505933153 02/25/2020

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5979871

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
GE LIGHTING SOLUTIONS, LLC	03/30/2019

RECEIVING PARTY DATA

Name:	CONSUMER LIGHTING (U.S.), LLC
Street Address:	901 MAIN AVENUE
City:	NORWALK
State/Country:	CONNECTICUT
Postal Code:	06851

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15529849

CORRESPONDENCE DATA

Fax Number: (240)912-7432

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: 240-801-9717

docketing@woodiplaw.com, dcrooks@woodiplaw.com, Email:

USPTO@dockettrak.com

Correspondent Name: WOOD IP LLC

Address Line 1: 555 QUINCE ORCHARD ROAD

Address Line 2: SUITE 280

Address Line 4: GAITHERSBURG, MARYLAND 20878

ATTORNEY DOCKET NUMBER:	275459-US-4
NAME OF SUBMITTER:	THEODORE A. WOOD
SIGNATURE:	/Theodore A. Wood/
DATE SIGNED:	02/25/2020

Total Attachments: 40

source=GELS to CLUS assignment 2#page1.tif source=GELS to CLUS assignment 2#page2.tif source=GELS to CLUS assignment 2#page3.tif

source=GELS to CLUS assignment 2#page4.tif

505933153

source=GELS to CLUS assignment 2#page5.tif	
source=GELS to CLUS assignment 2#page6.tif	
source=GELS to CLUS assignment 2#page7.tif	
source=GELS to CLUS assignment 2#page8.tif	
source=GELS to CLUS assignment 2#page9.tif	
source=GELS to CLUS assignment 2#page10.tif	
source=GELS to CLUS assignment 2#page11.tif	
source=GELS to CLUS assignment 2#page12.tif	
source=GELS to CLUS assignment 2#page13.tif	
source=GELS to CLUS assignment 2#page14.tif	
source=GELS to CLUS assignment 2#page15.tif	
source=GELS to CLUS assignment 2#page16.tif	
source=GELS to CLUS assignment 2#page17.tif	
source=GELS to CLUS assignment 2#page18.tif	
source=GELS to CLUS assignment 2#page19.tif	
source=GELS to CLUS assignment 2#page20.tif	
source=GELS to CLUS assignment 2#page21.tif	
source=GELS to CLUS assignment 2#page22.tif	
source=GELS to CLUS assignment 2#page23.tif	
source=GELS to CLUS assignment 2#page24.tif	
source=GELS to CLUS assignment 2#page25.tif	
source=GELS to CLUS assignment 2#page26.tif	
source=GELS to CLUS assignment 2#page27.tif	
source=GELS to CLUS assignment 2#page28.tif	
source=GELS to CLUS assignment 2#page29.tif	
source=GELS to CLUS assignment 2#page30.tif	
source=GELS to CLUS assignment 2#page31.tif	
source=GELS to CLUS assignment 2#page32.tif	
source=GELS to CLUS assignment 2#page33.tif	
source=GELS to CLUS assignment 2#page34.tif	
source=GELS to CLUS assignment 2#page35.tif	
source=GELS to CLUS assignment 2#page36.tif	
source=GELS to CLUS assignment 2#page37.tif	
source=GELS to CLUS assignment 2#page38.tif	
source=GELS to CLUS assignment 2#page39.tif	
source=GELS to CLUS assignment 2#page40.tif	

PATENT ASSIGNMENT AGREEMENT

This Patent Assignment Agreement (the "<u>Assignment</u>"), dated as of April 1, 2019, is by and between GE Lighting Solutions, LLC, a Delaware Limited Liability Company, having an office at 1975 Noble Rd. Building 338, Nela Park, East Cleveland, Ohio 44112 ("<u>Assignor</u>") and Consumer Lighting (U.S.) LLC, a Delaware Limited Liability Company, having an office at 901 Main Ave. Norwalk, Connecticut 06851, ("<u>Assignee</u>").

WHEREAS, Assignor is the owner of certain intellectual property listed on the attached <u>Schedule A</u> (the "<u>Assigned Patent Registrations</u>");

WHEREAS, General Electric Company and Espresso Holdco, Inc. entered into that certain Stock and Asset Purchase Agreement dated as of November 5, 2018 ("Purchase Agreement"); and

WHEREAS, in furtherance of the transactions contemplated by the Purchase Agreement, the parties thereto have agreed to cause Assignor to assign to Assignee the Assigned Patent Registrations, and all right, title and interest in and to the Assigned Patent Registrations, and the parties wish to record such assignment in the respective Patent Offices.

NOW, THEREFORE, in consideration of the sum of US\$10 (ten US Dollars) and other good and valuable consideration paid by the Assignee to the Assignor, the receipt and sufficiency of which is hereby acknowledged, Assignor and Assignee agree as follows:

- 1. <u>Assignment of Patent Registrations</u>. Effective as of the date hereof, Assignor sells, transfers, conveys, assigns and delivers to Assignee and Assignee accepts all right, title and interest in and to (i) the Assigned Patent Registrations; (ii) all income, royalties, damages, claims, and payments now or hereafter due or payable under and with respect thereto, including, without limitation, damages, claims, and payments for past and future infringements thereof; (iii) all rights to sue for past, present, and future infringements of the foregoing, including the right to settle suits involving claims and demands for royalties owing; and (iv) the right to assign the rights conveyed herein, the same to be held and enjoyed by Assignee for its own use and benefit, and for the benefit of its successors, assigns, and legal representatives.
- 2. <u>Additional Documents</u>. Assignor shall execute any other documents as may be reasonably required to carry out the purposes of the Assignment.
- 3. <u>Successors</u>. This Assignment shall inure to the benefit of and is binding upon the respective successors and assigns of Assignor and Assignee.
- 4. <u>Governing Law</u>. This Assignment shall be governed by, and construed in accordance with (i) the laws of the United States, in respect to patent issues, and (ii) in all other respects, including as to validity (except for patent issues), interpretation and effect, by the laws of the State of New York.
- 5. <u>Counterparts</u>. This Assignment may be executed in separate counterparts, each of which is deemed to be an original and all of which taken together constitute one and the same agreement.
- 6. <u>Miscellaneous</u>. This Assignment is subject to all the terms and conditions of the Purchase Agreement. The parties intend that this Assignment is for recordation purposes only and its terms shall not modify the applicable terms and conditions of the Purchase Agreement.

1

IN WITNESS WHEREOF, Assignor and Assignee caused this Assignment to be duly executed as of the date first written above.

GE LIGHTING SOLUTIONS, LLC

By: Willi V. Vega
Its: Sr. Euc Corporate IP Council, Transactions
Date: March 30, 20/9

9000	
STATE OF Masachisetts)
COUNTY OF MALIK) ss.

Before me, the undersigned authority, on this 30th day of 12019, personally appeared known to me as the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same for the purposes and consideration therein expressed, in the capacity state, and with authority to act in this assignment on behalf of the Assignor.

Notary Public

(Signature of Notary

DOUGLAS YU
Notary Public, Commonweelth of Massachusett
My Commission Expires December 12, 2025

(Legibly Print or Stamp Name of Notary)

REEL: 052008 FRAME: 0357

ACCEPTED BY:

CONSUMER LIGHTING (US) LLC

	By: Willia V. Jeea
	Its: Sr Exec Corporale IP Counsed, Transactions
	Its: <u>Sr Exec Carporale IP Counsed,</u> Transactions Date: <u>March</u> 30, 2019
STATE OF Massachusetts)	·
COUNTY OF World	SS.
instrument and acknowledged to me	uthority, on this 30th day of March, 2019, personally appeared known to me as the person whose name is subscribed to the foregoing that he/she executed the same for the purposes and consideration therein with authority to act in this assignment on behalf of the Assignee.
	Notary Public
	(Signature of Notary) DOUGLAS YU Notary Public, Commonwealth of Massachusetts My Commission Expires December 12, 2025
	(Legibly Print or Stamp Name of Notary)

REEL: 052008 FRAME: 0358

Espresso to Opal

Schedule A-Patents & Patent Applications

IT	EP	JP	CN	FR	US	US	GВ	DE	CN	US
Issued	Filed	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued
HIGH POWER LED POWER PACK FOR SPOT MODULE ILLUMINATION	LED POWER PACK FOR SPOT MODULE ILLUMINATION	LED POWER PACK FOR SPOT MODULE ILLUMINATION	HIGH POWER LED POWER PACK FOR SPOT MODULE ILLUMINATION	HIGH POWER LED POWER PACK FOR SPOT MODULE ILLUMINATION	HIGH POWER LED POWER PACK FOR SPOT MODULE ILLUMINATION	NIGHT LIGHT FOR PLUMBING FIXTURES	HEAT DISSIPATION SYSTEM FOR HIGH POWER LED LIGHTING SYSTEM	HEAT DISSIPATION SYSTEM FOR HIGH POWER LED LIGHTING SYSTEM	HEAT DISSIPATION SYSTEM FOR HIGH POWER LED LIGHTING SYSTEM	SYSTEM FOR HIGH POWER LED LIGHTING SYSTEM
EPP-EUROPEAN PATENT - PCT ORIGINATED	DIV-DIVISIONAL FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	EPP-EUROPEAN PATENT - PCT ORIGINATED	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	EPC-EUROPEAN PATENT CONVENTION	EPC-EUROPEAN PATENT CONVENTION	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING
502016000112354	10171923.5	2003-500968	2812366.2	2739450	10/063924	10/064772	2721632.4	2721632.4	2809084.5	09/681400
11/17/2003	8/4/2010	11/23/2006	5/24/2002	11/17/2003	5/24/2002	8/15/2002	3/29/2002	3/29/2002	3/29/2002	3/29/2001
8/24/2016		2/5/2010	8/5/2009	8/24/2016	10/5/2004	10/19/2004	6/13/2007	6/13/2007	4/25/2007	11/19/2002
EP1393374		JP4452495	CN02812366.2	EP1393374	US6799864	US6805458	EP1374319	EP1374319	CN02809084.5	US6481874

PATENT

REEL: 052008 FRAME: 0359

JP	ES	N.	IT	GB	9	JP	DE	US	GB	DE	US	GB	
Filed	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	
COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	LED-BASED MODULAR	LED-BASED MODULAR	LED-BASED MODULAR	LED-BASED MODULAR	ZOOMABLE SPOT MODULE	ZOOMABLE SPOT MODULE	VARIABLE OPTICS SPOT MODULE	HIGH POWER LED POWER PACK FOR SPOT MODULE ILLUMINATION	
PCT-PATENT COOPERATION TREATY	PATENT CONVENTION	PATENT CONVENTION	PATENT CONVENTION	EPC-EUROPEAN PATENT CONVENTION	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	EPC-EUROPEAN PATENT CONVENTION	PRI-PRIORITY APPLICATION	EPC-EUROPEAN PATENT CONVENTION	PATENT CONVENTION	PRI-PRIORITY APPLICATION	EPP-EUROPEAN PATENT - PCT ORIGINATED	
2004-532037	3751945.1	3751945.1	502010901806259	3751945.1	3823757.1	2004-543297	3754619.9	10/065320	2766298	2766298	09/682535	2739450	
8/29/2003	8/29/2003	8/29/2003	8/29/2003	8/29/2003	4/4/2005	9/19/2003	9/19/2003	10/3/2002	9/17/2002	9/17/2002	9/17/2001	11/17/2003	
	11/11/2009	11/11/2009	11/11/2009	11/11/2009	11/28/2012	10/21/2009	2/28/2018	9/7/2004	1/10/2007	1/10/2007	8/10/2004	8/24/2016	
	EP1540746	EP1540746	EP1540746	EP1540746	CN03823757.1	JP4350648	EP1547447	US6787999	EP1427962	EP1427962	US6773139	EP1393374	

US	JP	ΕP	EP	DE		BE	CN	AU	KR	US	US	EP
Filed	Issued	Filed	Filed	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Filed
LED-BASED LIGHT BULB	LED-BASED LIGHT BULB	LED-BASED LIGHT BULB	LED-BASED LIGHT BULB	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY	COATED LED WITH IMPROVED EFFICIENCY
PCT-PATENT COOPERATION TREATY	DIV-DIVISIONAL FILING	DIV-DIVISIONAL FILING	PCT-PATENT COOPERATION TREATY	EPC-EUROPEAN PATENT CONVENTION	EPC-EUROPEAN PATENT CONVENTION	EPP-EUROPEAN PATENT - PCT ORIGINATED	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	REI-REISSUE	DIV-DIVISIONAL FILING
10/555721	2011-110613	12166294.4	4751681	3751945.1	3751945.1	3751945.1	3824703.8	2003270052	2005-7003453	10/525697	90/011805	8004649.3
4/2/2007	5/17/2011	5/1/2012	11/25/2005	8/29/2003	8/29/2003	8/29/2003	8/29/2003	3/1/2005	8/29/2003	3/23/2006	7/22/2011	3/13/2008
	10/2/2015			11/11/2009	11/11/2009	11/11/2009	3/11/2009	6/4/2009	9/19/2006	1/10/2009	10/17/2013	
	JP5815982			EP1540746	EP1540746	EP1540746	CN100468791C	AU2003270052	KR622209	US7479662	US7479662	

GB	NL	DE	S	WO	US	US	JP	S	US	US	US	CN	
Issued	Issued	Issued	Issued	Filed	Filed	Issued	Issued	Issued	Issued	Filed	Filed	Issued	
LED LAMP	LED LAMP	LED LAMP	LED LAMP	LED LAMP	White LEDs with enhanced color contrast	PIEZOFAN AND HEAT SINK SYSTEM FOR ENHANCED HEAT TRANSFER	LED-BASED LIGHT BULB	LED-BASED SPECIALTY LIGHT BULB	LED-BASED LIGHT BULB	LED-BASED LIGHT BULB	LED-BASED LIGHT BULB	LED-BASED LIGHT BULB	
EPP-EUROPEAN PATENT - PCT ORIGINATED	EPP-EUROPEAN PATENT - PCT ORIGINATED	EPP-EUROPEAN PATENT - PCT ORIGINATED	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	CON- CONTINUATION	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	DIV-DIVISIONAL FILING	CON- CONTINUATION	CIP- CONTINUATION IN PART	CON- CONTINUATION	PCT-PATENT COOPERATION TREATY	
11779260.6	11779260.6	11779260.6	201180054064.4	US11/55185	14/295486	11/531170	2006-514328	201010226198.7	13/424835	13/424805	13/424785	200480015673.9	
5/15/2013	5/15/2013	5/15/2013	5/9/2013	10/7/2011	6/4/2014	9/12/2006	11/4/2005	5/5/2004	3/20/2012	3/20/2012	3/20/2012	5/5/2004	
6/29/2016	6/29/2016	6/29/2016	8/31/2016			12/4/2012	6/27/2014	10/30/2013	4/17/2018			11/24/2010	
EP2638318	EP2638318	EP2638318	CN103180659			US8322889	JP5566564	CN101915365	US9944519			CN1802533	

KR	MX	JP	MX	KR	EP	BR	US	US	CX	S	US
Filed	Filed	Issued	Issued	Filed	Filed	Filed	Issued	Issued	Filed	Filed	Filed
TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES	Transparent Heat Fins - Transparent Thermally Conductive Polymer Composites For Light Source Thermal Management	Transparent Heat Fins - Transparent Thermally Conductive Polymer Composites For Light Source Thermal Management	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	LED lamp having a spherical diffuser	LED LAMP WITH UNIFORM OMNIDIRECTIONAL LIGHT INTENSITY OUTPUT	LED lamp having a spherical diffuser	LED lamp having a spherical diffuser	LED LAMP WITH UNIFORM OMNIDIRECTIONAL LIGHT INTENSITY OUTPUT			
DIV-DIVISIONAL FILING	DIV-DIVISIONAL	DIV-DIVISIONAL	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	CON- CONTINUATION	CON- CONTINUATION	PCT-PATENT COOPERATION TREATY	DIV-DIVISIONAL FILING	CONTINUATION
1020187004495	MX/a/2016/001608	2015-212729	MX/a/2012/008009	1020127011454	10821324	112012011011-0	14/183013	14/205542	201080054756.4	2016109308322	15/158978
2/13/2018	2/4/2016	10/29/2015	7/9/2012	5/2/2012	5/1/2012	10/1/2010	2/18/2014	3/12/2014	6/1/2012	10/31/2016	5/19/2016
	4/8/2017	9/6/2017	4/28/2016				6/7/2016	4/11/2017			
	MX349604	JP6193330	MX338717				US9360166	US9618165			

CN	KR	df	AU	8	BR	EP	US	
Issued	Filed	Issued	Issued	Issued	Filed	Filed	Issued	
Heatsink design for uniform optical output of a LED lamp with spherical diffuser	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	TRANSPARENT THERMALLY CONDUCTIVE POLYMER COMPOSITES FOR LIGHT SOURCE THERMAL MANAGEMENT	FOR LIGHT SOURCE THERMAL MANAGEMENT
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	
201080054757.9	1020127020972	2012-548995	2011205461	201180005962	112012017088-0	11708124	12/979611	
6/1/2012	8/9/2012	7/12/2012	7/31/2012	7/12/2012	4/12/2016	7/25/2012	12/28/2010	
10/7/2015	4/10/2018	5/12/2017	10/22/2015	11/25/2015			9/24/2013	
CN201080054757.9	KR101847657	JP6139134	AU2011205461	CN201180005962.0			US8541933	

MX	CN	US	JP	BR	MX	CN	US	DE	TW	KR	EP	US
Issued	Filed	Appeal	Filed	Filed	Issued	Issued	Issued	Issued	Issued	Filed	Filed	Filed
Lightweight Heat Sinks and LED Lamps Employing Same	LIGHTWEIGHT HEAT SINKS AND LED LAMPS EMPLOYING SAME	Lightweight Heat Sinks and LED Lamps Employing Same	LIGHTWEIGHT HEAT SINKS AND LED LAMPS EMPLOYING SAME	LIGHTWEIGHT HEAT SINKS AND LED LAMPS EMPLOYING SAME	Opaque High Conduction Light Weight Heat Sinks	Opaque High Conduction Light Weight Heat Sinks	LIGHTWEIGHT HEAT SINKS AND LED LAMPS EMPLOYING SAME	Heatsink design for uniform optical output of a LED lamp with spherical diffuser	LED LAMP			
PCT-PATENT COOPERATION TREATY	DIV-DIVISIONAL FILING	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	EPP-EUROPEAN PATENT - PCT ORIGINATED	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	CONTINUATION
MX/a/2012/011433	2018102156900	12/979476	2013-502622	112012025157-0	MX/a/2012/011434	201180027211.9	12/979529	11712382.8	100111435	1020127028368	10763295.2	14/062317
3/18/2011	3/15/2018	12/28/2010	10/2/2012	10/2/2012	3/18/2011	11/30/2012	12/28/2010	10/23/2012	3/31/2011	10/30/2012	5/2/2012	10/24/2013
1/20/2014					1/22/2014	5/11/2016	3/11/2014	1/11/2017	2/11/2017			4/24/2018
MX317299					MX317382	CN102939501	US8668356	DE602011034251.7	TWI570380			US9951938

MX	CN	US	NL	DE	N	KR	DE	KR	MX	CN	US	NL	
Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Filed	Issued	Issued	Issued	Issued	
LIGHTWEIGHT HEAT SINKS AND LED LAMPS	Multifunctional HeatFins for LED Lamp Optical and Thermal Management	LIGHTWEIGHT HEAT SINKS AND LED LAMPS EMPLOYING SAME	LIGHTWEIGHT HEAT SINKS AND LED LAMPS EMPLOYING SAME	LIGHTWEIGHT HEAT SINKS AND LED LAMPS EMPLOYING SAME	Multifunctional HeatFins for LED Lamp Optical and Thermal Management	Multifunctional HeatFins for LED Lamp Optical and Thermal Management	LED LAMP	LED LAMP	LED LAMP	LED LAMP	LED LAMP	LED LAMP	
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PATENT - PCT ORIGINATED	EPP-EUROPEAN PATENT - PCT ORIGINATED	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	EPP-EUROPEAN PATENT - PCT ORIGINATED	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	EPP-EUROPEAN PATENT - PCT ORIGINATED	
MX/a/2013/003422	201180057758.3	12/979573	11713109.4	11713109.4	1201301341	1020137009765	10861503	1020137016970	MX/a/2013/007701	201080070988.9	13/336392	10861503	
3/18/2011	5/30/2013	12/28/2010	4/19/2013	4/19/2013	3/18/2011	3/18/2011	7/2/2013	6/28/2013	6/28/2013	6/28/2013	12/23/2011	7/2/2013	
11/27/2014	3/29/2017	3/18/2014	4/27/2016	4/27/2016	6/20/2017	12/8/2017	11/30/2016		10/6/2014	10/12/2016	7/9/2013	11/30/2016	
MX325708	CN103238027	US8672516	EP2622267	EP2622267	VN17098	KR10-1809185	DE602010038548.5		MX324190	CN103261777	US8480257	EP2659178	

S	KR	JP	ЕР	TW	US	JP	ID	BR
Issued	Filed	Issued	Filed	Issued	Issued	Issued	Filed	Filed
PHOSPHOR SUSPENDED IN SILICONE, MOLDED/FORMED AND USED IN A REMOTE	PHOSPHOR SUSPENDED IN SILICONE, MOLDED/FORMED AND USED IN A REMOTE PHOSPHOR CONFIGURATION	PHOSPHOR SUSPENDED IN SILICONE, MOLDED/FORMED AND USED IN A REMOTE PHOSPHOR CONFIGURATION	PHOSPHOR SUSPENDED IN SILICONE, MOLDED/FORMED AND USED IN A REMOTE PHOSPHOR CONFIGURATION	PHOSPHOR SUSPENDED IN SILICONE, MOLDED/FORMED AND USED IN A REMOTE PHOSPHOR CONFIGURATION	PHOSPHOR SUSPENDED IN SILICONE, MOLDED/FORMED AND USED IN A REMOTE PHOSPHOR CONFIGURATION	Multifunctional HeatFins for LED Lamp Optical and Thermal Management	Multifunctional HeatFins for LED Lamp Optical and Thermal Management	Multifunctional HeatFins for LED Lamp Optical and Thermal Management
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY
201180036888.9	1020137004798	2013-521870	11749600	100126837	13/187592	2013-531566	W00201301695	112013007741-7
1/28/2013	2/26/2013	1/25/2013	1/25/2013	7/28/2011	7/21/2011	3/18/2011	3/18/2011	3/18/2011
3/23/2016		1/15/2016		6/21/2017	9/16/2014	10/2/2015		
CN103081567		JP5868404		TWI589033	US8835199	JP5815716		

-	_
٠.	_
$^{\circ}$	٦,

CN	뒫	MX	BR	JP	CN	US	N.	GB	DE	KR	US	
Filed	Filed	Issued	Filed	Issued	Issued	Issued	Issued	Issued	Issued	Filed	Issued	
COOLING SYSTEM AND ILLUMINATING DEVICE COMPRISING SAME	LED LIGHT ENGINE/HEAT SINK ASSEMBLY	LIGHT EMITTING DIODE (LED) BASED LAMP	PHOSE CONFIGURATION									
PRI-PRIORITY APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	EPP-EUROPEAN PATENT - PCT ORIGINATED	EPP-EUROPEAN PATENT - PCT ORIGINATED	EPP-EUROPEAN PATENT - PCT ORIGINATED	PCT-PATENT COOPERATION TREATY	CIP- CONTINUATION IN PART	
201210260962.1	5368/DELNP/2013	MX/a/2013/008428	112013018378-0	2013-550473	201180065492.7	13/323038	11811463.6	11811463.6	11811463.6	1020137018979	12/896314	
7/26/2012	6/17/2013	7/19/2013	7/18/2013	7/16/2013	7/19/2013	12/12/2011	7/16/2013	7/16/2013	7/16/2013	7/18/2013	10/1/2010	
		11/20/2014		12/18/2015	8/10/2016	9/8/2015	4/15/2015	4/15/2015	4/15/2015		4/9/2013	
		MX325568		JP5855135	CN103354886	US9127816	EP2665967	EP2665967	EP2665967		US8414151	
	l .	·			I		1	l.		ATFN	-	VIIIII

EM	MX	CN	US	AU	CA	US	US	MX	JP	US	US
Issued	Issued	Issued	Issued	Issued	Filed	Issued	Issued	Issued	Issued	Issued	Issued
LAMP	LAMP	LAMP	LAMP	LIGHTING APPARATUS WITH A LIGHT SOURCE COMPRISING LIGHT EMITTING DIODES	LIGHTING APPARATUS WITH A LIGHT SOURCE COMPRISING LIGHT EMITTING DIODES	LIGHTING APPARATUS WITH A LIGHT SOURCE COMPRISING LIGHT EMITTING DIODES	LIGHTING APPARATUS WITH A LIGHT SOURCE COMPRISING LIGHT EMITTING DIODES	LAMP	LAMP	LAMP	LAMP
ID- INTERNATIONAL DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DIV-DIVISIONAL FILING	PCT-PATENT COOPERATION TREATY	CON- CONTINUATION	PRI-PRIORITY APPLICATION	DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	PDS-PRIORITY DESIGN APPLICATION
1310809	MX/F/2012/000249	201230017702.2	29/397912	2015246150	2852884	14/079992	13/189052	MX/f/2012/001322	2012-008926	29/404955	29/404991
1/20/2012	1/20/2012	1/20/2012	7/22/2011	10/23/2015	4/17/2014	11/14/2013	7/22/2011	4/27/2012	4/17/2012	10/27/2011	10/27/2011
1/20/2012	3/14/2013	2/13/2013	5/29/2012	9/21/2017		8/16/2016	12/17/2013	5/10/2013	11/30/2012	10/2/2012	10/2/2012
EM1310809-0001	MX38269	CN201230017702.2	USD660991	AU2015246150		US9416952	US8608347	MX38663	JP1458769	USD668361	USD668362

AU	NZ	CA	NZ	EP	CN	US	KR	S	EP	US
Issued	Issued	Filed	Filed	Filed	Issued	Issued	Filed	Filed	Filed	Issued
Non-imaging Fresnel lens for LED lamps	Non-imaging Fresnel lens for LED lamps	OPTICAL SYSTEM AND LIGHTING DEVICE COMPRISED THEREOF	LIGHTING DEVICE INCLUDING A DRIVE DEVICE CONFIGURED FOR DIMMING LIGHTEMITTING DIODES	LIGHTING DEVICE INCLUDING A DRIVE DEVICE CONFIGURED FOR DIMMING LIGHTEMITTING DIODES	LIGHTING DEVICE INCLUDING A DRIVE DEVICE CONFIGURED FOR DIMMING LIGHTEMITTING DIODES	LIGHTING DEVICE INCLUDING A DRIVE DEVICE CONFIGURED FOR DIMMING LIGHT-EMITTING DIODES				
DIV-DIVISIONAL FILING	DIV-DIVISIONAL FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PRI-PRIORITY APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PRI-PRIORITY APPLICATION
2016204281	720860	2862702	627462	13705865.7	201380007897.4	13/365949	20147015329	201280066241.5	12773479.6	13/290589
6/23/2016	6/3/2016	7/24/2014	7/28/2014	7/28/2014	8/1/2014	2/3/2012	6/5/2014	7/7/2014	5/9/2014	11/7/2011
10/19/2017	3/23/2018				10/27/2017	10/11/2016				8/8/2017
AU2016204281	NZ720860				CN104145158	US9464784				US9730294

CA	AU	KR	BR	MX	CN	EP	CN	US
Filed	Issued	Filed	Filed	Issued	Issued	Filed	Filed	Issued
OMNI-DIRECTIONAL REFLECTOR COMPRISING A FRUSTO-CONICAL SURFACE FOR A LIGHT- EMITTING DIODE	OMNI-DIRECTIONAL REFLECTOR COMPRISING A FRUSTO-CONICAL SURFACE FOR A LIGHT- EMITTING DIODE	OMNI-DIRECTIONAL REFLECTOR COMPRISING A FRUSTO-CONICAL SURFACE FOR A LIGHT- EMITTING DIODE	OMNI-DIRECTIONAL REFLECTOR COMPRISING A FRUSTO-CONICAL SURFACE FOR A LIGHT- EMITTING DIODE	OMNI-DIRECTIONAL REFLECTOR COMPRISING A FRUSTO-CONICAL SURFACE FOR A LIGHT- EMITTING DIODE	OMNI-DIRECTIONAL REFLECTOR COMPRISING A FRUSTO-CONICAL SURFACE FOR A LIGHT- EMITTING DIODE	OMNI-DIRECTIONAL REFLECTOR COMPRISING A FRUSTO-CONICAL SURFACE FOR A LIGHT- EMITTING DIODE	Inner lens optics for Omnidirectional lamp	Inner lens optics for Omnidirectional lamp
PCT-PATENT COOPERATION TREATY	DIV-DIVISIONAL FILING	PRI-PRIORITY APPLICATION						
2879388	2013296992	1020157005463	112015001967-6	MX/A/2015/001515	201380041269.8	13742302.6	201611095526.8	13/566623
1/15/2015	1/30/2015	3/2/2015	1/28/2015	1/30/2015	2/3/2015	2/3/2015	12/2/2016	8/3/2012
	6/22/2017			5/5/2016	7/28/2017			3/31/2015
	AU2013296992			MX338948	CN104755988			US8992052

EP	CN	CA	TW	US	CA	KR	JP	CN	EP	MX	US	US	
Filed	Filed	Filed	Issued	Issued	Filed	Filed	Filed	Filed	Filed	Filed	Issued	Issued	
SYSTEM AND METHOD FOR MONITORING USE OF A LAMP	SYSTEM AND METHOD FOR MONITORING USE OF A LAMP	SYSTEM AND METHOD FOR MONITORING USE OF A LAMP	SYSTEM AND METHOD FOR MONITORING USE OF A LAMP	SYSTEM AND METHOD FOR MONITORING USE OF A LAMP	Optical system for BR LED replacement lamps	OPTICAL SYSTEM FOR A DIRECTIONAL LAMP	Light Emitting Diode Lamp						
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PRI-PRIORITY APPLICATION	PDS-PRIORITY DESIGN APPLICATION	
13795118.2	201380072423.8	2896452	102143590	13/706511	2905246	1020157028302	2016-500327	201480027463.5	14711037.3	MX/A/2015/012160	13/802987	29/418358	
6/18/2015	8/6/2015	6/25/2015	11/28/2013	12/6/2012	9/10/2015	10/8/2015	9/10/2015	11/13/2015	9/7/2015	9/10/2015	3/14/2013	4/16/2012	
			11/21/2017	9/19/2017							11/17/2015	10/15/2013	
			TWI606414	US9767522							US9188312	USD691745	

CA	TW	US	US	US	CN	US	US	CN	EP	US	US	KR
Filed	Filed	Issued	Issued	Issued	Issued	Issued	Filed	Filed	Filed	Issued	Filed	Filed
THREE-WAY LAMP WITH PROGRAMMABLE OUTPUT LEVELS	HOW THREE-WAY LAMP WITH PROGRAMMABLE OUTPUT LEVELS	High Output Three-way lamp with consumer programable output levels	ACTIVE COOLING DEVICE	LAMP WITH LIGHT EMITTING ELEMENTS SURROUNDING ACTIVE COOLING DEVICE	OPTICS SYSTEM FOR SOLID STATE LIGHTING APPARATUS	OPTICS SYSTEM FOR SOLID STATE LIGHTING APPARATUS	LAMP WITH HEAT SINK AND ACTIVE COOLING DEVICE	LAMP WITH HEAT SINK AND ACTIVE COOLING DEVICE	LAMP WITH HEAT SINK AND ACTIVE COOLING DEVICE	LED LAMP	SYSTEM AND METHOD FOR MONITORING USE OF A LAMP	SYSTEM AND METHOD FOR MONITORING USE OF A LAMP
PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	PUM-PCT UTILITY MODEL	PCT-PATENT COOPERATION TREATY	CON- CONTINUATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	DES-DESIGN	CON- CONTINUATION	PCT-PATENT COOPERATION TREATY
2922489	103128643	14/013157	13/710782	13/665959	201390000447.8	14/398887	15/809655	201380023503.4	13724956.1	29/420071	15/685427	10-2015-7017930
2/18/2016	8/20/2014	8/29/2013	12/11/2012	11/1/2012	11/4/2014	11/4/2014	11/10/2017	11/4/2014	11/7/2014	5/4/2012	8/24/2017	7/3/2015
		9/1/2015	3/7/2017	11/22/2016	9/23/2015	12/12/2017				1/22/2013		
		US9125271	US9587820	US9500355	CN201390000447.8	US9841175				USD674927		

CN	EM	US	MX	US	ΕP	CN	CA	US	MX	JP	TW	CN	
Issued	Issued	Issued	Issued	Issued	Filed	Filed	Filed	Issued	Issued	Issued	Filed	Filed	
DECO CANDLE LED LAMP WITH ELEVATED LIGHT SOURCE	DECO CANDLE LED LAMP WITH ELEVATED LIGHT SOURCE	LED LAMP WITH AN ELEVATED LIGHT UNIT	LED LAMP	LED LAMP	LED LAMP WITH ND-GLASS BULB	LED LAMP WITH ND-GLASS BULB	LED LAMP WITH ND-GLASS BULB	LED LAMP WITH ND-GLASS BULB	LED LAMP WITH ND-GLASS BULB	LED LAMP WITH ND-GLASS BULB	A lighting device a lighting assembly and a regulating element	A lighting device a lighting assembly and a regulating element	
DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	
201330441103.8	2308536	29/448755	MX/f/2013/002869	29/450990	13785746.2	201380066484.3	2888268	14/056328	MX/A/2015/004952	2015-538048	103140869	201310666489.1	
9/13/2013	9/13/2013	3/13/2013	9/20/2013	3/27/2013	4/24/2015	6/18/2015	4/16/2015	10/17/2013	4/17/2015	4/15/2015	11/25/2014	12/10/2013	
11/12/2014	9/13/2013	6/23/2015	7/21/2015	12/17/2013				4/4/2017	7/20/2017	11/24/2017			
CN201330441103.8	EM002308536-0001	USD732709	MX44596	USD695927				US9612002	MX349277	JP6247694			

۰	_
`	J

US	TR	PE	во	CL	SG	EM	US	US	TW	US	MX	CA	
Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Filed	Issued	Issued	Issued	
LAMP HAVING LENS ELEMENT FOR DISTRIBUTING LIGHT	LED LAMP WITH STIPPLED LENS	LED LAMP WITH STIPPLED LENS	LED LAMP WITH STIPPLED LENS	LED LAMP WITH STIPPLED LENS	LED LAMP WITH STIPPLED LENS	LED LAMP WITH STIPPLED LENS	LED LAMP WITH STIPPLED LENS	UNITARY HEAT SINK FOR SOLID STATE LAMP	DIRECTIONAL LAMP WITH ADJUSTABLE BEAM SPREAD	DIRECTIONAL LAMP WITH ADJUSTABLE BEAM SPREAD	DECO CANDLE LED LAMP WITH ELEVATED LIGHT SOURCE	DECO CANDLE LED LAMP WITH ELEVATED LIGHT SOURCE	
PRI-PRIORITY APPLICATION	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	DES-DESIGN	DES-DESIGN	
14/068414	2014/02278	417.2014	SP-109-2014	1189-2014	D2014/343/E	2427054	29/468115	14/574414	103117510	13/906387	MX/f/2013/002814	152860	
10/31/2013	3/24/2014	3/26/2014	3/26/2014	5/7/2014	3/20/2014	3/18/2014	9/26/2013	12/18/2014	5/19/2014	5/31/2013	9/13/2013	9/12/2013	
11/29/2016	6/1/2014	3/22/2016	10/31/2016	8/4/2016	5/2/2014	3/18/2014	6/23/2015	5/30/2017		4/5/2016	2/6/2015	10/24/2014	
US9506624B2	TR2014 02278	PE4480	ВО6590-В	CL8.125	SGD2014/343/E	EM002427054	USD732710	US9664343		US9303846B2	MX43404	CA152860	

MX	BR	CA	CA	MX	BR	EM	US	BR	CN	ΕP	MX	CA	
Filed	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Filed	Filed	Filed	Filed	Filed	
Smooth Par Lamp Par38/30/20	Smooth Par Lamp Par38/30/20	Smooth Par Lamp Par38/30/20	LED DIRECTIONAL LAMP WITH LENS	LAMP HAVING LENS ELEMENT FOR DISTRIBUTING LIGHT									
DDV-DESIGN DIVISIONAL	DDV-DESIGN DIVISIONAL	DDV-DESIGN DIVISIONAL	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	
MX/F/2017/000350	322016005759-4	165183	161897	MX/F/2015/001238	302015002002-4	2690537	29/506035	112016008265-6	201480059977.9	14802240.3	MX/A/2016/005675	2928432	
2/2/2017	12/12/2016	11/5/2015	4/13/2015	4/13/2015	4/13/2015	4/28/2015	10/13/2014	4/14/2016	4/29/2016	4/27/2016	4/29/2016	4/21/2016	
	11/7/2017	1/7/2016	1/7/2016	2/3/2017	8/1/2017	4/28/2015	8/15/2017						
	BR322016005759-4	CA165183	CA161897	MX48952	BR302015002002	EM002690537	USD794837						

CN	US	US	BR	AU	KR	Q	JP	EP	TW	US	CA	MX
Filed	Issued	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed
LAMP WITH LED CHIPS COOLED BY A PHASE TRANSFORMATION LOOP	LAMP WITH LED CHIPS COOLED BY A PHASE TRANSFORMATION LOOP	STRUCTURES SUBJECTED TO THERMAL ENERGY AND THERMAL MANAGEMENT METHODS THEREFOR	ENHANCED COLOR- PREFERENCE LIGHT SOURCES	ENHANCED COLOR- PREFERENCE LIGHT SOURCES								
ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	PRI-PRIORITY APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY
201510982991.2	14/583039	14/567270	112016005086-0	2014315049	1020167008964	201480061293.2	2016-540937	14842487.2	103131905	14/917870	2923187	MX/A/2016/003053
12/24/2015	12/24/2014	12/11/2014	3/8/2016	3/9/2016	4/5/2016	5/9/2016	3/3/2016	3/3/2016	9/16/2014	3/9/2016	3/3/2016	3/8/2016
	7/26/2016											
	US9401468B2											

EP	TW	US	Z	MY	AU	CX	CN	US	US	WO	US
Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Issued	Filed	Filed
MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	LED LAMP	REFLECTOR AND LAMP COMPRISED THEREOF	Continuation or CIP for A lamp TIR inner reflector	LIGHT BULB	A19 Lamp Design Using Light Emitting Diodes	LED LAMP WITH COATED SUBSTRATE
PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	CIP- CONTINUATION IN PART	PDS-PRIORITY DESIGN APPLICATION	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION
14903619.6	104133077	15/515755	201747013831	2017701023	2014408631	201410654638.7	201511035930.1	14536957	29/486580	PCT/US2018/27200	15/486415
4/4/2017	10/7/2015	3/30/2017	4/19/2017	3/24/2017	3/27/2017	11/17/2014	11/10/2015	11/10/2014	3/31/2014	4/12/2018	4/13/2017
									6/23/2015		
									USD732717		

AU	US	CA	US	TW	CN	BR	MX	CA	KR	JP	Cy .
Filed	Issued	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed
REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	LIGHTING APPARATUS	LIGHTING APPARATUS	LIGHTING APPARATUS	LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS	MATERIALS AND OPTICAL COMPONENTS FOR COLOR FILTERING IN A LIGHTING APPARATUS
ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY
2016244183	14/886781	2968975	15/529849	104140827	201410736040.2	112017006964-4	MX/A/2017/004648	2963171	1020177012079	2017-518287	201480082766.7
10/11/2016	10/19/2015	5/25/2017	5/25/2017	12/4/2015	12/4/2014	4/5/2017	4/7/2017	3/30/2017	5/2/2017	4/5/2017	4/10/2017
	5/15/2018										
	US9970629										

21

WO	US	US	BR	MX	CA	KR	JP	CN	ЕP	TW	Z	MY
Filed	Issued	Issued	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed
WIRELESS BEHAVIORAL FEEDBACK FOR ACTIVE LIGHTING CONTROL	WIRELESS BEHAVIORAL FEEDBACK FOR ACTIVE LIGHTING CONTROL	LIGHTING SYSTEM WITH ACTIVELY CONTROLLABLE OPTICS AND METHOD	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS	REMOTE PHOSPHOR LIGHTING DEVICES AND METHODS
ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING
PCT/US2016/061016	14/948912	14/850596	102016024252-5	MX/A/2016/013679	2944470	1020160133496	2016-200502	201610909566.5	16194150.5	105132230	201644035129	PI 2016703520
11/9/2016	11/23/2015	9/10/2015	10/18/2016	10/18/2016	10/6/2016	10/14/2016	10/12/2016	10/19/2016	10/17/2016	10/5/2016	10/14/2016	9/26/2016
	5/2/2017	12/12/2017										
	US9642218	US9841167										

CA	WO	CA	US	N	MY	S	KR	JP	TW	US	US	TW
Filed	Filed	Filed	Issued	Filed	Issued	Filed						
LED LAMP WITH INTERNAL MIRROR	LED LAMP WITH INTERNAL MIRROR	WARM DIMMING FOR AN LED LIGHT SOURCE	WARM DIMMING FOR AN LED LIGHT SOURCE	LED APPARATUS EMPLOYING NEODYMIUM- FLUORINE MATERIALS	LAMP BASE HAVING INTEGRAL SEMICONDUCTOR TRANSIENT PROTECTION DEVICE	WIRELESS BEHAVIORAL FEEDBACK FOR ACTIVE LIGHTING CONTROL						
PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PRI-PRIORITY APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING
2978463	PCT/US2016/022367	2992994	14/809892	1201701007	2017700676	201580054742.5	1020177012241	2017-516838	104133048	14/876366	14/572224	105136487
8/31/2017	3/14/2016	1/18/2018	7/27/2015	3/21/2017	2/27/2017	4/7/2017	5/4/2017	3/28/2017	10/7/2015	10/6/2015	12/16/2014	11/9/2016
			5/30/2017								10/4/2016	
			US9668307								US9462656B2	

EM	KR	CA	VE	PE	CL	СО	US	CN	CA	US	US	CN
Issued	Issued	Issued	Filed	Issued	Issued	Issued	Issued	Filed	Filed	Filed	Filed	Filed
LIGHT STICK LAMP	LIGHT STICK LAMP	LIGHT STICK LAMP	LIGHT STICK LAMP	LIGHT STICK LAMP	LIGHT STICK LAMP	LIGHT STICK LAMP	Design patent for light stick, design 1#	LED LAMP WITH INTERNAL MIRROR	LED LAMP WITH INTERNAL MIRROR	LED LAMP WITH INTERNAL MIRROR	LED LAMP WITH ENCAPSULATED DRIVER AND SAFETY CIRCUIT	LED LAMP WITH INTERNAL MIRROR
DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY
2688358	30-2015-0019635	162007	15-388	548.15	1019-2015	15095060	29/507347	201680027451.1	2979409	15/557655	15/549539	201680015297.6
4/24/2015	4/17/2015	4/21/2015	4/27/2015	4/23/2015	4/22/2015	4/27/2015	10/27/2014	11/10/2017	9/11/2017	9/12/2017	8/8/2017	9/12/2017
4/24/2015	11/14/2016	11/19/2015		12/31/2015	4/26/2017	12/3/2015	10/20/2015					
EM002688358	KR30-0881911-0000	CA162007		PE4423	CL8.599	CO8863	USD741519					

WO	CN	CL	AR	PE	MX	DO	СО	US	AR	MX	JP	CN
Filed	Issued	Issued	Issued	Issued	Issued							
LED APPARATUS EMPLOYING NEODYMIUM BASED MATERIALS WITH VARIABLE CONTENT OF FLUORINE AND OXYGEN	LED LIGHT STICK LAMP	Design patent application, light stick, design 3#	LIGHT STICK LAMP	LIGHT STICK LAMP	LIGHT STICK LAMP	LIGHT STICK LAMP						
PRI-PRIORITY APPLICATION	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN						
PCT/CN2016/076459	201530210994.5	2015-01830	88621	1182.15	MX/F/2015/001966	D2015-0152	15145.198	29/513041	88355	MX/F/2015/001369	2015-008829	201530116199.X
3/16/2016	6/24/2015	6/24/2015	6/17/2015	6/23/2015	6/23/2015	6/16/2015	6/24/2015	12/24/2014	4/23/2015	4/24/2015	4/20/2015	4/27/2015
	2/3/2016	9/5/2017	6/17/2015	12/18/2015	1/17/2017	10/30/2015	1/6/2016	5/17/2016	4/23/2015	7/6/2016	4/28/2016	11/18/2015
	CN303580651	CL8.645	AR88621	PE1182.15	MX48789	DOD2015-0152	CO8886	USD756544S1	AR88355	MX47331	JP1551048	CN201530116199.X

US	CZ	EM	US	S	US	US	WO	US	CN	US	TW
Issued	Issued	Issued	Issued	Issued	Issued	Issued	Filed	Filed	Filed	Issued	Filed
LED LAMP	LED LAMP	LED LAMP	LED LAMP	Extended facet feature on lens surface to mimic the reflector appearance for LED directional lamps. (file as DESIGN patent)	LED LAMP	LED Retrofit Lamp - design patent	COLOR-SHIFTED LAMPS USING NEODYMIUM- FLUORINE CONTAINING COATING	COLOR-SHIFTED LAMPS USING NEODYMIUM- FLUORINE CONTAINING COATING	HEATSINK WITH INTEGRATED ELECTRICAL AND BASE CONTACTS	HEATSINK WITH INTEGRATED ELECTRICAL AND BASE CONTACTS	LED APPARATUS EMPLOYING NEODYMIUM BASED MATERIALS WITH VARIABLE CONTENT OF FLUORINE AND OXYGEN
DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	PDS-PRIORITY DESIGN APPLICATION	PDS-PRIORITY DESIGN APPLICATION	ORD-UTILITY PATENT FILING	CIP- CONTINUATION IN PART	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING
29/564569	201530460093.1	3126796	29/564547	201530460092.7	29/510862	29/510861	PCT/US16/59974	14/931476	201610812024.6	14/850010	106107252
5/13/2016	11/17/2015	5/13/2016	5/13/2016	11/17/2015	12/3/2014	12/3/2014	11/2/2016	11/3/2015	9/9/2016	9/10/2015	3/6/2017
7/4/2017	8/24/2016	5/13/2016	7/4/2017	9/7/2016	2/23/2016	2/23/2016				5/15/2018	
USD791370	CN201530460093.1	EM0031267960001	USD791369	CN201530460092.7	USD750285S1	USD750284S1				US9970646	

CN	EM	MX	BR	KR	JP	CN	US	CN	WO	TW	US	EM	
Issued	Issued	Issued	Filed	Issued	Issued	Issued	Issued	Filed	Filed	Filed	Issued	Issued	
LED LAMP	RETROFIT LAMP WITH LED LIGHT SOURCE FILAMENT	LED dimmer, LED apparatus and LED system	BATTERY BACK UP LAMP USING AC WIRING ACTIVATION	BATTERY BACK UP LAMP USING AC WIRING ACTIVATION	BATTERY BACK UP LAMP USING AC WIRING ACTIVATION	LED LAMP							
PDS-PRIORITY DESIGN APPLICATION	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	DES-DESIGN	
201530318687.9	3143593	MX/F/2016/001745	302016002233-0	3020160024398	2016-011260	201630224764.9	29/547642	201510392344.6	PCT/US2016/055868	105135107	14/938930	3126457	
8/24/2015	5/20/2016	6/3/2016	5/30/2016	5/23/2016	5/27/2016	6/6/2016	12/6/2015	7/6/2015	10/7/2016	10/28/2016	11/12/2015	5	
5/4/2016	5/20/2016	11/1/2017		11/6/2017	4/28/2017	6/20/2017	5/2/2017				11/28/2017	5/13/2016	
CNCN201530318687.9	EM003143593	MX51236		KR3009306910001	JP1577376	CN304185627	USD785821			ATEN ¹		EM0031264570001	

TW	WO	CX	TW	WO	US	US
Filed	Filed	Filed	Filed	Filed	Filed	Issued
COMPOSITE MATERIAL FOR LIGHTING FILTERING, LIGHTING APPARATUS, AND METHOD FOR DTERMINING DOPING CONCENTRATION OR	COMPOSITE MATERIAL FOR LIGHTING FILTERING, LIGHTING APPARATUS, AND METHOD FOR DTERMINING DOPING CONCENTRATION OR THICKNESS OF COMPOSITE MATERIAL	COMPOSITE MATERIAL FOR LIGHTING FILTERING, LIGHTING APPARATUS, AND METHOD FOR DTERMINING DOPING CONCENTRATION OR THICKNESS OF COMPOSITE MATERIAL	LED APPARATUS EMPLOYING TUNABLE COLOR FILTERING USING MULTIPLE NEODYMIUM AND FLUORINE COMPOUNDS	LED APPARATUS EMPLOYING TUNABLE COLOR FILTERING USING MULTIPLE NEODYMIUM AND FLUORINE COMPOUNDS	LED APPARATUS EMPLOYING TUNABLE COLOR FILTERING USING MULTIPLE NEODYMIUM AND FLUORINE COMPOUNDS	LED LAMP
ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	CIP- CONTINUATION IN PART	DES-DESIGN
105143390	PCT/US2016/069236	201511015919.9	105140480	PCT/US2016/065149	14/966329	29/555687
12/27/2016	12/29/2016	12/29/2015	12/7/2016	12/6/2016	12/11/2015	2/24/2016
						8/15/2017
						USD794839

AU	MY	TW	CA	US	EM	JP	KR	TH	CL	MX	CN	
Issued	Issued	Issued	Issued	Issued	Issued	Issued	Issued	Filed	Filed	Issued	Issued	
LAMP	LAMP	LAMP	LAMP	LAMP	LAMP	LAMP	LAMP	LAMP	LAMP	LAMP	LAMP	THICKNESS OF COMPOSITE MATERIAL
DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	
201615617	16-00994-0101	105306826	170765	29/584591	003404391-0001	2016-021772	30-2016-0049167	1602004298	2554-2016	MX/F/2016/003443	201630206723.7	
10/4/2016	10/4/2016	11/14/2016	10/4/2016	11/16/2016	10/4/2016	10/6/2016	10/13/2016	11/8/2016	10/6/2016	11/7/2016	5/27/2016	
1/9/2017	1/19/2018	11/1/2017	7/12/2017	1/23/2018	10/4/2016	6/16/2017	9/13/2017			11/16/2017	3/8/2017	
AU201615617	MY16-00994-0101	TWD186469	CA170765	USD808547	EM003404391-0001	JP1581002	KR30-0923676-0000			MX51383	CNCN201630206723.7	

CN	WO	CA	US	S	US	CA	S	EM	US	AR	BR	РН	
Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Issued	Issued	Filed	Issued	Unfiled	
LED LAMP	LED BULB WITH GLASS ENVELOPE	LED LAMP AND ASSEMBLING METHOD THEREOF	LED LAMP AND ASSEMBLING METHOD THEREOF	LED LAMP AND ASSEMBLING METHOD THEREOF	LAMP AND LIGHTING FIXTURE COMPRISING THE LAMP	LAMP AND LIGHTING FIXTURE COMPRISING THE LAMP	LAMP AND LIGHTING FIXTURE COMPRISING THE LAMP	LAMP	BOTTOM PORTION OF LAMP	LAMP	LAMP	LAMP	Risia.
PRI-PRIORITY APPLICATION	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PRI-PRIORITY APPLICATION	DES-DESIGN	PDS-PRIORITY DESIGN APPLICATION	DES-DESIGN	DES-DESIGN	DES-DESIGN	
201710447399.1	PCT/CN2016/105677	2990790	15/865643	201710036140.8	15/854894	2990134	201611225008.3	3456680	29/566268	90850	302016004733-2		
6/14/2017	11/14/2016	1/4/2018	1/9/2018	1/17/2017	12/27/2017	12/27/2017	12/27/2016	11/10/2016	5/27/2016	10/14/2016	10/14/2016		
								11/10/2016	7/11/2017		9/12/2017		
								EM003456680-0001	USD791984		BR302016004733-2		

JP	US	US	US	KR	US	EP	S	CN	TW	WO	US	US	CN	US	
Issued	Filed	Filed	Issued	Issued	Issued	Filed	Filed	Filed	Issued	Filed	Filed	Filed	Filed	Filed	
Light Emitting Diode Component	LIGHT EMITTING DIODE COMPONENT	Light Emitting Diode Component	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	Light Emitting Diode Component	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING SILICATE, NITRIDE, AND PFS PHOSPHORS	LED FILAMENT LAMPS WITH WHITE FILAMENT APPEARANCE	LED FILAMENT LAMPS WITH WHITE FILAMENT APPEARANCE	LAMP	LED BATTERY BACKUP LAMP	
PCT-PATENT COOPERATION TREATY	CON- CONTINUATION	CON- CONTINUATION	CON- CONTINUATION	ORD-UTILITY PATENT FILING	CON- CONTINUATION	PCT-PATENT COOPERATION TREATY	DIV-DIVISIONAL FILING	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PRO- PROVISIONAL	PRI-PRIORITY APPLICATION	PRO- PROVISIONAL	
2007-510852	14/062169	13/886878	12/884717	2006-7024601	12/884612	5740241.4	201310632677.2	200580020335.9	94113337	PCT/US2015/025128	15/922021	62/578200	201711190699.2	62/511433	
4/25/2005	10/24/2013	5/3/2013	9/17/2010	4/25/2005	9/17/2010	11/10/2006	4/25/2005	4/25/2005	4/26/2005	4/9/2015	3/15/2018	10/27/2017	11/24/2017	5/26/2017	
3/20/2014			5/7/2013	6/25/2012	1/29/2013				2/11/2015						
JP5503844			US8436380	KR1161461	US8362695				TWI473291	WO					

US	CN	CN	S	CN	CN	JP	US	US	US	KR	US	EP	S	CN	TW
Application	Application	Application	Application	Application	Application	Issued	Filed	Filed	Issued	Issued	Issued	Filed	Filed	Filed	Issued
LED FILAMENT WITH COLORED OFF STATE MASKING	END CAP ACCEMBLY, LAMP USING THE END CAP AND ACCEMBLING METHOD OF THE LAMP	PRESENCE SENSING METHOD, PRESENCE SENSING DEVICE AND LIGHT SYSTEM	DRIVER FOR LED AND LED SYSTEM	LED LAMP	LED LAMP	Light Emitting Diode Component	LIGHT EMITTING DIODE COMPONENT	Light Emitting Diode Component	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	LIGHT EMITTING DIODE COMPONENT	Light Emitting Diode Component
provisional	Non Provisional	Non Provisional	Non Provisional	Non Provisional	Non Provisional	PCT-PATENT COOPERATION TREATY	CON- CONTINUATION	CON- CONTINUATION	CON- CONTINUATION	ORD-UTILITY PATENT FILING	CON- CONTINUATION	PCT-PATENT COOPERATION TREATY	DIV-DIVISIONAL FILING	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING
62/765060	201810933465.0	201810660549.1	201810300160.6	201810200947.5	201810189396.7	2007-510852	14/062169	13/886878	12/884717	2006-7024601	12/884612	5740241.4	201310632677.2	200580020335.9	94113337
2018-08-16	2018-08-16	2018-06-25	2018-04-04	2018-03-12	2018-03-05	4/25/2005	10/24/2013	5/3/2013	9/17/2010	4/25/2005	9/17/2010	11/10/2006	4/25/2005	4/25/2005	4/26/2005 2/11/2015
						3/20/2014			5/7/2013	6/25/2012	1/29/2013				2/11/2015
						JP5503844			US8436380	KR1161461	US8362695				TWI473291

S	EP	US	РН	TH	Z	МY	US		
Filed	Filed	Filed	Filed	Filed	Filed	Filed	Issued	To Be Filed	Awaiting Evaluation
ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG,	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	WHITE LEDs WITH TUNABLE CRI	A PWM dimming circuit with low stand-by power for LED device	Self-adaptive UV Disinfection Light Fixture
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	CON-	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PRI-PRIORITY APPLICATION	unfiled invention disclosure	unfiled invention disclosure
201580060838.2	15706560.8	15/509554	1-2017-500305	1701001199	201747011928	PI 2017700550	10/909564		
5/9/2017	3/1/2017	3/8/2017	2/20/2017	3/8/2017	4/3/2017	2/17/2017	8/2/2004		
							8/3/2010		
							US7768189		

МY	KR	AU	BR	MX	CA	KR	JP	
Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	
ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING YAG, NITRIDE, AND PFS PHOSPHORS	NITRIDE, AND PFS PHOSPHORS
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	
PI 2017700351	1020177009584	2015315832	112017004395-5	MX/A/2017/003055	2959989	10-2017-7009138	2017-512013	
1/31/2017	4/7/2017	2/24/2017	3/6/2017	3/8/2017	3/2/2017	4/4/2017	3/1/2017	

CN	CA	BR	AU	TW	US	TH	РН	MX
Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed
ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG,	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	ORD-UTILITY PATENT FILING	CON- CONTINUATION	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY
201580048476.5	2959131	112017003420-4	2015315833	105101403	15/454831	1701001253	1-2017-500431	MX/A/2017/003056
3/9/2017	2/23/2017	2/21/2017	2/21/2017	1/18/2016	3/9/2017	3/9/2017	3/8/2017	3/8/2017

35

PATENT

TW	US	EP	Z	MY	AU	BR	JP	Z	ΕP	
Filed	Issued	Filed	Filed	Filed	Filed	Filed	Filed	Filed	Filed	
MULTI-CHANNEL LAMP SYSTEM AND METHOD WITH MIXED SPECTRUM	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	ENHANCED COLOR- PREFERENCE LED LIGHT SOURCES USING LAG, NITRIDE, AND PFS PHOSPHORS	NITILI NITRIDE, AND PFS PHOSPHORS						
ORD-UTILITY PATENT FILING	ORD-UTILITY PATENT FILING	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	
105112496	14/757957	16723849.2	201747040195	PI2017703601	2016251580	112017022622-7	2017-510659	201747011927	15703175.8	
4/21/2016	12/24/2015	10/11/2017	11/10/2017	9/26/2017	10/20/2017	10/20/2017	2/22/2017	4/3/2017	3/1/2017	
	5/15/2018									
	US9974138									

ω
7

RECORDED: 02/25/2020

MX	CA	KR	JP	S	
Filed	Filed	Filed	Filed	Filed	
MULTI-CHANNEL LAMP SYSTEM AND METHOD WITH MIXED SPECTRUM					
PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	PCT-PATENT COOPERATION TREATY	
MX/A/2017/013515	2983422	1020177032638	2017-552122	201680023187.4	
10/20/2017	10/19/2017	11/10/2017	10/4/2017	10/20/2017	
		PATEN			