2013		
MX	Issued	DIMMABLE OUTDOOR LUMINAIRES	PCT-PATENT COOPERATION TREATY	MX/a/2013/0006183	5/31/2013	7/23/2015	MX331826
DE	Issued	DIMMABLE OUTDOOR LUMINAIRES	EPP-EUROPEAN PATENT - PCT ORIGINATED	11784848.1	6/17/2013	12/21/2016	EP2646750
FR	Issued	DIMMABLE OUTDOOR LUMINAIRES SOLID STATE LIGHTING CONTROL METHODS AND APPARATUSES FOR SERIES COMBINATIONS OF LIGHT EMITTING DIODES	EPP-EUROPEAN PATENT - PCT ORIGINATED	11784848.1	6/17/2013	12/21/2016	EP2646750
WO	Filed		ORD-UTILITY PATENT FILING	US11/60148	11/10/2011		
US	Issued	COLOR STABLE PHOSPHORS	ORD-UTILITY PATENT FILING	13/080099	4/5/2011	11/26/2013	US8593062
TW	Issued	COLOR STABLE PHOSPHORS	ORD-UTILITY PATENT FILING	100114942	4/28/2011	11/21/2016	TW1558788
EP	Filed	COLOR STABLE PHOSPHORS	PCT-PATENT COOPERATION TREATY	11716144.8	2/22/2013		
US	Issued	LIGHT EMITTING DESK LAMP	DES-DESIGN	29/359370	4/9/2010	9/21/2010	USD624225
US	Issued	LIGHT EMITTING MOBILE	DES-DESIGN	29/359371	4/9/2010	4/5/2011	USD635709

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	LIGHT EMITTING SCULPTURE	DES-DESIGN	29/359372	4/9/2010	6/14/2011	USD639987
US	Issued	LIGHTING SYSTEM COMMUNICATIONS APPARATUS AND METHOD	PRI-PRIORITY APPLICATION	12/849400	8/3/2010	9/25/2012	US8274232
BR	Filed	LIGHTING SYSTEM COMMUNICATIONS APPARATUS AND METHOD	PCT-PATENT COOPERATION TREATY	BR112013001597-7	1/22/2013		
CN	Issued	LIGHTING SYSTEM COMMUNICATIONS APPARATUS AND METHOD	PCT-PATENT COOPERATION TREATY	201180038057.5	2/1/2013	12/3/2014	CN103026796B
KR	Filed	LIGHTING SYSTEM COMMUNICATIONS APPARATUS AND METHOD	PCT-PATENT COOPERATION TREATY	1020137002835	2/1/2013		
MX	Issued	LIGHTING SYSTEM COMMUNICATIONS APPARATUS AND METHOD	PCT-PATENT COOPERATION TREATY	MX/a/2013/001255	1/30/2013	12/23/2013	MX316805
EP	Filed	LIGHTING SYSTEM COMMUNICATIONS APPARATUS AND METHOD	PCT-PATENT COOPERATION TREATY	11731578.8	1/31/2013		
CN	Issued	Power off communications system	DIV-DIVISIONAL FILING	201410583522.9	10/27/2014	7/25/2017	CN104363675
US	Issued	ALKALINE AND ALKALINE EARTH METAL PHOSPHATE HALIDES AND PHOSPHORS	ORD-UTILITY PATENT FILING	12/873090	8/31/2010	11/13/2012	US8308982
CN	Issued	GRID ELECTRODE DRIVING CONTROLLER CIRCUIT WITH ANTI-SATURATION CIRCUIT AND POWER-ON CIRCUIT THEREOF	PRI-PRIORITY APPLICATION	201010261079.5	7/5/2010	8/12/2015	CN201010261079.5
US	Issued	GATE DRIVE CONTROLLER CIRCUIT WITH ANTI-SATURATION CIRCUIT AND POWER UP CIRCUIT THEREFOR	ORD-UTILITY PATENT FILING	12/893584	9/29/2010	12/17/2013	US8611118
CA	Filed	GATE DRIVE CONTROLLER CIRCUIT WITH ANTI-SATURATION CIRCUIT AND POWER UP CIRCUIT THEREFOR	ORD-UTILITY PATENT FILING	2744784	6/29/2011		

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
MX	Issued	GATE DRIVE CONTROLLER CIRCUIT WITH ANTI-SATURATION CIRCUIT AND POWER UP CIRCUIT THEREFOR	ORD-UTILITY PATENT FILING	MX/a/2011/007243	7/5/2011	1/6/2014	MX316808
MX	Issued	Drive Transformer Anti-Saturation Circuit	DIV-DIVISIONAL FILING	MX/a/2013/011920	10/11/2013	5/12/2014	MX320064
US	Issued	POWER LINE COMMUNICATION METHOD AND APPARATUS FOR LIGHTING CONTROL	ORD-UTILITY PATENT FILING	12/907549	10/19/2010	11/19/2013	US8587223
US	Issued	FIXTURE AND SOCKET ASSEMBLY FOR REPLACEMENT AND FLEXIBLE PANEL LIGHTING DEVICE	PRI-PRIORITY APPLICATION	13/086061	4/13/2011	1/7/2014	US8624483
CN	Issued	MODULAR LED ROADWAY LAMP	DES-DESIGN	201030552772.9	10/12/2010	4/13/2011	CN201030552772.9
AU	Issued	MODULAR LED ROADWAY LAMP	DES-DESIGN	11658/2011	4/12/2011	5/10/2011	AU336389
MX	Issued	MODULAR LED ROADWAY LAMP	DES-DESIGN	MX/H/2011/001122	4/12/2011	8/14/2012	MX37008
EM	Filed	ROADWAY LAMP	DES-DESIGN	1270300	4/12/2011		
AU	Issued	MODULAR LED ROADWAY LAMP	DES-DESIGN	11943/2011	4/12/2011	5/10/2011	AU336390
AU	Issued	MODULAR LED ROADWAY LAMP	DES-DESIGN	11944/2011	4/12/2011	5/10/2011	AU226391
AU	Issued	MODULAR LED ROADWAY LAMP CONTROLLER AND SOLID STATE LIGHTING DEVICE FOR LARGE AREA APPLICATIONS	DES-DESIGN	11945/2011	4/12/2011	5/10/2011	AU336392
TW	Issued	CONTROLLER AND SOLID STATE LIGHTING DEVICE FOR LARGE AREA APPLICATIONS	ORD-UTILITY PATENT FILING	101116054	5/4/2012	3/21/2017	TW1576004

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
EP	Filed	CONTROLLER AND SOLID STATE LIGHTING DEVICE FOR LARGE AREA APPLICATIONS	PCT-PATENT COOPERATION TREATY	12719888.5	10/23/2013		
CN	Issued	CONTROLLER AND SOLID STATE LIGHTING DEVICE FOR LARGE AREA APPLICATIONS	PCT-PATENT COOPERATION TREATY	201280022077.8	11/6/2013	5/18/2016	CN103503565
JP	Issued	CONTROLLER AND SOLID STATE LIGHTING DEVICE FOR LARGE AREA APPLICATIONS	PCT-PATENT COOPERATION TREATY	2014-509426	10/30/2013	9/2/2016	JP5998205
KR	Filed	CONTROLLER AND SOLID STATE LIGHTING DEVICE FOR LARGE AREA APPLICATIONS	PCT-PATENT COOPERATION TREATY	1020137029273	11/5/2013		
AU	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	PCT-PATENT COOPERATION TREATY	2011293537	1/2/2013	12/4/2014	AU2011293537
NL	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	EPP-EUROPEAN PATENT - PCT ORIGINATED	11761421.4	2/20/2013	10/12/2016	EP2609367
GB	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	EPP-EUROPEAN PATENT - PCT ORIGINATED	11761421.4	2/20/2013	10/12/2016	EP2609367
DE	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	EPP-EUROPEAN PATENT - PCT ORIGINATED	11761421.4	2/20/2013	10/12/2016	EP2609367
FR	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	EPP-EUROPEAN PATENT - PCT ORIGINATED	11761421.4	2/20/2013	10/12/2016	EP2609367
US	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	ORD-UTILITY PATENT FILING	13/212565	8/18/2011	8/13/2013	US8506105
BR	Filed	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	PCT-PATENT COOPERATION TREATY	112013004175-7	2/22/2013		
MX	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	PCT-PATENT COOPERATION TREATY	MX/a/2013/002057	2/20/2013	5/12/2014	MX320061

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	PCT-PATENT COOPERATION TREATY	201180041022.7	2/25/2013	5/11/2016	CN103052846
JP	Issued	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	PCT-PATENT COOPERATION TREATY	2013-526078	2/13/2013	1/22/2016	JP5873872
IN	Filed	THERMAL MANAGEMENT SYSTEMS FOR SOLID STATE LIGHTING AND OTHER ELECTRONIC SYSTEMS	PCT-PATENT COOPERATION TREATY	360/DELNP/2013	1/11/2013		
US	Issued	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	ORD-UTILITY PATENT FILING	13/047914	3/15/2011	6/11/2013	US8461774
GB	Issued	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	EPP-EUROPEAN PATENT - PCT ORIGINATED	12716103.2	10/3/2013	8/26/2015	EP2686944
NL	Issued	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	EPP-EUROPEAN PATENT - PCT ORIGINATED	12716103.2	10/3/2013	8/26/2015	EP2686944
CN	Issued	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	PCT-PATENT COOPERATION TREATY	201280013208.6	9/13/2013	8/17/2016	CN103493348
KR	Filed	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	PCT-PATENT COOPERATION TREATY	1020137024404	9/13/2013		
JP	Issued	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	PCT-PATENT COOPERATION TREATY	2013-558024	9/6/2013	9/11/2017	JP6200810
MX	Issued	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	PCT-PATENT COOPERATION TREATY	MX/a/2013/010567	9/13/2013	9/9/2014	MX323549
BR	Filed	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	PCT-PATENT COOPERATION TREATY	112013021955-6	8/28/2013		
DE	Issued	LIGHTING POWER CIRCUIT WITH PEAK CURRENT LIMITER FOR EMI FILTER	EPP-EUROPEAN PATENT - PCT ORIGINATED	12716103.2	10/3/2013	8/26/2015	EP2686944

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	SELF-DIMMING OLED LIGHTING SYSTEM AND CONTROL METHOD	ORD-UTILITY PATENT FILING	13/101452	5/5/2011	11/19/2013	US8587215
TW	Issued	SELF-DIMMING OLED LIGHTING SYSTEM AND CONTROL METHOD	ORD-UTILITY PATENT FILING	101116066	5/4/2012	10/21/2016	TW1555433
EP	Filed	SELF-DIMMING OLED LIGHTING SYSTEM AND CONTROL METHOD	PCT-PATENT COOPERATION TREATY	12719887.7	10/23/2013		
CN	Issued	SELF-DIMMING OLED LIGHTING SYSTEM AND CONTROL METHOD	PCT-PATENT COOPERATION TREATY	201280021925.3	11/5/2013	1/20/2016	CNZL201280021925.3
JP	Filed	SELF-DIMMING OLED LIGHTING SYSTEM AND CONTROL METHOD	PCT-PATENT COOPERATION TREATY	2014-509422	10/31/2013	4/28/2017	JP6132834
KR	Filed	SELF-DIMMING OLED LIGHTING SYSTEM AND CONTROL METHOD	PCT-PATENT COOPERATION TREATY	1020137029342	11/5/2013		
US	Filed	ISOLATED CAPACITOR DRIVE CIRCUIT FOR THIN-FILM SOLID-STATE LIGHTING	PRI-PRIORITY APPLICATION	13/105328	5/11/2011		
TW	Issued	ISOLATED CAPACITOR DRIVE CIRCUIT FOR THIN-FILM SOLID-STATE LIGHTING	ORD-UTILITY PATENT FILING	101116979	5/11/2012	5/1/2017	TW1581659
EP	Filed	PHOSPHOR PRECURSOR COMPOSITION	PCT-PATENT COOPERATION TREATY	12737677	1/9/2014		
KR	Filed	PHOSPHOR PRECURSOR COMPOSITION	PCT-PATENT COOPERATION TREATY	2014-7001190	1/16/2014		
US	Issued	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PRI-PRIORITY APPLICATION	13/196124	8/2/2011	10/1/2013	US8547019
WO	Filed	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST	ORD-UTILITY PATENT FILING	PCT/US2012/046438	7/12/2012		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
		MISWIRING IN A LAMP CONTROLLER					
		LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	2012290613	1/21/2014	1/7/2016	AU2012290613
AU	Issued	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	2012290613	1/21/2014	1/7/2016	AU2012290613
BR	Filed	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	112014002209-7	1/29/2014		
CA	Filed	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	2843143	1/24/2014		
CN	Issued	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	201280037912.5	1/28/2014	10/12/2016	CN103733732
EP	Filed	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	12746156.4	2/3/2014		
KR	Filed	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	2014-7002449	1/28/2014		
MX	Issued	LAMP ASSEMBLY AND CIRCUITS FOR PROTECTION AGAINST MISWIRING IN A LAMP CONTROLLER	PCT-PATENT COOPERATION TREATY	MX/a/2014/001340	1/31/2014	3/2/2015	MX328196
US	Issued	HIGH VOLTAGE LED AND DRIVER	PRI-PRIORITY APPLICATION	13/183879	7/15/2011	6/16/2015	US9060397
CN	Issued	HIGH VOLTAGE LED AND DRIVER	PCT-PATENT COOPERATION TREATY	201280035190.X	1/15/2014	10/12/2016	CN103650639

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CA	Filed	HIGH VOLTAGE LED AND DRIVER	PCT-PATENT COOPERATION TREATY	2841460	1/10/2014		
KR	Filed	HIGH VOLTAGE LED AND DRIVER	PCT-PATENT COOPERATION TREATY	2014-7000990	1/14/2014		
MX	Issued	HIGH VOLTAGE LED AND DRIVER	PCT-PATENT COOPERATION TREATY	MX/a/2014/000618	1/15/2014	6/11/2015	MX330747
BR	Filed	HIGH VOLTAGE LED AND DRIVER	PCT-PATENT COOPERATION TREATY	112014000628-8	1/10/2014		
AU	Issued	HIGH VOLTAGE LED AND DRIVER	PCT-PATENT COOPERATION TREATY	2012284336	1/8/2014	11/19/2015	AU2012284336
US	Issued	MULTIMODE DAYLIGHT SENSOR	PDS-PRIORITY DESIGN APPLICATION	29/402501	9/23/2011	3/26/2013	USD678793
US	Issued	MULTIMODE DAYLIGHT SENSOR	DDV-DESIGN DIVISIONAL	29/439301	12/10/2012	11/19/2013	USD693717
US	Issued	LED LIGHT MODULE FOR BACKLIGHTING	ORD-UTILITY PATENT FILING	13/434079	3/29/2012	6/16/2015	US9057498
CN	Issued	LED LIGHT MODULE FOR BACKLIGHTING	ORD-UTILITY PATENT FILING	201210289671.5	8/15/2012	7/6/2016	CN102954406
EP	Filed	LED LIGHT MODULE FOR BACKLIGHTING	ORD-UTILITY PATENT FILING	12179956.3	8/9/2012		
US	Issued	LED POWER SOURCE WITH OVER-VOLTAGE PROTECTION	PRI-PRIORITY APPLICATION	13/299020	11/17/2011	5/13/2014	US8723428
CA	Filed	LED POWER SOURCE WITH OVERVOLTAGE PROTECTION	PCT-PATENT COOPERATION TREATY	2856221	5/16/2014		



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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Issued	LED POWER SOURCE WITH OVERVOLTAGE PROTECTION	PCT-PATENT COOPERATION TREATY	201280067350.9	7/17/2014	2/22/2017	CN104040860
EP	Filed	LED POWER SOURCE WITH OVERVOLTAGE PROTECTION	PCT-PATENT COOPERATION TREATY	12788333.8	6/5/2014		
MX	Issued	LED POWER SOURCE WITH OVERVOLTAGE PROTECTION	PCT-PATENT COOPERATION TREATY	MX/a/2014/006036	5/16/2014	3/23/2016	MX337927
US	Issued	MULTIMODE SENSOR	PDS-PRIORITY DESIGN APPLICATION	29/402499	9/23/2011	7/31/2012	USD664460
US	Issued	CONTROLLER DEVICE	CIP-CONTINUATION IN PART	13/588492	8/17/2012	10/21/2014	US8864514
WO	Filed	CONTROLLER DEVICE	ORD-UTILITY PATENT FILING	PCT/US13/050174	7/12/2013		
CN	Issued	DEVICE FOR FAILURE PROTECTION IN LIGHTING DEVICES HAVING LIGHT EMITTING DIODES	PCT-PATENT COOPERATION TREATY	201180076237.2	7/10/2014	12/21/2016	CN104025712
CA	Filed	DEVICE FOR FAILURE PROTECTION IN LIGHTING DEVICES HAVING LIGHT EMITTING DIODES	PCT-PATENT COOPERATION TREATY	2857527	5/30/2014		
EP	Filed	DEVICE FOR FAILURE PROTECTION IN LIGHTING DEVICES HAVING LIGHT EMITTING DIODES	PCT-PATENT COOPERATION TREATY	11875405	6/4/2014		
US	Issued	PHOSPHORS FOR LED LAMPS	PRI-PRIORITY APPLICATION	13/432461	3/28/2012	8/13/2013	US8506104
US	Issued	SOLUTION FOR DYNAMIC LIGHTING CONTROL	PRI-PRIORITY APPLICATION	13/421357	3/15/2012	10/28/2014	US8872432
EP	Filed	SOLUTION FOR DYNAMIC LIGHTING CONTROL	PCT-PATENT COOPERATION TREATY	13707981	10/10/2014		

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
AU	Issued	SOLUTION FOR DYNAMIC LIGHTING CONTROL	PCT-PATENT COOPERATION TREATY	2013232622	10/1/2014	9/1/2016	AU2013232622
KR	Filed	SOLUTION FOR DYNAMIC LIGHTING CONTROL	PCT-PATENT COOPERATION TREATY	1020147028646	10/13/2014		
CN	Issued	SOLUTION FOR DYNAMIC LIGHTING CONTROL	PCT-PATENT COOPERATION TREATY	201380025253.8	11/14/2014	10/12/2016	CN104285503
US	Issued	LIGHTING SYSTEM HAVING AN OLED LIGHT SENSOR	PRI-PRIORITY APPLICATION	13/431639	3/27/2012	3/4/2014	US8664865
US	Issued	CURRENT SPLIT CIRCUIT FOR EQUALLY SPLITTING CURRENT BETWEEN PARALLEL CONNECTED LED LUMINAIRE STRINGS	PRI-PRIORITY APPLICATION	13/786768	3/6/2013	8/25/2015	US9119258
TW	Issued	CURRENT SPLIT CIRCUIT FOR EQUALLY SPLITTING CURRENT BETWEEN PARALLEL CONNECTED LED LUMINAIRE STRINGS	ORD-UTILITY PATENT FILING	103105712	2/20/2014	9/21/2017	TW1600345
EP	Filed	CURRENT SPLIT CIRCUIT FOR EQUALLY SPLITTING CURRENT BETWEEN PARALLEL CONNECTED LED LUMINAIRE STRINGS	PCT-PATENT COOPERATION TREATY	14702739.5	9/3/2015		
CN	Issued	CURRENT SPLIT CIRCUIT FOR EQUALLY SPLITTING CURRENT BETWEEN PARALLEL CONNECTED LED LUMINAIRE STRINGS	PCT-PATENT COOPERATION TREATY	201480012177.1	9/2/2015	5/31/2017	CN105027675
KR	Filed	CURRENT SPLIT CIRCUIT FOR EQUALLY SPLITTING CURRENT BETWEEN PARALLEL CONNECTED LED LUMINAIRE STRINGS	PCT-PATENT COOPERATION TREATY	10-2015-7025323	9/15/2015		
MX	Issued	CURRENT SPLIT CIRCUIT FOR EQUALLY SPLITTING CURRENT BETWEEN PARALLEL CONNECTED LED LUMINAIRE STRINGS	PCT-PATENT COOPERATION TREATY	MX/A/2015/011495	9/21/2015	5/30/2017	MX348235

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
BR	Filed	CURRENT SPLIT CIRCUIT FOR EQUALLY SPLITTING CURRENT BETWEEN PARALLEL CONNECTED LED LUMINAIRE STRINGS	PCT-PATENT COOPERATION TREATY	112015021460-6	9/3/2015		
US	Issued	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PRI-PRIORITY APPLICATION	13/649280	10/11/2012	11/10/2015	US9185766
BR	Filed	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	112015008213-0	4/13/2015		
CA	Filed	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	2890186	5/1/2015		
TW	Issued	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	ORD-UTILITY PATENT FILING	102136834	10/11/2013	3/21/2018	TW1619404
EP	Filed	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	13785981.5	4/17/2015		
JP	Filed	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	2015-536823	4/13/2015		
CN	Issued	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	201380064873.2	6/11/2015	9/14/2016	CN104838726
KR	Filed	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	10-20157012348	5/11/2015		
AU	Issued	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	20133329535	4/29/2015	6/8/2017	AU20133329535
MX	Issued	ROLLING BLACKOUT ADJUSTABLE COLOR LED ILLUMINATION SOURCE	PCT-PATENT COOPERATION TREATY	MX/a/2015/004683	4/13/2015	6/20/2017	MX348587
US	Issued	OVERHEAD OCCUPANCY SENSOR	PRI-PRIORITY APPLICATION	13/528269	6/20/2012	12/2/2014	US8901496

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Issued	OVERHEAD OCCUPANCY SENSOR	ORD-UTILITY PATENT FILING	201310245945.5	6/20/2013	9/1/2017	CN103512594
EP	Filed	ANTENNA SENSOR	PCT-PATENT COOPERATION TREATY	13776899	5/13/2015		
CN	Issued	ANTENNA SENSOR	PCT-PATENT COOPERATION TREATY	201380057505.5	4/30/2015	2/16/2018	CN104885295
KR	Filed	ANTENNA SENSOR	PCT-PATENT COOPERATION TREATY	10-2015-7014529	6/1/2015		
MX	Issued	ANTENNA SENSOR	PCT-PATENT COOPERATION TREATY	MX/A/2015/005583	4/30/2015	8/2/2017	MX349564
BR	Filed	ANTENNA SENSOR	PCT-PATENT COOPERATION TREATY	112015009907-6	4/30/2015		
US	Filed	ANTENNA SENSOR	CON-CONTINUATION	15/354551	11/17/2016		
US	Issued	PIVOTING HEAT SINK FOR LED LUMINAIRE	PRI-PRIORITY APPLICATION	13/899718	5/22/2013	10/27/2015	US9170014
EP	Filed	PIVOTING HEAT SINK FOR LED LUMINAIRE	ORD-UTILITY PATENT FILING	14170803.2	6/2/2014		
US	Filed	COMPOSITE MATERIALS HAVING RED EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	15/231026	8/8/2016		
WO	Filed	COMPOSITE MATERIALS HAVING RED EMITTING PHOSPHORS STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT	ORD-UTILITY PATENT FILING	PCT/US2017/051705	9/15/2017		

**Patents of Current Lighting Solutions, LLC**

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
		COMPOSITE MATERIALS HAVING RED EMITTING PHOSPHORS STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH AND DEVELOPMENT	ORD-UTILITY PATENT FILING		9/14/2017		
TW	Filed	A LIGHTING ASSEMBLY, APPARATUS AND ASSOCIATED METHOD FOR MAINTAINING LIGHT INTENSITIES	ORD-UTILITY PATENT FILING	106131582			
TW	Filed	A LIGHTING ASSEMBLY, APPARATUS AND ASSOCIATED METHOD FOR MAINTAINING LIGHT INTENSITIES	ORD-UTILITY PATENT FILING	103119886	6/9/2014		
EP	Filed	A LIGHTING ASSEMBLY, APPARATUS AND ASSOCIATED METHOD FOR MAINTAINING LIGHT INTENSITIES	PCT-PATENT COOPERATION TREATY	14736521.7	1/13/2016		
CN	Filed	A LIGHTING ASSEMBLY, APPARATUS AND ASSOCIATED METHOD FOR MAINTAINING LIGHT INTENSITIES	PCT-PATENT COOPERATION TREATY	201480042654.9	1/28/2016		
US	Issued	METHOD AND SYSTEM FOR CONTROLLING COLOR CHARACTERISTICS OF ONE OR MORE ILLUMINATION DEVICES	PRI-PRIORITY APPLICATION	14/087609	11/22/2013	9/29/2015	US9147240
US	Issued	A LIGHT EMITTING DIODE (LED) LAMP REPLACEMENT DRIVER FOR LINEAR FLUORESCENT LAMPS	PRI-PRIORITY APPLICATION	13/939245	7/11/2013	6/28/2016	US9380654B2
TW	Issued	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT DRIVER FOR LINEAR FLUORESCENT LAMPS	ORD-UTILITY PATENT FILING	103123309	7/7/2014	4/1/2018	TW1620464
CN	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT DRIVER FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	201480039568.2	1/11/2016		
JP	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT DRIVER FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	2016-525440	1/6/2016		
CA	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT DRIVER FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	2917760	1/7/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
BR	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT DRIVER FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	112016000425-6	1/8/2016		
EP	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT DRIVER FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	14744410.3	1/14/2016		
US	Issued	A LIGHT EMITTING DIODE (LED) LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PRE-PRIORITY APPLICATION	13/721452	12/20/2012	10/14/2014	US8858019
BR	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	112015013295-2	6/8/2015		
CA	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	2893956	6/4/2015		
CN	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	201380067619.8	6/23/2015		
EP	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	13821541.3	6/10/2015		
JP	Issued	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	2015-549512	6/17/2015	1/5/2018	JP6266649
KR	Filed	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	10-2015-7019720	7/20/2015		
MX	Issued	A LIGHT EMITTING DIODE LED LAMP REPLACEMENT SAFETY SWITCH FOR LINEAR FLUORESCENT LAMPS	PCT-PATENT COOPERATION TREATY	MX/A/2015/008030	6/19/2015	8/29/2016	MX341689

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
		DIMMABLE LED WITH CONSTANT VOLTAGE AND ADDITIONAL CONSTANT CURRENT DRIVING CIRCUIT	PRI-PRIORITY APPLICATION	201210511039	12/4/2012	1/9/2018	CN103857127
CN	Issued	DIMMABLE LED WITH CONSTANT VOLTAGE PLUS CONSTANT CURRENT DRIVE CIRCUITRY	ORD-UTILITY PATENT FILING	102142724	11/22/2013	12/1/2017	TW1607667
TW	Issued	BOOST CONVERTER OF DRIVER CIRCUIT WITH THERMAL COMPENSATION	PRI-PRIORITY APPLICATION	13/652619	10/16/2012	12/8/2015	US9210758
US	Issued	BOOST CONVERTER OF DRIVER CIRCUIT WITH THERMAL COMPENSATION	ORD-UTILITY PATENT FILING	201310484695	10/16/2013		
CN	Filed	BOOST CONVERTER OF DRIVER CIRCUIT WITH THERMAL COMPENSATION	ORD-UTILITY PATENT FILING	2829235	10/3/2013		
CA	Filed	BOOST CONVERTER OF DRIVER CIRCUIT WITH THERMAL COMPENSATION	ORD-UTILITY PATENT FILING	MX/a/2013/012081	10/16/2013	6/3/2016	MX339672
MX	Issued	BOOST CONVERTER OF DRIVER CIRCUIT WITH THERMAL COMPENSATION	ORD-UTILITY PATENT FILING	102013026569-1	10/15/2013		
BR	Filed	Relay Soft-switching Methodology	PRI-PRIORITY APPLICATION	13/975430	8/26/2013	8/23/2016	US9425011B2
US	Issued	DIMMER WITH PHOTO SENSOR AND HIGH/LOW CLAMPING	PCT-PATENT COOPERATION TREATY	15/127048	9/19/2016	2/13/2018	US9894742
US	Issued	A PROGRAMMABLE LIGHT EMITTING DIODE (LED) DRIVER TECHNIQUE BASED UPON AN INPUT VOLTAGE SIGNAL	PRI-PRIORITY APPLICATION	13/942727	7/16/2013	9/8/2015	US9131578
US	Issued	A PROGRAMMABLE LIGHT EMITTING DIODE LED DRIVER TECHNIQUE BASED UPON AN INPUT VOLTAGE SIGNAL	PCT-PATENT COOPERATION TREATY	201480051030.3	3/16/2016	10/27/2017	CN105519236
CN	Issued						

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CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	Programmable LED Driver	PRI-PRIORITY APPLICATION	13/942728	7/16/2013	11/3/2015	US9179527
CN	Issued	A PROGRAMMABLE LIGHT EMITTING DIODE LED DRIVER TECHNIQUE BASED UPON A PREFIX SIGNAL	PCT-PATENT COOPERATION TREATY	201480051025.2	3/16/2016	2/23/2018	CN105519238
US	Filed	LIGHTING AUDIT DOCKING STATION DEVICE AND METHOD THEREOF	CON-CONTINUATION	15/418648	1/27/2017		
US	Issued	Lighting System with Improved Illumination Distribution	PRI-PRIORITY APPLICATION	13/969361	8/16/2013	6/2/2015	US9046225
US	Issued	LIGHTING SYSTEM WITH IMPROVED ILLUMINATION DISTRIBUTION	CON-CONTINUATION	14/726058	5/29/2015	5/23/2017	US9658385
US	Issued	SYSTEM AND METHOD OF COMPENSATING POWER FACTOR FOR ELECTRICAL LOADS	PRI-PRIORITY APPLICATION	14/164416	1/27/2014	5/2/2017	US9641063
CA	Filed	SYSTEM AND METHOD OF COMPENSATING POWER FACTOR FOR ELECTRICAL LOADS	PCT-PATENT COOPERATION TREATY	2937631	7/21/2016		
CN	Filed	SYSTEM AND METHOD OF COMPENSATING POWER FACTOR FOR ELECTRICAL LOADS	PCT-PATENT COOPERATION TREATY	201580006040	7/27/2016		
MX	Issued	SYSTEM AND METHOD OF COMPENSATING POWER FACTOR FOR ELECTRICAL LOADS	PCT-PATENT COOPERATION TREATY	MX/A/2016/009714	7/26/2016	12/7/2017	MX352790
BR	Filed	SYSTEM AND METHOD OF COMPENSATING POWER FACTOR FOR ELECTRICAL LOADS	PCT-PATENT COOPERATION TREATY	112016015942-0	7/8/2016		
US	Issued	TWO-STAGE LED DRIVER WITH BUCK PFC AND IMPROVED THD	PRI-PRIORITY APPLICATION	14/042796	10/1/2013	2/17/2015	US8957600
US	Issued	Arrangement for Switchable Output Current Flyback Converter	PRI-PRIORITY APPLICATION	14/042786	10/1/2013	3/29/2016	US9301350B2



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	SYSTEM AND METHOD FOR ACHIEVING PRECISE REGULATION OF MULTIPLE OUTPUTS IN A MULTI-RESONANT LED DRIVER STAGE	PRI-PRIORITY APPLICATION	14/328909	7/11/2014	2/28/2017	US9585207B2
CN	Filed	CIRCUIT PROTECTION DEVICE	PRI-PRIORITY APPLICATION	201410817141.2	12/19/2014		
US	Filed	A DEVICE AND SYSTEM FOR LED LINEAR FLUORESCENT TUBE LAMP DRIVER	PRI-PRIORITY APPLICATION	14/132059	12/18/2013		
EP	Filed	A DEVICE AND SYSTEM FOR LED LINEAR FLUORESCENT TUBE LAMP DRIVER	PCT-PATENT COOPERATION TREATY	14809263.8	6/16/2016		
CN	Filed	A DEVICE AND SYSTEM FOR LED LINEAR FLUORESCENT TUBE LAMP DRIVER	PCT-PATENT COOPERATION TREATY	201480069594.X	6/17/2016		
KR	Filed	A DEVICE AND SYSTEM FOR LED LINEAR FLUORESCENT TUBE LAMP DRIVER	PCT-PATENT COOPERATION TREATY	10-2016-7018753	7/12/2016		
MX	Filed	A DEVICE AND SYSTEM FOR LED LINEAR FLUORESCENT TUBE LAMP DRIVER	PCT-PATENT COOPERATION TREATY	MX/A/2016/008129	6/17/2016		
BR	Filed	A DEVICE AND SYSTEM FOR LED LINEAR FLUORESCENT TUBE LAMP DRIVER	PCT-PATENT COOPERATION TREATY	112016014160-1	6/17/2016		
TR	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	2016/11424	8/15/2016		
SA	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	516371169	5/19/2016		
MX	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	MX/A/2016/006662	5/20/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
BR	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	112016011508-2	5/20/2016		
US	Issued	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	ORD-UTILITY PATENT FILING	14/546256	11/18/2014	5/9/2017	US9646495
CN	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	201480073799.5	7/21/2016		
AU	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	2014352751	5/20/2016		
SG	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	11201604028U	5/19/2016		
IN	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	201647019096	6/3/2016		
EP	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	14863711.9	6/6/2016		
AE	Filed	METHOD AND SYSTEM FOR TRAFFIC FLOW REPORTING, FORECASTING, AND PLANNING	PCT-PATENT COOPERATION TREATY	620/2016	5/22/2016		
US	Issued	CUSTOMIZABLE MODULAR LUMINAIRE	PRI-PRIORITY APPLICATION	14/068672	10/31/2013	1/17/2017	US9546776
US	Issued	Modular light fixture for outdoor lighting	CON-CONTINUATION	15/368716	12/5/2016	3/27/2018	US9927108
US	Issued	SYSTEMS AND METHODS FOR ATTACHING AND POSITIONING A SENSOR ON A LUMINAIRE FIXTURE	PRI-PRIORITY APPLICATION	14/513473	10/14/2014	9/13/2016	US9442215B2
US	Filed	SYSTEMS AND METHODS FOR CREATING A CONFIGURABLE LUMINAIRE FIXTURE	PRI-PRIORITY APPLICATION	14/304046	6/13/2014		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	AUTOMATIC COMMISSIONING OF DIGITAL ADDRESSABLE LIGHTING CONTROL SYSTEMS	PRI-PRIORITY APPLICATION	14/169885	1/31/2014	8/29/2017	US9747196
AU	Filed	AN AUTOMATIC COMMISSIONING OF DIGITAL ADDRESSABLE LIGHTING CONTROL SYSTEMS	PCT-PATENT COOPERATION TREATY	2015211306	7/29/2016		
EP	Filed	AN AUTOMATIC COMMISSIONING OF DIGITAL ADDRESSABLE LIGHTING CONTROL SYSTEMS	PCT-PATENT COOPERATION TREATY	15703186.5	8/9/2016		
US	Filed	METHODS FOR TOPOLOGY AND AUTOMATIC NEIGHBORHOOD DETECTION IN LIGHTING SYSTEM	PRI-PRIORITY APPLICATION	14/964486	12/9/2015		
US	Filed	COMMUNICATION SYSTEM FOR ADAPTIVE LIGHTING CONTROL	CON-CONTINUATION	15/581224	4/28/2017		
US	Issued	DIGITAL CONTROL METHOD FOR LOW OUTPUT DIMMING OF LIGHT EMITTING DIODE (LED) DRIVERS	PRI-PRIORITY APPLICATION	14/519701	10/21/2014	7/5/2016	US9386647B2
CN	Filed	LED DRIVING CIRCUIT	PRI-PRIORITY APPLICATION	201410039919.1	1/27/2014		
US	Issued	METHOD AND SYSTEM FOR LIGHTING INTERFACE MESSAGING WITH REDUCED POWER CONSUMPTION	PRI-PRIORITY APPLICATION	14/541470	11/14/2014	8/22/2017	US9743474
CN	Filed	METHOD AND SYSTEM FOR LIGHTING INTERFACE MESSAGING WITH REDUCED POWER CONSUMPTION	PCT-PATENT COOPERATION TREATY	201580073504.9	7/14/2017		
CN	Filed	LED DRIVING CIRCUIT AND PROTECTION CIRCUIT FOR DC/DC CONVERTOR	PRI-PRIORITY APPLICATION	201410654736	11/17/2014		
US	Filed	Protection circuit for a low cost LED driver.	PCT-PATENT COOPERATION TREATY	15/527206	5/16/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Filed	LUMINAIRE ASSOCIATE STATUS TRANSPONDER	ORD-UTILITY PATENT FILING	14/546408	11/18/2014		
MX	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	MX/A/2016/006666	5/20/2016		
SA	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	516371177	5/21/2016		
SG	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	11201604089W	5/20/2016		
TR	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	2016/11429	10/19/2016		
AU	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	2014352769	5/20/2016		
AE	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	624/2016	5/22/2016		
BR	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	112016011546-5	5/20/2016		
CN	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	201480073816.5	7/21/2016		
EP	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	14864958.5	6/6/2016		
IN	Filed	STREET LIGHTING COMMUNICATIONS, CONTROL, AND SPECIAL SERVICES	PCT-PATENT COOPERATION TREATY	201647018632	5/31/2016		
TR	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	2016/11458	8/15/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
SA	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	516371173	5/21/2016		
MX	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	MX/A/2016/006669	5/20/2016		
BR	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	112016011563-5	5/20/2016		
US	Issued	POWER LINE LUMINAIRE COMMUNICATIONS	ORD-UTILITY PATENT FILING	14/546856	11/18/2014	9/6/2016	US9439269B2
CN	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	201480073801.9	7/21/2016		
AU	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	2014352774	5/20/2016		
SG	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	11201604087P	5/20/2016		
IN	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	201647019114	6/3/2016		
EP	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	14864061.8	6/6/2016		
AE	Filed	POWERLINE LUMINAIRE COMMUNICATIONS	PCT-PATENT COOPERATION TREATY	619/2016	5/22/2016		
US	Issued	SYSTEM AND METHOD FOR MONITORING STREET LIGHTING LUMINAIRES	ORD-UTILITY PATENT FILING	14/484300	9/12/2014	8/16/2016	US9420674B2
MX	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	MX/A/2016/006664	5/20/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
SA	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	516371178	5/21/2016		
SG	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	11201604085V	5/20/2016		
TR	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	2016/11445	8/15/2016		
US	Issued	STREET LIGHTING CONTROL AND MONITORING SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	14/546916	11/18/2014	4/11/2017	US9621265
AU	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	2014352755	5/20/2016		
AE	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	625/2016	5/22/2016		
BR	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	112016011521-0	5/20/2016		
CN	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	201480073817.X	7/21/2016		
EP	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	14863951.1	6/6/2016		
IN	Filed	STREET LIGHTING CONTROL, MONITORING, AND DATA TRANSPORTATION SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	201647018622	5/31/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
TR	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	2016/11442	8/15/2016		
SA	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	516371183	5/22/2016		
MX	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	MX/A/2016/006671	5/20/2016		
BR	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	112016011593-7	5/20/2016		
US	Issued	GEOLOCATION AID SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	14/546954	11/18/2014	4/11/2017	US9622324
CN	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	201480073800.4	7/21/2016		
AU	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	2014352775	5/20/2016		
SG	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	11201604076V	5/20/2016		
IN	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	201647019056	6/3/2016		
EP	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	14863466	6/6/2016		
AE	Filed	GEOLOCATION AID SYSTEM AND METHOD	PCT-PATENT COOPERATION TREATY	622/2016	5/22/2016		
TR	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	2016/11437	8/15/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
SA	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	516371185	5/22/2016		
MX	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	MX/A/2016/006660	5/20/2016		
BR	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	112016011543-0	5/20/2016		
US	Issued	EMERGENCY VEHICLE ALERT SYSTEM	ORD-UTILITY PATENT FILING	14/546982	11/18/2014	1/31/2017	US9560720
CN	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	201480073798	7/21/2016		
AU	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	2014352747	5/20/2016		
SG	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	11201604073Q	5/20/2016		
IN	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	201647019084	6/3/2016		
EP	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	14863718.4	6/6/2016		
AE	Filed	EMERGENCY VEHICLE ALERT SYSTEM	PCT-PATENT COOPERATION TREATY	621/2016	5/22/2016		
US	Filed	ILLUMINATION DEVICE HAVING A LIGHT EMITTING SOURCE OPERATED VIA A CLAMPED SERIES RESONATOR CONVERTER	CIP-CONTINUATION IN PART	15628774	6/21/2017		
TR	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	2016/11453	8/15/2016		



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
SA	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	516371175	5/21/2016		
MX	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	MX/A/2016/006658	5/20/2016		
BR	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	112016011560-0	5/20/2016		
US	Issued	LUMINAIRE ASSOCIATE	CON-CONTINUATION	15/337582	10/28/2016	4/17/2018	US9945960
US	Issued	LUMINAIRE ASSOCIATE	ORD-UTILITY PATENT FILING	14/543892	11/18/2014	4/11/2017	US9622323
CN	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	201480073818.4	7/21/2016		
AU	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	2014353107	5/20/2016		
SG	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	11201604088Q	5/20/2016		
IN	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	201647018633	5/31/2016		
EP	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	14809562.3	6/6/2016		
AE	Filed	LUMINAIRE ASSOCIATE	PCT-PATENT COOPERATION TREATY	623/2016	5/22/2016		
US	Issued	TWO-STAGE LED DRIVER WITH BUCK PFC AND IMPROVED THD	PRI-PRIORITY APPLICATION	14/042791	10/1/2013	11/29/2016	US9510403B2

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	TWO-STAGE AC-DC POWER CONVERTER WITH SELECTABLE DUAL OUTPUT CURRENT	PRI-PRIORITY APPLICATION	14/042810	10/1/2013	5/3/2016	US9332601B2
US	Issued	SINGLE-STAGE AC-DC POWER CONVERTER WITH FLYBACK PFC AND IMPROVED THD	PRI-PRIORITY APPLICATION	14/042794	10/1/2013	10/20/2015	US9166483
US	Issued	SINGLE-STAGE AC-DC POWER CONVERTER WITH FLYBACK PFC AND SELECTABLE DUAL OUTPUT CURRENT	PRI-PRIORITY APPLICATION	14/042802	10/1/2013	6/28/2016	US9380655B2
US	Issued	DIGITAL ADDRESSABLE LIGHTING INTERFACE SHORT PROTECTION CIRCUIT	PRI-PRIORITY APPLICATION	14/469787	8/27/2014	4/18/2017	US9629222
WO	Filed	DIGITAL ADDRESSABLE LIGHTING INTERFACE SHORT PROTECTION CIRCUIT	ORD-UTILITY PATENT FILING	PCT/US2015/040678	7/16/2015		
EP	Filed	DIGITAL ADDRESSABLE LIGHTING INTERFACE SHORT PROTECTION CIRCUIT	PCT-PATENT COOPERATION TREATY	15742509.1	3/16/2017		
US	Issued	MICROCONTROLLER BURST MODE TO MAINTAIN VOLTAGE SUPPLY DURING STANDBY MODE OF A LIGHTING SYSTEM	PRI-PRIORITY APPLICATION	14/519846	10/21/2014	6/28/2016	US9380664B2
US	Issued	Gate voltage threshold turn off to maintain VDD during DALI RX/TX in sleep mode	PRI-PRIORITY APPLICATION	14/537361	11/10/2014	1/10/2017	US9544972
US	Issued	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PRI-PRIORITY APPLICATION	14/322047	7/2/2014	5/10/2016	US9335011B2
JP	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2016-575165	12/22/2016		
KR	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	1020177003039	2/2/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
MX	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	MX/A/2016/017072	12/19/2016		
MY	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	PI 2016704300	11/21/2016		
PL	Unfiled	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY				
TH	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	1601007485	12/15/2016		
TW	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	ORD-UTILITY PATENT FILING	104121529	7/2/2015		
AU	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2015284080	12/23/2016		
BR	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	112016029275-8	12/14/2016		
CA	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2953561	12/22/2016		
CN	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	201580035979.9	12/30/2016		
EP	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	15744761.6	12/9/2016		
IN	Filed	OXYFLUORIDE PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	201747002286	1/20/2017		
US	Issued	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PRI-PRIORITY APPLICATION	14/322076	7/2/2014	5/3/2016	US9328878B2

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
BR	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	112016029420-3	12/15/2016		
AU	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2015284531	12/23/2016		
MY	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	PI 2016704516	12/5/2016		
IN	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	201747002287	1/20/2017		
TH	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	1601007445	12/14/2016		
PH	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	12016502454	12/12/2016		
TW	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	ORD-UTILITY PATENT FILING	104120953	6/29/2015		
EP	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	15736109.8	12/9/2016		
CN	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	201580035901.7	12/30/2016		
JP	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2016-574272	12/20/2016		
KR	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	1020177003040	2/2/2017		
CA	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2953501	12/22/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
MX	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	MX/A/2016/017104	12/19/2016		
US	Filed	MODULAR METHOD OF MANUFACTURING WAVEGUIDE FOR LIGHTING SYSTEM	PRI-PRIORITY APPLICATION	14/955632	12/1/2015		
CN	Filed	CIRCUIT AND METHOD FOR A RESONANT TANK	PRI-PRIORITY APPLICATION	201410528345.4	10/9/2014		
US	Issued	AN ELECTRONIC DRIVER FOR AN ILLUMINATION DEVICE AND METHOD OF OPERATING THEREOF	PRI-PRIORITY APPLICATION	14/949980	11/24/2015	12/20/2016	US9526136B1
WO	Filed	AN ELECTRONIC DRIVER FOR AN ILLUMINATION DEVICE AND METHOD OF OPERATING THEREOF	ORD-UTILITY PATENT FILING	PCT/US2016/057256	10/17/2016		
IN	Filed	AN ENERGY METERING SYSTEM AND AN ASSOCIATED METHOD THEREOF	PRI-PRIORITY APPLICATION	4209/CHE/2015	8/12/2015		
US	Issued	ELECTRONIC DRIVER FOR CONTROLLING AN ILLUMINATION DEVICE	PRI-PRIORITY APPLICATION	14/953451	11/30/2015	8/23/2016	US9426854B1
US	Issued	form design of aesthetic outdoor luminaire	PDS-PRIORITY DESIGN APPLICATION	29/499514	8/15/2014	12/1/2015	USD744688
EM	Issued	form design of aesthetic outdoor luminaire	DES-DESIGN	2639214	2/13/2015	2/13/2015	EM002633214
TR	Issued	form design of aesthetic outdoor luminaire	DES-DESIGN	2015/01109	2/13/2015	2/13/2015	TR201501109
CN	Issued	form design of aesthetic outdoor luminaire	DES-DESIGN	201530047966.6	2/16/2015	9/30/2015	CN201530047966.6
TW	Issued	form design of aesthetic outdoor luminaire	DES-DESIGN	104300842	2/13/2015	11/21/2015	TWD172016

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
KR	Issued	form design of aesthetic outdoor luminaire	DES-DESIGN	3020150007972	2/13/2015	1/21/2016	KR30-0836867
MX	Issued	form design of aesthetic outdoor luminaire	DES-DESIGN	MX/F/2015/000519	2/13/2015	2/8/2016	MX46284
BR	Issued	form design of aesthetic outdoor luminaire	DES-DESIGN	302015000739-7	2/13/2015	6/14/2016	BR302015000739-7
US	Filed	EXTENSION INTERFACE FOR LUMINAIRES	ORD-UTILITY PATENT FILING	14/809182	7/25/2015		
WO	Filed	EXTENSION INTERFACE FOR LUMINAIRES	ORD-UTILITY PATENT FILING	PCT/US15/46481	8/24/2015		
TW	Filed	EXTENSION INTERFACE FOR LUMINAIRES	ORD-UTILITY PATENT FILING	104127803	8/25/2015		
TW	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	ORD-UTILITY PATENT FILING	105115178	5/17/2016		
US	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	15/566061	10/12/2017		
US	Filed	LED OUTDOOR FIXTURE IN PLASTIC HOUSING WITH OUTER FRAME	ORD-UTILITY PATENT FILING	14/934305	11/6/2015		
CN	Filed	LED OUTDOOR FIXTURE IN PLASTIC HOUSING WITH OUTER FRAME	PCT-PATENT COOPERATION TREATY	201580067364.4	6/9/2017		
JP	Filed	LED OUTDOOR FIXTURE IN PLASTIC HOUSING WITH OUTER FRAME	PCT-PATENT COOPERATION TREATY	2017-529324	6/1/2017		
EP	Filed	LED OUTDOOR FIXTURE IN PLASTIC HOUSING WITH OUTER FRAME	PCT-PATENT COOPERATION TREATY	15798660.5	5/26/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	SYSTEM AND PROCESSES FOR COMMISSIONING INDOOR INDUSTRIAL LIGHTING	PRI-PRIORITY APPLICATION	14/865350	9/25/2015	4/17/2018	US9949347
US	Filed	LIGHTING SYSTEM WITH IMPROVED ILLUMINATION DISTRIBUTION AND OUTPUT LUMINANCE VARIATION	PRI-PRIORITY APPLICATION	14/736081	6/10/2015		
US	Issued	IMAGE SENSOR CONTROLLED LIGHTING FIXTURE	PRI-PRIORITY APPLICATION	14/937408	11/10/2015	3/27/2018	US9930752
AU	Filed	IMAGE SENSOR CONTROLLED LIGHTING FIXTURE	ORD-UTILITY PATENT FILING	2016256752	11/10/2016		
BR	Filed	IMAGE SENSOR CONTROLLED LIGHTING FIXTURE	ORD-UTILITY PATENT FILING	102016026186-4	11/9/2016		
CA	Filed	IMAGE SENSOR CONTROLLED LIGHTING FIXTURE	ORD-UTILITY PATENT FILING	2947808	11/7/2016		
GB	Filed	IMAGE SENSOR CONTROLLED LIGHTING FIXTURE	ORD-UTILITY PATENT FILING	1618724.7	11/7/2016		
MX	Filed	IMAGE SENSOR CONTROLLED LIGHTING FIXTURE	ORD-UTILITY PATENT FILING	MX/A/2016/014707	11/9/2016		
US	Filed	METHOD AND SYSTEM FOR CONTROLLING AN ILLUMINATION DEVICE AND RELATED LIGHTING SYSTEM	PRI-PRIORITY APPLICATION	14/940833	11/13/2015		
WO	Filed	METHOD AND SYSTEM FOR CONTROLLING AN ILLUMINATION DEVICE AND RELATED LIGHTING SYSTEM	ORD-UTILITY PATENT FILING	PCT/US2016/061804	11/14/2016		
US	Filed	LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	PRI-PRIORITY APPLICATION	14/883613	10/14/2015		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
TW	Filed	A LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	ORD-UTILITY PATENT FILING	105131924	10/3/2016		
EP	Filed	A LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	PCT-PATENT COOPERATION TREATY	16782122.2	4/13/2018		
CA	Unfiled	A LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	PCT-PATENT COOPERATION TREATY				
MX	Filed	A LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	PCT-PATENT COOPERATION TREATY	MX/A/2018/004578	4/13/2018		
BR	Unfiled	A LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	PCT-PATENT COOPERATION TREATY				
AU	Filed	A LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	PCT-PATENT COOPERATION TREATY	2016338498	4/13/2018		
CN	Unfiled	A LUMINAIRE HAVING A BEACON AND A DIRECTIONAL ANTENNA	PCT-PATENT COOPERATION TREATY				
US	Issued	COMMISSIONING METHOD OF LIGHTING CONTROL SYSTEM USING VISUAL LIGHT COMMUNICATION	PRI-PRIORITY APPLICATION	14/866825	9/25/2015	5/15/2018	US9974146
US	Issued	SYSTEMS AND METHODS FOR CONTROLLING AND IMPROVING POWER CONVERTERS	PRI-PRIORITY APPLICATION	14/975349	12/18/2015	8/29/2017	US9748844
US	Issued	METHODS, APPARATUS, SYSTEM AND MEDIA FOR USE IN ASSOCIATION WITH LIGHTING SYSTEMS	PRI-PRIORITY APPLICATION	14/964107	12/9/2015	8/22/2017	US9743493
US	Issued	DRIVER CIRCUIT AND SWITCH DRIVING METHOD	PRI-PRIORITY APPLICATION	14/958411	12/3/2015	10/10/2017	US9787303



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
WO	Filed	DRIVER CIRCUIT AND SWITCH DRIVING METHOD	ORD-UTILITY PATENT FILING	PCT/US2016/062423	11/17/2016		
US	Filed	INDOOR POSITIONING SYSTEM USING BEACONS AND VIDEO ANALYTICS	PRI-PRIORITY APPLICATION	14/982584	12/29/2015		
US	Filed	MONITORING PARKING RULE VIOLATIONS	ORD-UTILITY PATENT FILING	15/099351	4/14/2016		
EP	Filed	MONITORING PARKING RULE VIOLATIONS	PCT-PATENT COOPERATION TREATY	16719646.8	10/17/2017		
MX	Filed	MONITORING PARKING RULE VIOLATIONS	PCT-PATENT COOPERATION TREATY	MX/A/2017/013401	10/17/2017		
CA	Filed	MONITORING PARKING RULE VIOLATIONS	PCT-PATENT COOPERATION TREATY	2984937	11/2/2017		
US	Issued	MULTI-FUNCTIONAL OPTICAL SENSOR FOR INDOOR LIGHTING SYSTEMS	PRI-PRIORITY APPLICATION	14/986022	12/31/2015	5/9/2017	US9648701
US	Issued	SYSTEMS AND METHODS FOR SAFETY AND PROXIMITY SENSING IN INDUSTRIAL ENVIRONMENTS	PRI-PRIORITY APPLICATION	14/977036	12/21/2015	5/16/2017	US9652962
US	Issued	SYSTEMS FOR PROVIDING EMERGENCY POWER DURING A POWER INTERRUPTION	PRI-PRIORITY APPLICATION	14/946817	11/20/2015	3/13/2018	US9917474
WO	Filed	SYSTEMS FOR PROVIDING EMERGENCY POWER DURING A POWER INTERRUPTION	ORD-UTILITY PATENT FILING	PCT/US2016/061736	11/14/2016		
US	Filed	CONTROLLED CONNECTING METHOD BETWEEN LUMINAIRE AND AUXILIARY DEVICE	ORD-UTILITY PATENT FILING	14/852512	9/12/2015		
US	Filed	HIGH VOLTAGE RESISTANT TRANSMITTING CIRCUIT FOR DEVICES COMMUNICATING ON DALI BUS	PRI-PRIORITY APPLICATION	14/972032	12/16/2015		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	WIRELESS CONNECTION OF SENSORS TO OUTDOOR LIGHTING SYSTEM	PRI-PRIORITY APPLICATION	15/146927	5/5/2016	8/29/2017	US9750110
US	Filed	WIRELESS CONNECTION OF SENSORS TO OUTDOOR LIGHTING SYSTEM	CON-CONTINUATION	15/660150	7/26/2017		
US	Filed	CONTROL SYSTEM FOR AN OUTDOOR COMMUNICATION SYSTEM	ORD-UTILITY PATENT FILING	15/368711	12/5/2016		
CA	Filed	CONTROL SYSTEM FOR AN OUTDOOR COMMUNICATION SYSTEM	ORD-UTILITY PATENT FILING	2951104	12/8/2016		
CN	Filed	CONTROL SYSTEM FOR AN OUTDOOR COMMUNICATION SYSTEM	ORD-UTILITY PATENT FILING	201611167774.9	12/16/2016		
EP	Filed	CONTROL SYSTEM FOR AN OUTDOOR COMMUNICATION SYSTEM	ORD-UTILITY PATENT FILING	16203318.7	12/9/2016		
US	Filed	AUXILIARY POWER FOR LUMINAIRE NODE CONTROLLERS	ORD-UTILITY PATENT FILING	15/480399	4/6/2017		
US	Issued	PROTECTION CIRCUIT ASSEMBLY AND METHOD	PRI-PRIORITY APPLICATION	14/960268	12/4/2015	10/31/2017	US9807846
AU	Filed	PROTECTION CIRCUIT ASSEMBLY AND METHOD	ORD-UTILITY PATENT FILING	2016266095	12/2/2016		
CA	Filed	PROTECTION CIRCUIT ASSEMBLY AND METHOD	ORD-UTILITY PATENT FILING	2950256	12/1/2016		
MX	Filed	PROTECTION CIRCUIT ASSEMBLY AND METHOD	ORD-UTILITY PATENT FILING	MX/A/2016/015993	12/2/2016		
BR	Filed	PROTECTION CIRCUIT ASSEMBLY AND METHOD	ORD-UTILITY PATENT FILING	102016028334-5	12/2/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Filed	PROTECTION CIRCUIT ASSEMBLY AND METHOD	ORD-UTILITY PATENT FILING	201611103335.1	12/5/2016		
US	Filed	DATA INTERFACE WITH OVERVOLTAGE PROTECTION FOR TWO-WAY DIGITAL CONTROL BUS SYSTEM	ORD-UTILITY PATENT FILING	15/201682	7/5/2016		
WO	Filed	DATA INTERFACE WITH OVERVOLTAGE PROTECTION FOR TWO-WAY DIGITAL CONTROL BUS SYSTEM	ORD-UTILITY PATENT FILING	PCT/US2017/017711	2/13/2017		
US	Filed	REVENUE GENERATING INTELLIGENT SYSTEM	PRI-PRIORITY APPLICATION	15/490039	4/18/2017		
US	Filed	POWER HANDLING SYSTEM AND METHOD	PRI-PRIORITY APPLICATION	15/073991	3/18/2016		
US	Filed	SYSTEMS AND METHODS FOR TRACKING LOCATION IN INDUSTRIAL FACILITIES	PRI-PRIORITY APPLICATION	15/233641	8/10/2016		
US	Filed	HEAT DISSIPATING REFLECTORS FOR LED LUMINAIRES	PRI-PRIORITY APPLICATION	15/092239	4/6/2016		
CN	Filed	HEAT DISSIPATING REFLECTORS FOR LED LUMINAIRES	ORD-UTILITY PATENT FILING	201710220740.X	4/6/2017		
JP	Filed	HEAT DISSIPATING REFLECTORS FOR LED LUMINAIRES	ORD-UTILITY PATENT FILING	2017-066515	3/30/2017		
EP	Filed	HEAT DISSIPATING REFLECTORS FOR LED LUMINAIRES	ORD-UTILITY PATENT FILING	17164348.9	3/31/2017		
US	Filed	METHODS AND SYSTEMS FOR LOAD BALANCING IN MESH NETWORKS	PRI-PRIORITY APPLICATION	15/130971	4/16/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CA	Filed	METHODS AND SYSTEMS FOR LOAD BALANCING IN MESH NETWORKS	ORD-UTILITY PATENT FILING	2963524	4/6/2017		
BR	Filed	METHODS AND SYSTEMS FOR LOAD BALANCING IN MESH NETWORKS	ORD-UTILITY PATENT FILING	102017007110-3	4/6/2017		
EP	Filed	METHODS AND SYSTEMS FOR LOAD BALANCING IN MESH NETWORKS	ORD-UTILITY PATENT FILING	17165367.8	4/6/2017		
AU	Filed	METHODS AND SYSTEMS FOR LOAD BALANCING IN MESH NETWORKS	ORD-UTILITY PATENT FILING	2017202463	4/13/2017		
MX	Filed	METHODS AND SYSTEMS FOR LOAD BALANCING IN MESH NETWORKS	ORD-UTILITY PATENT FILING	MX/A/2017/004928	4/12/2017		
US	Filed	TRACKING AND COMMISSIONING OF LIGHT ENGINES USING NEAR FIELD COMMUNICATION	ORD-UTILITY PATENT FILING	15/423906	2/3/2017		
CA	Filed	TRACKING AND COMMISSIONING OF LIGHT ENGINES USING NEAR FIELD COMMUNICATION	ORD-UTILITY PATENT FILING	2978550	9/8/2017		
US	Issued	OXY-BROMIDE PHOSPHORS AND USES THEREOF	PRI-PRIORITY APPLICATION	15/086699	3/31/2016	3/28/2017	US9605199
TW	Filed	OXY-BROMIDE PHOSPHORS AND USES THEREOF	ORD-UTILITY PATENT FILING	106108750	3/16/2017		
WO	Filed	OXY-BROMIDE PHOSPHORS AND USES THEREOF	ORD-UTILITY PATENT FILING	PCT/US2017/018611	2/21/2017		
US	Filed	SINGLE-STAGE CURRENT-FED CLAMPED SERIES RESONANT POWER FACTOR CORRECTED CONVERTER	PRI-PRIORITY APPLICATION	15/154059	5/13/2016		
CN	Filed	SINGLE-STAGE CURRENT-FED CLAMPED SERIES RESONANT	ORD-UTILITY PATENT FILING	201710339373.5	5/15/2017		

**Patents of Current Lighting Solutions, LLC**

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
		POWER FACTOR CORRECTED CONVERTER					
US	Filed	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	15/197891	6/30/2016		
WO	Filed	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	PCT/US17/051133	9/12/2017		
TW	Filed	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	106131407	9/13/2017		
US	Filed	POWER FACTOR CORRECTION OPTIMIZATION BY DIGITAL FEEDBACK	PRI-PRIORITY APPLICATION	15/354222	11/17/2016		
US	Filed	SYSTEMS AND METHODS FOR WINDOW CONTAMINATION DETECTION	ORD-UTILITY PATENT FILING	15/480008	4/5/2017		
CA	Filed	SYSTEMS AND METHODS FOR WINDOW CONTAMINATION DETECTION	ORD-UTILITY PATENT FILING	2979767	9/21/2017		
US	Filed	EXTERNALLY VIEWABLE ORIENTATION INDICATION APPARATUS AND METHOD FOR AN OPTICAL SENSOR	ORD-UTILITY PATENT FILING	15/459169	3/15/2017		
CN	Filed	EXTERNALLY VIEWABLE ORIENTATION INDICATION APPARATUS AND METHOD FOR AN OPTICAL SENSOR	ORD-UTILITY PATENT FILING	201710332778.6	5/11/2017		
CA	Filed	EXTERNALLY VIEWABLE ORIENTATION INDICATION APPARATUS AND METHOD FOR AN OPTICAL SENSOR	ORD-UTILITY PATENT FILING	2966113	5/4/2017		
MX	Filed	EXTERNALLY VIEWABLE ORIENTATION INDICATION APPARATUS AND METHOD FOR AN OPTICAL SENSOR	ORD-UTILITY PATENT FILING	MX/A/2017/006072	5/9/2017		

**Patents of Current Lighting Solutions, LLC**

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
ES	Filed	EXTERNALLY VIEWABLE ORIENTATION INDICATION APPARATUS AND METHOD FOR AN OPTICAL SENSOR	ORD-UTILITY PATENT FILING	P201730654	5/4/2017		
US	Filed	ASSEMBLY AND METHOD FOR GLARE ELIMINATION	ORD-UTILITY PATENT FILING	15/705415	9/15/2017		
CA	Filed	ASSEMBLY AND METHOD FOR GLARE ELIMINATION	ORD-UTILITY PATENT FILING	2979152	9/14/2017		
US	Issued	SYSTEM FOR COLLECTION, ANALYTICS, AND DISPLAY OF INDOOR POSITIONING DATA	ORD-UTILITY PATENT FILING	15/398239	1/4/2017	4/17/2018	US9949085
US	Filed	PHOSPHOR MATERIALS FOR LIGHT SOURCES AND METHOD FOR MANUFACTURING THE SAME	ORD-UTILITY PATENT FILING	15/411250	1/20/2017		
TW	Filed	PHOSPHOR MATERIALS FOR LIGHT SOURCES AND METHOD FOR MANUFACTURING THE SAME	ORD-UTILITY PATENT FILING	106112051	4/11/2017		
WO	Filed	PHOSPHOR MATERIALS FOR LIGHT SOURCES AND METHOD FOR MANUFACTURING THE SAME	ORD-UTILITY PATENT FILING	PCT/US2017/026744	4/10/2017		
US	Filed	SYSTEM AND METHOD FOR NONINTRUSIVE COMMISSIONING OF ELEMENTS TO AN INDOOR POSITIONING SYSTEM	ORD-UTILITY PATENT FILING	15/418793	1/30/2017		
US	Issued	DIRECTIONAL IMAGING USING CAMERA POSITIONING IN LIGHT FIXTURES FOR MINIMIZING PROTECTIVE WINDOW SIZE	PRI-PRIORITY APPLICATION	15/168215	5/30/2016	8/22/2017	US9742970
US	Filed	ANTI-DETACHMENT CAPPER FOR LED RETROFIT LAMPS	ORD-UTILITY PATENT FILING	15/373707	12/9/2016		
CA	Filed	ANTI-DETACHMENT CAPPER FOR LED RETROFIT LAMPS	ORD-UTILITY PATENT FILING	2964656	4/20/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
MX	Filed	ANTI-DETACHMENT CAPPER FOR LED RETROFIT LAMPS	ORD-UTILITY PATENT FILING	MX/A/2017/005278	4/21/2017		
CN	Filed	ANTI-DETACHMENT CAPPER FOR LED RETROFIT LAMPS	ORD-UTILITY PATENT FILING	201710269083.8	4/21/2017		
EP	Filed	ANTI-DETACHMENT CAPPER FOR LED RETROFIT LAMPS	ORD-UTILITY PATENT FILING	17167270.2	4/20/2017		
US	Filed	PACKAGING OF LUMINAIRE MOUNTED MICROPHONES	ORD-UTILITY PATENT FILING	15/275190	9/23/2016		
US	Filed	MODULAR LIGHTING CONTROLLER AND DATA ACQUISITION PLATFORM	PRI-PRIORITY APPLICATION	15/334419	10/26/2016		
EP	Filed	MODULAR LIGHTING CONTROLLER AND DATA ACQUISITION PLATFORM	ORD-UTILITY PATENT FILING	17198303.4	10/25/2017		
US	Filed	LED Design of Lower CCT Utilizing PFS Phosphor	PRI-PRIORITY APPLICATION	15/428077	2/8/2017		
WO	Filed	LED DESIGN OF LOWER CCT UTILIZING PFS PHOSPHOR	ORD-UTILITY PATENT FILING	PCT/US2018/012442	1/5/2018		
TW	Filed	LED DESIGN OF LOWER CCT UTILIZING PFS PHOSPHOR	ORD-UTILITY PATENT FILING	107102666	1/25/2018		
US	Filed	GEOFENCING FOR WIRELESS COMMUNICATIONS	PRI-PRIORITY APPLICATION	15/245014	8/23/2016		
CA	Filed	GEOFENCING FOR WIRELESS COMMUNICATIONS	ORD-UTILITY PATENT FILING	2976942	8/22/2017		
US	Filed	ANTENNA FOR LIGHTING CONTROL AT MESH NETWORKS NODES	ORD-UTILITY PATENT FILING	15/494644	4/24/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
WO	Filed	ANTENNA FOR LIGHTING CONTROL AT MESH NETWORKS NODES	ORD-UTILITY PATENT FILING	PCT/US2017/029231	4/25/2017		
US	Issued	SENSOR HOUSING FOR OUTDOOR LUMINAIRE	PDS-PRIORITY DESIGN APPLICATION	29/563363	5/4/2016	9/5/2017	USD796365
CN	Issued	SENSOR HOUSING FOR OUTDOOR LUMINAIRE	DES-DESIGN	201630533210.7	11/4/2016	9/26/2017	CN304296833
CA	Issued	SENSOR HOUSING FOR OUTDOOR LUMINAIRE	DES-DESIGN	171304	11/3/2016	5/31/2017	CA171304
AU	Issued	SENSOR HOUSING FOR OUTDOOR LUMINAIRE	DES-DESIGN	201616193	11/3/2016	1/10/2017	AU201616193
MX	Issued	SENSOR HOUSING FOR OUTDOOR LUMINAIRE	DES-DESIGN	MX/E/2016/003417	11/4/2016	3/5/2018	MX52122
BR	Filed	SENSOR HOUSING FOR OUTDOOR LUMINAIRE	DES-DESIGN	302016005032-5	11/4/2016		
US	Filed	INDOOR POSITIONING SYSTEM BASED ON MOTION SENSING AUGMENTED WITH BEACONS	PRI-PRIORITY APPLICATION	15/332896	10/24/2016		
US	Filed	TEMPERATURE CORRECTION FOR ENERGY MEASUREMENT IN A STREET LIGHTING LUMINAIRE	ORD-UTILITY PATENT FILING	15/425498	2/6/2017		
WO	Filed	TEMPERATURE CORRECTION FOR ENERGY MEASUREMENT IN A STREET LIGHTING LUMINAIRE	ORD-UTILITY PATENT FILING	PCT/US2017/036228	6/6/2017		
US	Filed	PROCESSING OF SIGNALS FROM LUMINAIRE MOUNTED MICROPHONES FOR ENHANCING SENSOR CAPABILITIES	ORD-UTILITY PATENT FILING	15/274193	9/23/2016		
US	Filed	METHOD OF PROTECTING AND DETECTING A SURGE EVENT IN A NODE	ORD-UTILITY PATENT FILING	15/400017	1/6/2017		



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Filed	SYSTEM FOR SELECTIVE ACCURACY OF AN INDOOR POSITIONING SYSTEM	PRI-PRIORITY APPLICATION	15/477849	4/3/2017		
US	Filed	METHOD AND SYSTEM FOR LIGHTNING DETECTION	PRI-PRIORITY APPLICATION	15/368712	12/5/2016		
WO	Filed	SMART LIGHT FIXTURE COMMUNICATION NETWORK INFRASTRUCTURE AND METHODS OF USE	ORD-UTILITY PATENT FILING	PCT/US2017/038298	6/20/2017		
US	Filed	A WAVEFORM SHAPING CIRCUIT FOR SPURIOUS HARMONIC SUPPRESSION	PRI-PRIORITY APPLICATION	15/496882	4/25/2017		
CA	Filed	A WAVEFORM SHAPING CIRCUIT FOR SPURIOUS HARMONIC SUPPRESSION	ORD-UTILITY PATENT FILING		4/12/2018		
EP	Filed	A WAVEFORM SHAPING CIRCUIT FOR SPURIOUS HARMONIC SUPPRESSION	ORD-UTILITY PATENT FILING	18168956.3	4/24/2018		
US	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PRI-PRIORITY APPLICATION	15/631362	6/23/2017		
US	Filed	EXPANDING SENSING CAPABILITIES OF A LUMINAIRE	ORD-UTILITY PATENT FILING	15/692181	8/31/2017		
CA	Filed	EXPANDING SENSING CAPABILITIES OF A LUMINAIRE	ORD-UTILITY PATENT FILING	2979151	9/14/2017		
CN	Filed	LED LAMP AND TEMPERATURE CONTROL CIRCUIT APPLIED TO THE LED LAMP	PRI-PRIORITY APPLICATION	201710362912.7	5/22/2017		
US	Filed	FLYBACK BIFILARMULTIFLAR SYMMETRIC TRANSFORMER	PRI-PRIORITY APPLICATION	15/399324	1/5/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Filed	DETERMINING POSITION VIA MULTIPLE CAMERAS AND VLC TECHNOLOGY	ORD-UTILITY PATENT FILING	15/810286	11/13/2017		
CN	Filed	LED LAMP	PRI-PRIORITY APPLICATION	201710249426.4	4/17/2017		
US	Filed	SENSOR MOUNT	PDS-PRIORITY DESIGN APPLICATION	29/582396	10/27/2016		
EP	Filed	LUMINAIRE MOUNTING	PRI-PRIORITY APPLICATION	EP16204857.3	12/16/2016		
US	Filed	GOVERNANCE OF THE CONTROL PROCESS BY THE STATE OF THE NODE	PRI-PRIORITY APPLICATION	15/646337	7/11/2017		
US	Filed	POSITIONING SYSTEM BASED ON VISIBLE LIGHT COMMUNICATIONS	PRI-PRIORITY APPLICATION	15/454936	3/9/2017		
US	Filed	LIGHT FIXTURE	PDS-PRIORITY DESIGN APPLICATION	29/591711	1/23/2017		
US	Filed	METHOD AND APPARATUS FOR AUTONOMOUS LIGHTING CONTROL	ORD-UTILITY PATENT FILING	15/475849	3/31/2017		
WO	Filed	METHOD AND APPARATUS FOR AUTONOMOUS LIGHTING CONTROL	ORD-UTILITY PATENT FILING	PCT/US2017/056012	10/11/2017		
TW	Filed	METHOD AND APPARATUS FOR AUTONOMOUS LIGHTING CONTROL	ORD-UTILITY PATENT FILING	106137324	10/30/2017		
US	Filed	ROADWAY FIXTURE SYSTEMS WITH INTEGRATED TRANSCIEIVING EQUIPMENT	ORD-UTILITY PATENT FILING	15/814836	11/16/2017		
WO	Filed	ROADWAY FIXTURE SYSTEMS WITH INTEGRATED TRANSCIEIVING EQUIPMENT	ORD-UTILITY PATENT FILING	PCT/US2017/063819	11/30/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Filed	Automated Region of Interest Learning for Video Analytics	PRO-PROVISIONAL	62/610596	12/27/2017		
US	Filed	SONIC POLE POSITION TRIANGULATION IN A LIGHTING SYSTEM	PRO-PROVISIONAL	62/611843	12/29/2017		
US	Filed	ASSEMBLY AND METHOD FOR ACCESSING SECURE NETWORKS USING OPTICALLY-SENSED INFORMATION	PRO-PROVISIONAL	62/573469	10/17/2017		
US	Filed	ASSEMBLY AND METHOD FOR ACCESSING SECURE NETWORKS USING OPTICALLY-SENSED INFORMATION	ORD-UTILITY PATENT FILING	15/881377	1/26/2018		
US	Filed	METHOD AND SYSTEM FOR IDENTIFYING LOCATION OF A PARKED VEHICLE	PRI-PRIORITY APPLICATION	15/692263	8/31/2017		
US	Filed	Simplified Commissioning of Lighting Controls via Visible Light Communication	PRO-PROVISIONAL	62/570387	10/10/2017		
US	Issued	NETWORKED LIGHT CONTROL SYSTEM AND METHOD	PRI-PRIORITY APPLICATION	15/621121	6/13/2017	1/16/2018	US9872361
US	Filed	COATED MANGANESE DOPED PHOSPHORS	PRI-PRIORITY APPLICATION	15/674495	8/10/2017		
US	Filed	CONTROL SYSTEM FOR USER-ACTIVATED SELECTION OF CONTROL FUNCTIONALITY	PRI-PRIORITY APPLICATION	15/706816	9/18/2017		
US	Filed	PROCESSES FOR PREPARING PHOSPHORS	PRO-PROVISIONAL	62/542985	8/9/2017		
US	Filed	BUILDING ENERGY MODELING TOOL SYSTEMS AND METHODS	PRI-PRIORITY APPLICATION	15/823130	11/27/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	METHODS AND SYSTEMS FOR MONITORING LIGHTING CONTROL AND INDICATING FAILURE	ORD-UTILITY PATENT FILING	09/611871	7/7/2000	7/9/2002	US6417775
US	Issued	INDUSTRIAL LIGHTING CONTROL SYSTEM AND METHOD	ORD-UTILITY PATENT FILING	09/681704	5/23/2001	5/4/2004	US6731079
US	Issued	INTERFACE CIRCUIT AND METHOD	ORD-UTILITY PATENT FILING	09/630303	7/31/2000	4/16/2002	US6373200
TW	Filed	LED POWER SOURCE	ORD-UTILITY PATENT FILING	90125387	10/15/2001		
CN	Issued	LED POWER SOURCE	PCT-PATENT COOPERATION TREATY	01803277.X	6/24/2002	5/30/2007	CN01803277.X
US	Issued	LIGHT EMITTING DIODE POWER SUPPLY	ORD-UTILITY PATENT FILING	09/736994	12/14/2000	6/25/2002	US6411045
US	Issued	SELF-OSCILLATING SYNCHRONOUS BOOST CONVERTER	ORD-UTILITY PATENT FILING	09/861208	5/18/2001	2/25/2003	US6525488
US	Issued	BALLAST HOUSING FOR LIGHTING FIXTURE	DES-DESIGN	29/132206	11/3/2000	7/9/2002	USD460209
US	Issued	HIGH INTENSITY DISCHARGE LIGHTING FIXTURE	PDS-PRIORITY DESIGN APPLICATION	29/168296	9/30/2002	7/27/2004	USD493558
US	Issued	LUMINAIRE	PDS-PRIORITY DESIGN APPLICATION	29/168349	9/30/2002	6/29/2004	USD492441
CN	Issued	LIGHT EMITTING DEVICE WITH PHOSPHOR HAVING HIGH LUMINOUS EFFICACY	PCT-PATENT COOPERATION TREATY	99802506.2	7/28/2000	4/30/2008	CN100385688C
GB	Issued	LIGHT EMITTING DEVICE WITH PHOSPHOR HAVING HIGH LUMINOUS EFFICACY	EPP-EUROPEAN PATENT - PCT ORIGINATED	99964012.1	7/17/2000	6/22/2016	EP1051758

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
		LIGHT EMITTING DEVICE WITH PHOSPHOR HAVING HIGH LUMINOUS EFFICACY	PCT-PATENT COOPERATION TREATY	2000-585941	7/18/2000	9/14/2012	JP5085815
JP	Issued	LIGHT EMITTING DEVICE WITH BA2MGS1207:EU2+, BA2SIO4:EU2+, OR (SRXCAY BA1-X-Y)/(AIZGA1-Z)2SR:EU2+ PHOSPHORS	PRI-PRIORITY APPLICATION	09/203206	11/30/1998	8/6/2002	US6429583B1
US	Issued	SOLID STATE ILLUMINATION SYSTEM CONTAINING A LIGHT EMITTING DIODE, A LIGHT SCATTERING MATERIAL AND A LUMINESCENT MATERIAL	CIP-CONTINUATION IN PART	09/642655	8/22/2000	9/14/2004	US6791259
US	Issued	LIGHT EMITTING DEVICE WITH PHOSPHOR HAVING HIGH LUMINOUS EFFICACY	EPP-EUROPEAN PATENT - PCT ORIGINATED	99964012.1	7/17/2000	6/22/2016	EP1051758
DE	Issued	LIGHT EMITTING DEVICE WITH PHOSPHOR HAVING HIGH LUMINOUS EFFICACY	EPP-EUROPEAN PATENT - PCT ORIGINATED	99964012.1	7/17/2000	6/22/2016	EP1051758
FR	Issued	LIGHT EMITTING DEVICE WITH PHOSPHOR HAVING HIGH LUMINOUS EFFICACY	EPP-EUROPEAN PATENT - PCT ORIGINATED	99964012.1	7/17/2000	6/22/2016	EP1051758
US	Issued	GREEN-LIGHT EMITTING PHOSPHORS AND LIGHT SOURCES USING THE SAME	ORD-UTILITY PATENT FILING	09/144137	8/31/1998	8/21/2001	US6278135
US	Issued	LIGHT SOURCE INCLUDING AN ARRAY OF LIGHT EMITTING SEMICONDUCTOR DEVICES AND CONTROL METHOD	ORD-UTILITY PATENT FILING	09/258935	3/1/1999	7/2/2002	US6412971
US	Issued	UNIFORM ANGULAR LIGHT DISTRIBUTION FROM LEADS	ORD-UTILITY PATENT FILING	09/550769	4/17/2000	11/25/2003	US6653765
US	Issued	GREEN EMITTING PHOSPHOR FOR USE IN UV LIGHT EMITTING DIODES	CIP-CONTINUATION IN PART	09/583196	5/30/2000	10/22/2002	US6469322
US	Issued	LIGHT EMITTING SEMI-CONDUCTOR DEVICE APPARATUS FOR DISPLAY ILLUMINATION	CON-CONTINUATION	10/207317	7/29/2002	4/26/2005	US6883926

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	FLIP CHIP LED APPARATUS	ORD-UTILITY PATENT FILING	09/542037	4/3/2000	11/19/2002	US6483196
US	Issued	HIGH POWER WHITE LED LAMP STRUCTURE USING UNIQUE PHOSPHOR APPLICATION FOR LED LIGHTING PRODUCTS	ORD-UTILITY PATENT FILING	09/670240	9/26/2000	10/21/2003	US6635987
US	Issued	PHOSPHOR COATING WITH SELF-ADJUSTING DISTANCE FROM LED CHIP	ORD-UTILITY PATENT FILING	09/642901	8/21/2000	10/21/2003	US6635363
US	Issued	PLASTIC PACKAGING OF LED ARRAYS	ORD-UTILITY PATENT FILING	09/654163	9/1/2000	9/2/2003	US6614103
US	Issued	PLASTIC PACKAGING OF LED ARRAYS	DIV-DIVISIONAL FILING	10/387862	3/14/2003	5/4/2004	US6730533
US	Issued	PLASTIC PACKAGING OF LED ARRAYS	DIV-DIVISIONAL FILING	10/387835	3/14/2003	5/11/2004	US6733711
US	Issued	LIGHT EMITTING DEVICE PACKAGE AND METHOD OF FABRICATION	ORD-UTILITY PATENT FILING	09/682163	7/30/2001	3/2/2004	US6700136
US	Issued	ORGANIC ELECTROLUMINESCENT DEVICES WITH ENHANCED LIGHT EXTRACTION	ORD-UTILITY PATENT FILING	09/741961	12/22/2000	8/17/2004	US6777871
US	Issued	COLOR TUNABLE ORGANIC ELECTROLUMINESCENT LIGHT SOURCE	ORD-UTILITY PATENT FILING	09/684483	10/10/2000	12/9/2003	US6661029
US	Issued	COLOR TUNABLE ORGANIC ELECTROLUMINESCENT LIGHT SOURCE	DIV-DIVISIONAL FILING	10/666145	9/22/2003	1/11/2005	US6841949
US	Issued	WHITE LIGHT EMITTING PHOSPHOR BLEND FOR LED DEVICES	CON-CONTINUATION	10/295943	11/18/2002	3/21/2006	US7015510
US	Issued	A PHOSPHOR FOR DOWN CONVERTING ULTRAVIOLET LIGHT OF LEDS TO BLUE-GREEN LIGHT	ORD-UTILITY PATENT FILING	09/571382	5/15/2000	4/29/2003	US6555958

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
FR	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	1939044.2	5/15/2001	8/10/2016	EP1332520
GB	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	1939044.2	5/15/2001	8/10/2016	EP1332520
US	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	PRI-PRIORITY APPLICATION	09/570932	5/15/2000	9/16/2003	US6621211
JP	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	PCT-PATENT COOPERATION TREATY	2001-584500	5/15/2001	11/22/2013	JP5414957
CN	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	PCT-PATENT COOPERATION TREATY	1811702.3	12/24/2002	12/17/2008	CN100444305
KR	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	PCT-PATENT COOPERATION TREATY	2002-7015303	5/15/2001	9/23/2008	KR10-0860755
US	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	DIV-DIVISIONAL FILING	10/617028	7/11/2003	9/6/2005	US6939481
DE	Issued	WHITE LIGHT EMITTING PHOSPHOR BLENDS FOR LED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	1939044.2	5/15/2001	8/10/2016	EP1332520
US	Issued	UV REFLECTORS AND UV-BASED LIGHT SOURCES HAVING REDUCED UV RADIATION LEAKAGE INCORPORATING THE SAME	ORD-UTILITY PATENT FILING	09/681560	4/30/2001	2/3/2004	US6686676
US	Issued	YELLOW LIGHT-EMITTING HALOPHOSPHATE PHOSPHORS AND LIGHT SOURCES INCORPORATING THE SAME	ORD-UTILITY PATENT FILING	09/681686	5/21/2001	9/9/2003	US6616862
CN	Issued	YELLOW LIGHT-EMITTING HALOPHOSPHATE PHOSPHORS AND LIGHT SOURCES INCORPORATING SAME	PCT-PATENT COOPERATION TREATY	2829006.2	11/22/2004	11/7/2007	CN02829006.2

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	BROAD-SPECTRUM TERBIUM-CONTAINING GARNET PHOSPHORS AND WHITE-LIGHT SOURCES INCORPORATING THE SAME	ORD-UTILITY PATENT FILING	09/681522	6/1/2001	7/22/2003	US6596195
US	Issued	A DEVICE WITH COMBINED FEATURES OF LIGHTING AND AIR PURIFICATION	PR-I-PRIORITY APPLICATION	13/273371	10/14/2011	6/10/2014	US8746929
US	Published	DETERMINING OVERLAP OF A PARKING SPACE BY A VEHICLE	Non Provisional	15/099338	2016-04-14		
CA	Application	IDENTIFYING AND TRACKING VEHICLES IN MOTION	Non Provisional	2984955	2016-04-17		
EP	Published	IDENTIFYING AND TRACKING VEHICLES IN MOTION	Non Provisional	16780974.8	2016-04-17		
MX	Published	IDENTIFYING AND TRACKING VEHICLES IN MOTION	Non Provisional	MX/A/2017/013399	2016-04-17		
US	Granted	IDENTIFYING AND TRACKING VEHICLES IN MOTION	Non Provisional	15/099357	2016-04-14	4/10/2018	US9940524
CA	Application	USER INTERFACES FOR PARKING ZONE CREATION	Non Provisional	2984148	2016-04-17		
EP	Published	USER INTERFACES FOR PARKING ZONE CREATION	Non Provisional	16780975.5	2016-04-17		
MX	Published	USER INTERFACES FOR PARKING ZONE CREATION	Non Provisional	MX/A/2017/013400	2016-04-17		
US	Published	USER INTERFACES FOR PARKING ZONE CREATION	Non Provisional	15/099363	2016-04-14		
US	Application	LIGHT DISINFECTION SYSTEM AND METHOD	Non Provisional	15/990296	5/28/2018		
US	Application	SYSTEM AND METHOD FOR CONTROLLING AUXILIARY POWER SUPPLY	Non Provisional	15970473	2018-05-03		
US	Application	GENERATION OF COORDINATED CONTROL COMMANDS FOR GROUPINGS OF HEATING/VENTILATION/COOLING THERMOSTATS	Non Provisional	15/904319	2018-02-24		



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Application	SYSTEMS AND METHODS FOR ALLOCATING A NETWORK ADDRESS TO A LIGHTING DEVICE	Non Provisional	16/102950	2018-08-15		
US	Application	SYSTEM AND METHOD FOR COMMUNICATING BETWEEN NONNETWORKED MONITORING DEVICE AND NETWORKED LIGHTING CONTROLLERS	Non Provisional	15961438	2018-04-24		
US	Application	SELF-FORMING NETWORK COMMISSIONING SYSTEM AND METHOD	Non Provisional	16/105453	2018-08-20		
US	Application	APPARATUS AND METHOD FOR INSTALLING AND REPLACING LIGHT FIXTURE DEVICES	Non Provisional	16/105375	2018-08-20		
US	Application	POSITIONING SYSTEM AND METHOD USING LAMP FIXTURE INDICATOR	Non Provisional	16/040099	2018-07-19		
US	Application (needs to be revived)	SIMULATING CAMERA NODE OUTPUT FOR PARKING POLICY MANAGEMENT SYSTEM	Non Provisional				
US	Application	SENSOR DATA ARRAY AND METHOD OF COUNTING OCCUPANTS	provisional	62/727949	2018-09-06		
US	Application	SYSTEMS AND METHODS FOR ALLOCATING A NETWORK ADDRESS TO A LIGHTING DEVICE	provisional	62/667504	2018-05-05		
US	Application	DISTRIBUTED OCCUPANCY DETECTION SYSTEM AND METHOD	provisional	62/667488	2018-05-05		
US	Application	SELF-FORMING NETWORK COMMISSIONING SYSTEM AND METHOD	provisional	62/667495	2018-05-05		
US	Application	COLORBANDS: IDENTIFICATION OF LIGHTING FIXTURES FOR INDOOR POSITIONING	provisional	62/751,479	2018-10-26		

## Patents of Current Lighting Solutions, LLC

CO	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	PRI-PRIORITY APPLICATION	12/843947	7/27/2010	11/15/2011	US8057706
NL	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	EPP-EUROPEAN PATENT - PCT ORIGINATED	11738105.3	1/17/2013	11/23/2016	NL2598601
CN	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	PCT-PATENT COOPERATION TREATY	201180036339.1	1/24/2013	1/27/2016	CNZL201180036339.1
JP	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	PCT-PATENT COOPERATION TREATY	2013-521802	1/22/2013	5/27/2016	JP5941464
KR	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	PCT-PATENT COOPERATION TREATY	1020137004332	2/21/2013	2/20/2018	KR101832529
DE	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	EPP-EUROPEAN PATENT - PCT ORIGINATED	11738105.3	1/17/2013	11/23/2016	DE2598601
FR	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	EPP-EUROPEAN PATENT - PCT ORIGINATED	11738105.3	1/17/2013	11/23/2016	FR2598601
GB	Issued	MOISTURE-RESISTANT PHOSPHOR AND ASSOCIATED METHOD	EPP-EUROPEAN PATENT - PCT ORIGINATED	11738105.3	1/17/2013	11/23/2016	GB2598601
IN	Filed	PHOSPHOR MATERIALS AND RELATED DEVICES	ORD-UTILITY PATENT FILING	3392/CHE/2011	9/30/2011		
DE	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	12769822.3	3/24/2014	12/16/2015	EP2760970
FR	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	12769822.3	3/24/2014	12/16/2015	EP2760970

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
GB	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	12769822.3	3/24/2014	12/16/2015	EP2760970
NL	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	12769822.3	3/24/2014	12/16/2015	EP2760970
IT	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	EPP-EUROPEAN PATENT - PCT ORIGINATED	502016000002232	3/24/2014	12/16/2015	EP2760970
WO	Filed	PHOSPHOR MATERIALS AND RELATED DEVICES	ORD-UTILITY PATENT FILING	PCT/US12/56299	9/20/2012		
US	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	PCT-PATENT COOPERATION TREATY	14/348244	3/28/2014	4/4/2017	US9611237B2
JP	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	PCT-PATENT COOPERATION TREATY	2014-533614	3/28/2014	9/1/2017	JP6200891
CN	Issued	PHOSPHOR MATERIALS AND RELATED DEVICES	PCT-PATENT COOPERATION TREATY	201280047878.X	3/28/2014	4/26/2017	CN103827259
KR	Filed	PHOSPHOR MATERIALS AND RELATED DEVICES	PCT-PATENT COOPERATION TREATY	2014-7011126	4/25/2014		
MX	Filed	PHOSPHOR MATERIALS AND RELATED DEVICES	PCT-PATENT COOPERATION TREATY	MX/a/2014/003844	3/28/2014		
CA	Filed	PHOSPHOR MATERIALS AND RELATED DEVICES	PCT-PATENT COOPERATION TREATY	2848917	3/14/2014		
TW	Filed	PHOSPHOR ASSEMBLY FOR LIGHT EMITTING DEVICES	ORD-UTILITY PATENT FILING	103115083	4/25/2014		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201480028317.4	11/16/2015	9/15/2017	CN105189696
EP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	14720825	10/7/2015		
IN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	5623/CHENP/2015	9/16/2015		
JP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016-502530	9/10/2015		
KR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1020157029868	10/15/2015		
MY	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2015002135	8/28/2015		
MX	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/A/2015/012735	9/14/2015		
PH	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	12015501963	9/4/2015		
TH	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1501005565	9/15/2015		
VN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1-2015-03773	10/9/2015		
US	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	CON-CONTINUATION	15/402606	1/10/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
AU	Filed	Improved stability Mn <sup>4+</sup> -doped fluoride phosphor and devices that use this phosphor	DIV-DIVISIONAL FILING	2017200092	1/6/2017		
CN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	DIV-DIVISIONAL FILING	201710706690.6	8/17/2017		
JP	Filed	-	DIV-DIVISIONAL FILING	2018-025677	2/16/2018		
TW	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	103109499	3/14/2014		
US	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	14/208592	3/13/2014	7/4/2017	US9698314
US	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	CON-CONTINUATION	14/285746	5/23/2014	2/28/2017	US9580648
US	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	CON-CONTINUATION	14/311624	6/23/2014	12/9/2014	US8906724
AU	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2014239197	9/10/2015	5/18/2017	AU2014239197
BR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	112015022228-5	9/10/2015		
CA	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2905489	9/10/2015		
IN	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	201647006864	2/28/2016		

**Patents of Current Lighting Solutions, LLC**

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
JP	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016-536492	2/18/2016		
KR	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	1020167007084	3/17/2016		
MY	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	PI2016700116	1/13/2016		
MX	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/A/2016/002275	2/19/2016		
PH	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	1-2016-500292	2/11/2016		
TH	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	1601000747	2/9/2016		
AU	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	DIV-DIVISIONAL FILING	2018201820	3/14/2018		
US	Issued	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	ORD-UTILITY PATENT FILING	14/465024	8/21/2014	7/26/2016	US9399732B2
TW	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	ORD-UTILITY PATENT FILING	103129173	8/25/2014		
BR	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	112016002023-5	1/29/2016		
CA	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	2921044	2/10/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Issued	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	201480046448.5	2/22/2016	2/13/2018	CN105452418
EP	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED PHOSPHORS	PCT-PATENT COOPERATION TREATY	14781701.9	2/9/2016		
JP	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016-527216	4/28/2016		
KR	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	10-2016-7013911	5/25/2016		
MY	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016701086	3/25/2016		
MX	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/A/2016/005884	5/4/2016		
PH	Unfiled	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY				
TH	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1601002285	4/21/2016		
TW	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	103136656	10/23/2014		
AU	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2014347188	5/3/2016		
BR	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	112016009298-8	4/27/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CA	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2929037	4/28/2016		
CN	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201480061124.9	5/6/2016		
EP	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	14781793.6	4/28/2016		
IN	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201647017115	5/18/2016		
US	Issued	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	14/267434	5/1/2014	12/6/2016	US9512356B2
KR	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	10-2015-0061213	4/30/2015		
MY	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	P1 2015000725	3/23/2015		
MX	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	MX/A/2015/005580	4/30/2015		
TW	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	104112582	4/20/2015		
DE	Issued	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	EPC-EUROPEAN PATENT CONVENTION	15165675.8	4/29/2015	8/16/2017	EP2940099
FR	Issued	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	EPC-EUROPEAN PATENT CONVENTION	15165675.8	4/29/2015	8/16/2017	EP2940099



## Patents of Current Lighting Solutions, LLC

CO	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
GB	Issued	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	EPC-EUROPEAN PATENT CONVENTION	15165675.8	4/29/2015	8/16/2017	EP2940099
NL	Issued	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	EPC-EUROPEAN PATENT CONVENTION	15165675.8	4/29/2015	8/16/2017	EP2940099
AU	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2015202021	4/21/2015		
BR	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	102015008716-0	4/17/2015		
CA	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2888734	4/23/2015		
CN	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	201510216824.7	4/30/2015		
EP	Issued	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	15165675.8	4/29/2015	8/16/2017	EP2940099
IN	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	1934/CHE/2015	4/15/2015		
JP	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2015-088859	4/24/2015		
US	Issued	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	14/267449	5/1/2014	1/17/2017	US9546318B2
AU	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2015202034	4/22/2015		

## Patents of Current Lighting Solutions, LLC

CO	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
MY	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2015000874	4/6/2015		
IN	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2140/CHE/2015	4/27/2015		
EP	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	15165904.2	4/30/2015		
CN	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	201510215473.8	4/30/2015		
JP	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2015-087995	4/23/2015		
KR	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	10-2015-0061564	4/30/2015		
TW	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	104112249	4/16/2015		
CA	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	2888731	4/23/2015		
MX	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	MX/A/2015/005581	4/30/2015		
BR	Filed	PROCESS FOR PREPARING RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	102015009499-0	4/28/2015		
IN	Filed	MOISTURERESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PRI-PRIORITY APPLICATION	6152/CHE/2013	12/30/2013		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
BR	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	112016015280-8	6/29/2016		
AU	Issued	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	2014374223	6/24/2016		AU2014374223
MY	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	PI2016701852	5/23/2016		
TH	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	1601003849	6/28/2016		
PH	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	1-2016-500972	5/25/2016		
US	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	15/109267	6/30/2016		
DE	Issued	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	EPP-EUROPEAN PATENT - PCT ORIGINATED	14828089.4	6/15/2016	2/21/2018	EP3090030
NL	Issued	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	EPP-EUROPEAN PATENT - PCT ORIGINATED	14828089.4	6/15/2016	2/21/2018	EP3090030
FR	Issued	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	EPP-EUROPEAN PATENT - PCT ORIGINATED	14828089.4	6/15/2016	2/21/2018	EP3090030
GB	Issued	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	EPP-EUROPEAN PATENT - PCT ORIGINATED	14828089.4	6/15/2016	2/21/2018	EP3090030
TW	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	ORD-UTILITY PATENT FILING	103143909	12/16/2014		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
EP	Issued	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	14828089.4	6/15/2016	2/21/2018	EP3090030
JP	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	2016-542720	6/23/2016		
KR	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	10-2016-7019884	7/20/2016		
CA	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	2934249	6/16/2016		
MX	Filed	MOISTURE-RESISTANT PHOSPHOR COMPOSITIONS AND ASSOCIATE METHODS	PCT-PATENT COOPERATION TREATY	MX/A/2016/008668	6/29/2016		
IN	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	201647022392	6/30/2016		
JP	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016-537527	6/8/2016		
KR	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	10-2016-7018760	7/12/2016		
MY	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016701626	5/5/2016		
MX	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/A/2016/007678	6/10/2016		
PH	Unfiled	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY				

**Patents of Current Lighting Solutions, LLC**

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
TH	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	1601003462	6/13/2016		
US	Issued	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	ORD-UTILITY PATENT FILING	14/568396	12/12/2014	7/12/2016	US9388336B2
TW	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	ORD-UTILITY PATENT FILING	103143523	12/12/2014		
AU	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	2014362239	5/30/2016		
BR	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	112016012238-0	5/30/2016		
CA	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	2932616	6/2/2016		
CN	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	201480068017.9	6/13/2016		
EP	Filed	PROCESSES FOR PREPARING COLOR STABLE MANGANESE-DOPED COMPLEX FLUORIDE PHOSPHORS	PCT-PATENT COOPERATION TREATY	14821427.3	6/9/2016		
US	Issued	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PRI-PRIORITY APPLICATION	14/568170	12/12/2014	1/3/2017	US9537061
BR	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	112017011463-1	5/31/2017		
AU	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2015361064	5/30/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
MY	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2017701909	5/24/2017		
IN	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	201747022984	6/30/2017		
VN	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	1201702490	6/30/2017		
TW	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	ORD-UTILITY PATENT FILING	104139746	11/27/2015		
EP	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	15816931.8	5/30/2017		
CN	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	201580067683.5	6/12/2017		
JP	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2017-530189	6/6/2017		
KR	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	10-2017-7019058	7/10/2017		
CA	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2969524	6/1/2017		
MX	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	MX/A/2017/007590	6/9/2017		
US	Issued	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PRI-PRIORITY APPLICATION	14/303020	6/12/2014	2/14/2017	US9567516

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
BR	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	112016027358-3	11/22/2016		
AU	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	2015274474	12/12/2016		
MY	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	PI 2016703989	10/31/2016		
IN	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	201747001162	1/11/2017		
TH	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	1601007318	12/8/2016		
PH	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	1-2016-502269	11/15/2016		
TW	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	ORD-UTILITY PATENT FILING	104118924	6/11/2015		
EP	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	15731791.8	12/5/2016		
CN	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	201580031387.X	12/12/2016		
JP	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	2016-571167	12/2/2016		
KR	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	10-2017-7000729	1/10/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CA	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	2951410	12/6/2016		
MX	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	PCT-PATENT COOPERATION TREATY	MX/a/2016/016392	12/9/2016		
US	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	14/302823	6/12/2014	7/5/2016	US9385282B2
AU	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2015274758	12/5/2016		
MY	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	P1 2016704474	12/1/2016		
IN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201747001163	1/11/2017		
VN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1201605165	12/29/2016		
EP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	15795004.9	12/9/2016		
TW	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	104118927	6/11/2015	3/21/2018	TW618778
CN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201580031379.5	12/12/2016		
JP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016-572305	12/8/2016		



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
KR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	10-2017-7000734	1/10/2017		
CA	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	29522250	12/6/2016		
MX	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/a/2016/016390	12/9/2016		
BR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	112016028806-8	12/8/2016		
US	Issued	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	14/304098	6/13/2014	3/27/2018	US9929319
JP	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016-570864	12/1/2016		
KR	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1020177001142	1/13/2017		
MY	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	PI 2016704109	11/8/2016		
MX	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/a/2016/016393	12/9/2016		
PH	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1-2016-502268	11/15/2016		
TH	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1601007265	12/2/2016		

**Patents of Current Lighting Solutions, LLC**

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
TW	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	104118925	6/11/2015		
AU	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2015274858	12/2/2016		
BR	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	112016028142-0	11/30/2016		
CA	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2951381	12/6/2016		
CN	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201580031761.6	12/13/2016		
EP	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	15794995.9	12/5/2016		
IN	Filed	LED PACKAGE WITH RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201647040300	11/25/2016		
US	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	14/302907	6/12/2014	6/21/2016	US9371481B2
BR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1120160279999	11/29/2016		
AU	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2015274585	11/28/2016		
MY	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	PI 2016704277	11/18/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
IN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201747001164	1/11/2017		
TH	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1601007110	11/28/2016		
PH	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1-2016-502361	11/28/2016		
TW	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	104119176	6/12/2015		
EP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	15795022.1	11/30/2016		
CN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201580031443.X	12/12/2016		
JP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016-570793	12/1/2016		
KR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1020177000883	1/11/2017		
CA	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2951717	12/8/2016		
MX	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/a/2016/016391	12/9/2016		
US	Issued	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PRI-PRIORITY APPLICATION	14/337984	7/22/2014	12/6/2016	US9512357B2

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
BR	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	112017001130-1	1/19/2017		
AU	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	2015294337	1/20/2017		
MY	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	PI 2017700177	1/16/2017		
IN	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	201747004025	2/3/2017		
TH	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	1701000306	1/20/2017		
PH	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	1-2017-500251	2/10/2017		
TW	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	ORD-UTILITY PATENT FILING	104123561	7/21/2015		
EP	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	15745673.2	1/23/2017		
CN	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	201580051217.8	3/22/2017		
JP	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	2017-503101	1/19/2017		
KR	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	1020177004499	2/17/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CA	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	2955799	1/19/2017		
MX	Filed	RED-EMITTING PHOSPHORS, ASSOCIATED PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	MX/a/2017/001015	1/20/2017		
IN	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PRI-PRIORITY APPLICATION	1093/CHE/2015	3/5/2015		
US	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	15/555719	9/5/2017		
TW	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	ORD-UTILITY PATENT FILING	105105322	2/23/2016		
CN	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	201680013986.3	9/5/2017		
EP	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	16719567.6	9/4/2017		
JP	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	2017-544656	8/22/2017		
KR	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	10-2017-7027513	9/27/2017		
MY	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	P12017702734	7/26/2017		
VN	Filed	RED-EMITTING PHOSPHORS, PROCESSES AND DEVICES	PCT-PATENT COOPERATION TREATY	1-2017-03217	8/21/2017		

## Patents of Current Lighting Solutions, LLC

CO	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
TW	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	ORD-UTILITY PATENT FILING	105113753	5/3/2016		
US	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	15/574539	11/16/2017		
EP	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	15727167.7	11/9/2017		
CN	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	201580080098.9	11/17/2017		
JP	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	2017-558370	11/7/2017		
KR	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	1020177036189	12/15/2017		
MY	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	P12017703612	9/26/2017		
VN	Filed	PROCESS FOR IMPROVED HALIDE MATERIALS	PCT-PATENT COOPERATION TREATY	1-2017-04824	11/30/2017		
US	Issued	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	CIP-CONTINUATION IN PART	14/747174	6/23/2015	2/13/2018	US9890328
TW	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	ORD-UTILITY PATENT FILING	105117640	6/3/2016		
EP	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	16727092.5	11/30/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
CN	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	201680036911.7	12/22/2017		
JP	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	2017-564562	12/12/2017		
KR	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	1020187001985	1/22/2018		
MY	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	PI2017703925	10/17/2017		
VN	Filed	PHOSPHOR COMPOSITIONS AND LIGHTING APPARATUS THEREOF	PCT-PATENT COOPERATION TREATY	1201800029	1/3/2018		
IN	Filed	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	6365/CHE/2015	11/26/2015		
US	Filed	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	15/768562	4/16/2018		
TW	Filed	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	105137704	11/17/2016		
CN	Unfiled	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY				
JP	Unfiled	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY				

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
KR	Unfiled	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY				
MY	Filed	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	PI2018701408	4/9/2018		
VN	Unfiled	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY				
EP	Unfiled	PROCESSES FOR SYNTHESIZING RED-EMITTING PHOSPHORS AND RELATED RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY				
US	Issued	COLOR STABLE RED-EMITTING PHOSPHORS	CIP-CONTINUATION IN PART	14/549847	11/21/2014	6/28/2016	US9376615B2
JP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2017-525904	5/12/2017		
KR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	10-2017-7015975	6/12/2017		
MY	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	PI 2017701252	4/10/2017		
MX	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/A/2017/006661	5/19/2017		
VN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1-2017-02001	5/29/2017		



## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
TW	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	104138604	11/20/2015		
AU	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2015350281	5/9/2017		
BR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	112017008966-1	4/28/2017		
CA	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2967642	5/11/2017		
CN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201580062970.7	5/19/2017		
EP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	15797819.8	5/15/2017		
IN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201747017319	5/17/2017		
BR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	112017017718-8	8/18/2017		
AU	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2016220527	8/7/2017		
MY	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2017702689	7/21/2017		
IN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201747032400	9/13/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
VN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1-2017-03251	8/23/2017		
EP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	16708749.3	8/3/2017		
US	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	14/950679	11/24/2015	5/29/2018	US9982190
TW	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	105104315	2/15/2016		
CN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	20168001147.8	8/18/2017		
JP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2017-541767	8/8/2017		
KR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	10-2017-7026538	9/20/2017		
CA	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2976335	8/10/2017		
MX	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	MX/A/2017/010695	8/18/2017		
EP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	16723922.7	11/28/2017		
US	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	14/950644	11/24/2015		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
TW	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	105115997	5/23/2016		
CN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	201680032287.3	12/1/2017		
JP	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	2017-560665	11/21/2017		
KR	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1020177037736	12/28/2017		
MY	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	PI2017703725	10/2/2017		
VN	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PCT-PATENT COOPERATION TREATY	1201704617	11/20/2017		
WO	Filed	COATED MANGANESE DOPED PHOSPHORS	ORD-UTILITY PATENT FILING	PCT/US17/39439	6/27/2017		
US	Filed	CORE-SHELL MATERIALS WITH RED-EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	15/238989	8/17/2016		
WO	Filed	CORE-SHELL MATERIALS WITH RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	PCT/US2017/051706	9/15/2017		
TW	Filed	CORE-SHELL MATERIALS WITH RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	106131401	9/13/2017		
US	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	PRO-PROVISIONAL	62/472135	3/16/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	15/709557	9/20/2017		
W/O	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	PCT/US2018/016360	2/1/2018		
TW	Filed	COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	107107021	3/2/2018		
US	Filed	PURIFIED POTASSIUM HEXAFLUOROMANGANATE AND METHODS FOR PURIFYING POTASSIUM HEXAFLUOROMANGANATE	PRI-PRIORITY APPLICATION	15/241758	8/19/2016		
W/O	Filed	PURIFIED POTASSIUM HEXAFLUOROMANGANATE AND METHODS FOR PURIFYING POTASSIUM HEXAFLUOROMANGANATE	ORD-UTILITY PATENT FILING	PCT/US2017/042721	7/19/2017		
TW	Filed	PURIFIED POTASSIUM HEXAFLUOROMANGANATE AND METHODS FOR PURIFYING POTASSIUM HEXAFLUOROMANGANATE	ORD-UTILITY PATENT FILING	106126166	8/3/2017		
US	Issued	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHORS	CIP-CONTINUATION IN PART	15/197897	6/30/2016	1/16/2018	US9868898
W/O	Filed	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	PCT/US2017/051038	9/12/2017		
TW	Filed	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	106131402	9/13/2017		
US	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	CIP-CONTINUATION IN PART	15/171098	6/2/2016		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
WO	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	ORD-UTILITY PATENT FILING	PCT/US2017/034477	5/25/2017		
TW	Filed	RED-EMITTING PHOSPHORS AND ASSOCIATED DEVICES	ORD-UTILITY PATENT FILING	106118332	6/2/2017		
US	Filed	DEVICES CONTAINING A REMOTE PHOSPHOR PACKAGE WITH RED LINE EMITTING PHOSPHORS AND GREEN EMITTING QUANTUM DOTS	ORD-UTILITY PATENT FILING	15/370762	12/6/2016		
WO	Filed	DEVICES CONTAINING A REMOTE PHOSPHOR PACKAGE WITH RED LINE EMITTING PHOSPHORS AND GREEN EMITTING QUANTUM DOTS	PRI-PRIORITY APPLICATION	PCT/US17/27209	4/12/2017		
IN	Filed	COATED RED LINE EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	201641039267	11/17/2016		
WO	Filed	COATED RED LINE EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	PCT/US17/61702	11/15/2017		
TW	Filed	COATED RED LINE EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	106139674	11/16/2017		
US	Unfiled	COATED RED LINE EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING				
US	Filed	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHOR PARTICLES HAVING SMALL PARTICLE SIZE	ORD-UTILITY PATENT FILING	15/829878	12/2/2017		
WO	Filed	PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHOR PARTICLES HAVING SMALL PARTICLE SIZE	ORD-UTILITY PATENT FILING	PCT/US17/65795	12/12/2017		

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
		PROCESSES FOR PREPARING COLOR STABLE RED-EMITTING PHOSPHOR PARTICLES HAVING SMALL PARTICLE SIZE	ORD-UTILITY PATENT FILING	106143544	12/12/2017		
TW	Filed	LIGHTING APPARATUS INCLUDING COLOR STABLE RED EMITTING PHOSPHORS AND QUANTUM DOTS	CIP-CONTINUATION IN PART	14/962624	12/8/2015		
US	Filed	METHODS FOR FABRICATING DEVICES CONTAINING RED LINE EMITTING PHOSPHORS	PRI-PRIORITY APPLICATION	15/270657	9/20/2016	4/10/2018	US9938457
US	Issued	PROCESSES FOR PREPARING STABLE RED-EMITTING PHOSPHORS	ORD-UTILITY PATENT FILING	15/794759	10/26/2017		
US	Filed	MANGANESE-DOPED PHOSPHOR MATERIALS FOR HIGH POWER DENSITY APPLICATIONS	PCT-PATENT COOPERATION TREATY	15/743435	1/10/2018		
WO	Filed	MANGANESE-DOPED PHOSPHOR MATERIALS FOR HIGH POWER DENSITY APPLICATIONS	ORD-UTILITY PATENT FILING	PCT/US2017/031654	5/9/2017		
CN	Issued	LUMINAIRE	DES-DESIGN	200630010410	4/4/2006	3/21/2007	CN3624666
CN	Issued	ROADWAY	DES-DESIGN	200530169020.3	12/15/2005	10/6/2006	CN3567460
CN	Issued	BEAM TRIMMER	DES-DESIGN	200530018550.8	6/15/2005	4/19/2006	CN3521572
US	Filed	MOTION-BASED MATERIALS MANAGEMENT SYSTEM AND METHOD	PRO-PROVISIONAL	62/577664	10/26/2017		
US	Issued	LED packaging methods and LEDbased lighting products	PRI-PRIORITY APPLICATION	12/198662	8/26/2008	9/7/2010	US7791089

## Patents of Current Lighting Solutions, LLC

CG	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	LED packaging methods and LEDbased lighting products	DIV-DIVISIONAL FILING	12/843194	7/26/2010	5/24/2011	US7947516
US	Issued	LED packaging methods and LEDbased lighting products	CIP-CONTINUATION IN PART	12/857472	8/16/2010	11/15/2011	US8058659
US	Issued	SYSTEMS AND METHODS FOR CONVEYING INFORMATION USING A CONTROL SIGNAL REFERENCED TO ALTERNATING CURRENT AC POWER	CON-CONTINUATION	13/598195	8/29/2012	8/6/2013	US8502649
US	Issued	LEDBased Lighting Power Supplies With Power Factor Correction And Dimming Control	ORD-UTILITY PATENT FILING	12/859717	8/19/2010	3/5/2013	US8390214
US	Issued	HIGH BAY LED LIGHT FIXTURE	PDS-PRIORITY DESIGN APPLICATION	29/318524	5/21/2008	5/19/2009	USD592785
US	Issued	LED light fixture	PDS-PRIORITY DESIGN APPLICATION	29/318648	5/23/2008	5/19/2009	USD592786
US	Issued	High bay LED light fixture	PDS-PRIORITY DESIGN APPLICATION	29/325189	9/26/2008	2/8/2011	USD632418
US	Issued	LED LIGHT FIXTURE	PDS-PRIORITY DESIGN APPLICATION	29/391284	5/5/2011	2/18/2014	USD699886
US	Issued	LED LIGHT FIXTURES	DDV-DESIGN DIVISIONAL	29/482308	2/17/2014	9/30/2014	USD714486
US	Issued	LED Light Fixture	PDS-PRIORITY DESIGN APPLICATION	29/449296	3/14/2013	6/2/2015	USD731103
US	Issued	Glare Shield For LED Light Fixture	DDV-DESIGN DIVISIONAL	29/524696	4/22/2015	12/13/2016	USD774235S1

## Patents of Current Lighting Solutions, LLC

CO	Case Status	Title	Filing Description	Application Number	Application Date	Patent Date	Patent Number
US	Issued	Thermal Management of LED Based Lighting System	CON-CONTINUATION	12/897593	10/4/2010	9/6/2011	US8011799
US	Issued	THERMAL MANAGEMENT OF LEDBASED LIGHTING SYSTEMS	ORD-UTILITY PATENT FILING	11/735903	4/16/2007	10/5/2010	US7806574
US	Issued	FLOW-THROUGH LED LIGHTING SYSTEM	ORD-UTILITY PATENT FILING	11/959335	12/18/2007	8/13/2013	US8506121
US	Issued	THERMAL MANAGEMENT OF LEDBASED LIGHTING SYSTEMS	CIP-CONTINUATION IN PART	12/431674	4/28/2009	4/23/2013	US8425085
US	Issued	LED ChipBased Lighting Products and Methods of Building	CIP-CONTINUATION IN PART	13/718755	12/18/2012	10/15/2013	US8558255
US	Issued	METHODS OF INTEGRATING LED CHIPS WITH HEAT SINKS AND LEDBASED LIGHTING ASSEMBLIES MADE THEREBY	CIP-CONTINUATION IN PART	13/802444	3/13/2013	7/7/2015	US9076951
US	Issued	Methods of Integrating LED Chips With Heat Sinks and LED Based Lighting Assemblies Made Thereby	PR1-PRIORITY APPLICATION	13/802401	3/13/2013	3/17/2015	US8981629
US	Filed	LAMP	DES-DESIGN	29/626301	11/16/2017		



**Schedule B**  
**Trademarks**

See attached.

**Trademarks of Current Lighting Solutions, LLC**

<b>MARK</b>	<b>COUNTRY</b>	<b>SER. NO.</b>	<b>REG. NO.</b>
ACE	United States of America	87195118	5313308
ALGLAS	Australia	416604	416604
ALGLAS	China	227487	227487
ALGLAS	Singapore	T8405428D	T8405428D
ALGLAS	Taiwan	73049884	286291
ALGLAS	United States of America	72268042	881579
ALGLAS (ENGLISH) ALGLAS (KATAKANA CHARACTERS)	Japan	S52-073800	1449357
ALLSITES	Argentina	3665202	
ALLSITES	Argentina	3665201	
ALLSITES	Brazil	913800236	
ALLSITES	Brazil	913800260	
ALLSITES	Canada	1857609	
ALLSITES	EUTM	17155227	17155227
ALLSITES	Mexico	1979275	1921192
ALLSITES	Mexico	1979276	1847183
ALLSITES	Peru	7292302017	19641
ALLSITES	United States of America	87582036	
ARCSTREAM	Australia	656550	656550
ARCSTREAM	Bangladesh	45329	45329

ARCSTREAM	Canada	794406	461990
ARCSTREAM	Denmark	VA199508452	VR199601908
ARCSTREAM	France	95588620	95588620
ARCSTREAM	Germany	395386802	39538680
ARCSTREAM	India	680932	680932
ARCSTREAM	Italy	MI1996C010088	1210982
ARCSTREAM	Mexico	244482	507444
ARCSTREAM	Spain	1987322	1987322
ARCSTREAM	Sri Lanka	76687	76687
ARCSTREAM	Sweden	9512718	312838
ARIZE	Brazil	911176330	911176330
ARIZE	Canada	1786718	
ARIZE	China	20627690	20627690
ARIZE	EUTM	15552813	15552813
ARIZE	Mexico	1761143	1688196
ARIZE	United States of America	87067695	5387512
ARIZE ELEMENT	United States of America	87549593	5676084
BREADLEAF	China	9723365	9723365
CITYIQ	Canada	1825129	
CITYIQ	Mexico	1860515	1766490
CITYIQ	Mexico	1860522	1976594
CITYIQ	United States of America	87350985	5,546,756
CODE CONTROL	Canada	1302109	TMA691366

CONSTANTCOLOR	Australia	649855	649855
CONSTANTCOLOR	Indonesia	D002011035912	IDM000412974
CONSTANTCOLOR	Korea - Republic of (South)	40201145924	400939549
CONSTANTCOLOR	Malaysia	2011015507	2011015507
CONSTANTCOLOR	New Zealand	847982	847982
CONSTANTCOLOR	Singapore	T1111597F	T1111597F
CONSTANTCOLOR	Taiwan	100042927	1517278
CONSTANTCOLOR	United States of America	74190883	1766646
CONSTANTCOLOR	Vietnam	4201117393	191662
CONSTANTCOLOR (STYLISED)	Hong Kong	302013074	302013074
CURRENT	Brazil	913704733	913704733
CURRENT	Brazil	913704750	913704750
CURRENT	Brazil	913704784	913704784
CURRENT	Brazil	913704806	913704806
CURRENT	Brazil	913704822	913704822
CURRENT	Canada	1867210	
CURRENT	EUTM	17452351	
CURRENT	Mexico	1971089	
CURRENT	Mexico	1971090	1847935
CURRENT	Mexico	1971091	1847936
CURRENT	Mexico	1971087	1847934
DUROGLOW	Spain	1055464	1055464
ECOLUX	Mexico	370403	657491

ECOLUX	United States of America	75157145	2186490
EVOLVE	Argentina	2941652	2373381
EVOLVE	Australia	1193360	1193360
EVOLVE	Brazil	830375805	830375805
EVOLVE	Canada	1450253	TMA820517
EVOLVE	Chile	876529	885264
EVOLVE	China	1193360	1193360
EVOLVE	Colombia	1193360	1193360
EVOLVE	Guatemala	M0058962009	167744
EVOLVE	India	1868860	1868860
EVOLVE	India	1193360	1193360
EVOLVE	Indonesia	D002009032818	IDM000298298
EVOLVE	Jamaica	54523	54523
EVOLVE	Korea - Republic of (South)	1193360	1193360
EVOLVE	Malaysia	9017054	9017054
EVOLVE	Mexico	1193360	1193360
EVOLVE	New Zealand	1193360	1193360
EVOLVE	Panama	184801	184801
EVOLVE	Peru	398272	158837
EVOLVE	Philippines	1193360	1193360
EVOLVE	Singapore	1193360	1193360
EVOLVE	Taiwan	98050071	1414145
EVOLVE	Thailand	745958	TM325927

EVOLVE	United States of America	77375301	3747331
EVOLVE	Venezuela	171082010	P313052
EVOLVE	Vietnam	1193360	1193360
EVOLVE	WIPO	1193360	1193360
EVOLVE (STYLISED)	Hong Kong	301438452	301438452
EYES ON TRACK	EUTM	15865711	15865711
EYES ON TRACK	United Kingdom	3187886	3187886
EYES ON TRACK	United States of America	87187373	
E-Z LUX	United States of America	73048566	1024164
FILTERGLOW	Italy	MI1970V018546	1291756
FILTERGLOW	Spain	1055466	1055466
GARAGE-GARD	Spain	1929391	1929391
GHB	United States of America	73740531	1552751
INFUSION	Brazil	830497358	830497358
INFUSION	Canada	1456887	TMA827408
INFUSION	China	8028217	8028217
INFUSION	EUTM	8811721	8811721
INFUSION	Japan	2010-002276	5338140
INFUSION	Mexico	1060670	1153807
INFUSION	United States of America	77306300	3923497
INTRINSX	United States of America	85554560	4314481
LIGHTLOGIX	EUTM	15269871	15269871

LIGHTLOGIX	Kuwait	181295	154297
LIGHTLOGIX	Norway	201607027	289668
LIGHTLOGIX	Qatar	106990	106990
LIGHTLOGIX	Russian Federation	2016721884	612003
LIGHTLOGIX	Saudi Arabia	1437020936	1437020936
LIGHTLOGIX	Turkey	201654103	201654103
LIGHTLOGIX	United Arab Emirates	255800	255800
LIGHTSWEEP	United States of America	85517916	4296432
LIGHTX	Canada	1323186	TMA699812
LUMINATION	United States of America		3603057
LUMENCHOICE	Canada	1876527	
LUMENCHOICE	United States of America	87746579	5,639,521
MOD-U-LINE	Mexico	11207	325135
MOD-U-LINE	Peru	5746732014	54260
MOD-U-LINE	United States of America	73180988	1137936
MULTIVAPOR	EUTM	12393765	12393765
MULTI-VAPOR	Benelux	524440	301921
MULTI-VAPOR	China	228571	228571
MULTI-VAPOR	EUTM	15293822	15293822
MULTI-VAPOR	Germany		887249
MULTI-VAPOR	Germany		DD653357
MULTI-VAPOR	Italy	MI1971C000001	1409147
MULTI-VAPOR	Italy	MI1991C001294	621503

MULTI-VAPOR	Korea - Republic of (South)	4.01983E+12	107252
MULTI-VAPOR	Peru	5746722014	54256
MULTI-VAPOR	Spain	576850	576850
MULTI-VAPOR	Switzerland	01088/1991	P-387833
MULTI-VAPOR	United States of America	72205278	820924
OKOLORLUX	Australia	217197	217197
PERMA-GARD	United States of America	73740530	1540355
POWER GROOVE	Germany	W64912	DD653490
POWER GROOVE	Germany		810711
POWER GROOVE	Italy	MI2015C000174	1637060
POWER GROOVE	Mexico	155008	239602
POWER GROOVE	South Africa		650508
POWER GROOVE	Switzerland	00221/1985	336404
POWER GROOVE	United States of America	72086958	706579
PROLINE	United States of America	78377097	3018636
PROLINE	United States of America	78352339	2917477
PRO-LINE	United States of America	75389493	2325186
PROSYS	United States of America	76099257	2747833
PULSEARC	United States of America	75290545	2406576
QUARTZLINE	Korea - Republic of (South)	4.01988E+12	190296



QUARTZLINE	Peru	574674-2014	54258
QUARTZLINE	Sweden	01-46480	146480
QUARTZLINE	United States of America	72091372	710836
RADIANTRED	Australia	1800205	1800205
RADIANTRED	Brazil	912365153	912365153
RADIANTRED	Brazil	912365196	912365196
RADIANTRED	Canada	1804186	
RADIANTRED	France	174334586	174334586
RADIANTRED	Italy	3.02017E+14	3.02017E+14
RADIANTRED	Japan	2016-106203	5945050
RADIANTRED	Korea - Republic of (South)	40201692262	401260735
RADIANTRED	Spain	3649737	3649737
RADIANTRED	Taiwan	105058060	1862964
RADIANTRED	United States of America	87169040	
SBF	United States of America	73521391	1360397
SELECT TX	United States of America	87357843	
SKYGARD	United States of America	78078190	2807401
STARCOAT	Australia	833020	833020
STARCOAT	EUTM	1628023	1628023
STARCOAT	India	920104	920104
STARCOAT	Japan	2000-077108	4566513

STARCOAT	Kuwait	50543	41990
STARCOAT	Norway	200004879	205562
STARCOAT	Oman	22415	22415
STARCOAT	Saudi Arabia	64050	57066
STARCOAT	South Africa	200007782	200007782
STARCOAT	United Arab Emirates	36468	29522
STARCOAT	United States of America	75632103	2319103
STREETDREAMS	Canada	1239858	TMA717271
STREETDREAMS	United States of America	78435902	3104954
TRIMLINE	Canada	CA080486700	482695
TRIMLINE	China	960034855	1467292
ULC	United States of America	75817212	2678536
UNIMOUNT	United States of America	73308994	1216586
ULTRASTART	United States of America	78453794	3101888
VERSAGLOW	United States of America	73042671	1026153
CONSTANT COLOR PRECISE MR 16	Brazil	816767939	816767939
MOD-U-LINE	Canada	333542	177574
MULTI-VAPOR	Canada	333543	184671
POWER GROOVE	Canada	265064	TMA127291
QUARTZLINE	Canada	265065	TMA126313

**Schedule C**  
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