PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4683448

| SUBMISSION TYPE: | NEW ASSIGNMENT |
|-----------------------|----------------|
| NATURE OF CONVEYANCE: | ASSIGNMENT |

CONVEYING PARTY DATA

| Name | Execution Date |
|--------------------------|----------------|
| KONINKLIJKE PHILIPS N.V. | 06/30/2017 |

RECEIVING PARTY DATA

| Name: | LUMILEDS LLC | |
|-----------------|--------------------|--|
| Street Address: | 370 W. TRIMBLE RD. | |
| City: | SAN JOSE | |
| State/Country: | CALIFORNIA | |
| Postal Code: | 95131 | |

PROPERTY NUMBERS Total: 104

| Property Type | Number |
|---------------------|----------|
| Application Number: | 13365668 |
| Application Number: | 12513382 |
| Application Number: | 15016019 |
| Application Number: | 12491976 |
| Application Number: | 61387681 |
| Application Number: | 15161571 |
| Application Number: | 61409153 |
| Application Number: | 15482350 |
| Application Number: | 61409158 |
| Application Number: | 61392378 |
| Application Number: | 61409160 |
| Application Number: | 14948042 |
| Application Number: | 15651768 |
| Application Number: | 61415395 |
| Application Number: | 14921938 |
| Application Number: | 61452181 |
| Application Number: | 14994106 |
| Application Number: | 15664651 |
| Application Number: | 61491918 |
| Application Number: | 14869625 |
| | |

PATENT REEL: 044792 FRAME: 0018

504636730

| Property Type | Number |
|---------------------|----------|
| Application Number: | 15066237 |
| Application Number: | 15645964 |
| Application Number: | 61489280 |
| Application Number: | 14977565 |
| Application Number: | 15663715 |
| Application Number: | 61491920 |
| Application Number: | 14114809 |
| Application Number: | 61527634 |
| Application Number: | 61597366 |
| Application Number: | 61587156 |
| Application Number: | 61597358 |
| Application Number: | 14997713 |
| Application Number: | 61556343 |
| Application Number: | 15071792 |
| Application Number: | 61508211 |
| Application Number: | 61614578 |
| Application Number: | 15148135 |
| Application Number: | 61603985 |
| Application Number: | 61612536 |
| Application Number: | 61617919 |
| Application Number: | 61617903 |
| Application Number: | 61584836 |
| Application Number: | 61668053 |
| Application Number: | 15195004 |
| Application Number: | 61677107 |
| Application Number: | 61723341 |
| Application Number: | 61656691 |
| Application Number: | 61673810 |
| Application Number: | 15170442 |
| Application Number: | 14892193 |
| Application Number: | 15434969 |
| Application Number: | 61674883 |
| Application Number: | 61701742 |
| Application Number: | 14891332 |
| Application Number: | 15287623 |
| Application Number: | 14764202 |
| Application Number: | 15289548 |
| Application Number: | 14762576 |

| Property Type | Number |
|---------------------|----------|
| Application Number: | 14392345 |
| Application Number: | 14903727 |
| Application Number: | 14782774 |
| Application Number: | 14896371 |
| Application Number: | 14763873 |
| Application Number: | 14906539 |
| Application Number: | 14902001 |
| Application Number: | 15581204 |
| Application Number: | 15031612 |
| Application Number: | 15664825 |
| Application Number: | 14917217 |
| Application Number: | 15640482 |
| Application Number: | 14906256 |
| Application Number: | 14901705 |
| Application Number: | 15373710 |
| Application Number: | 15103474 |
| Application Number: | 15103991 |
| Application Number: | 15102986 |
| Application Number: | 15105096 |
| Application Number: | 15104475 |
| Application Number: | 15104220 |
| Application Number: | 15106667 |
| Application Number: | 15107867 |
| Application Number: | 15495425 |
| Application Number: | 15113738 |
| Application Number: | 15607180 |
| Application Number: | 15122599 |
| Application Number: | 61901072 |
| Application Number: | 15032021 |
| Application Number: | 15504796 |
| Application Number: | 15312608 |
| Application Number: | 15538048 |
| Application Number: | 62293741 |
| Application Number: | 15533158 |
| Application Number: | 15510999 |
| Application Number: | 14853102 |
| Application Number: | 15339637 |
| Application Number: | 62243470 |

| Property Type | Number |
|---------------------|----------|
| Application Number: | 62238664 |
| Application Number: | 62238666 |
| Application Number: | 62258385 |
| Application Number: | 62172834 |
| Application Number: | 62272416 |
| Application Number: | 62262311 |
| Application Number: | 62298355 |
| Application Number: | 15437872 |

CORRESPONDENCE DATA

Fax Number:

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.

Email: dkerner@vklaw.com

Correspondent Name: VOLPE AND KOENIG, P.C. **Address Line 1:** 30 SOUTH 17TH STREET

Address Line 2: UNITED PLAZA

Address Line 4: PHILADELPHIA, PENNSYLVANIA 19103

| ATTORNEY DOCKET NUMBER: | LUMI-1A |
|-------------------------|------------------|
| NAME OF SUBMITTER: | DAWN C. KERNER |
| SIGNATURE: | /Dawn C. Kerner/ |
| DATE SIGNED: | 11/10/2017 |

Total Attachments: 7

source=LUMI-1A_-_DELTA_ASSIGN_K_Philips_NV_to_Lumileds_LLC_-_20170630#page1.tif source=LUMI-1A_-_DELTA_ASSIGN_K_Philips_NV_to_Lumileds_LLC_-_20170630#page2.tif source=LUMI-1A_-_DELTA_ASSIGN_K_Philips_NV_to_Lumileds_LLC_-_20170630#page3.tif source=LUMI-1A_-_DELTA_ASSIGN_K_Philips_NV_to_Lumileds_LLC_-_20170630#page4.tif source=LUMI-1A_-_DELTA_ASSIGN_K_Philips_NV_to_Lumileds_LLC_-_20170630#page5.tif source=LUMI-1A_-_DELTA_ASSIGN_K_Philips_NV_to_Lumileds_LLC_-_20170630#page6.tif source=LUMI-1A_-_DELTA_ASSIGN_K_Philips_NV_to_Lumileds_LLC_-_20170630#page7.tif

DEED OF ASSIGNMENT

This Deed of Assignment effective the 30th day of June Two Thousand Seventeen

BETWEEN:

(1) Koninklijke Philips N.V., a public limited liability company incorporated in the Netherlands, with corporate seat in Eindhoven, the Netherlands and registered address at High Tech Campus 5, 5656 AE Eindhoven, the Netherlands, ("Royal Philips"), also acting on behalf of Royal Philips' Affiliates

and

(2) Lumileds LLC, a limited liability company incorporated in the USA, with corporate seat at DELAWARE and registered address at 370 West Trimble Road, San Jose, California 95131, USA (the company)

HAVE AGREED AS FOLLOWS:

1 DEFINITIONS

When used in this Deed, the following capitalised terms shall have the meaning set forth below:

"Affiliate" means with respect to any Person, another Person directly or indirectly Controlling, being Controlled by, or being under common Control with the first Person from the date on which, or at any time during the period for which, the determination of affiliation is being made (i.e. whether now or in the future), provided that for purposes of this Deed the Company and any of its Subsidiaries shall be deemed not to be an Affiliate of Royal Philips or any of its Affiliates and vice versa:

"Annex" means the annex to this Deed;

"Control" of a Person means, (i) with respect to a corporate Person, direct or indirect ownership of more than 50% of the outstanding voting securities of such corporate person or the ability to appoint more than half of the directors of the board of directors or equivalent governing body of such person or the ability to direct or cause the direction of the management and policies of such person,

(ii) with respect to a non-corporate Person, the comparable voting interest or financial participation (as set forth in (i) above) for such non-corporate Person, or (iii) the possession, direct or indirect, of the power to direct or cause the direction of the management and policies of a Person. The terms "Controls", "Controlling" and "Controlled" shall have corresponding meanings;

"Deed" means this deed of transfer of Patents including the Annex;

"Governmental Authority" means, to the extent it has jurisdiction in respect of the relevant matter, any judicial, legislative, executive, regulatory or competition authority or any other governmental authority, of any jurisdiction, including of the European Union;

"Party" means Royal Philips or the Company and "Parties" means Royal Philips and the Company together;

"Patents" means any patents, petty patents, utility models and applications therefor, and the right to file patent applications, including any divisionals, amendments, substitutions, continuations, continuations-in-part, provisionals and any patent issuing on any of the foregoing, re-examinations, renewals, re- issues and extensions of any of the foregoing, existing in any country in the world;

"Person" means an individual, a company or corporation, a partnership, a limited liability company, a trust, an association, a foundation or other legal entity or unincorporated organisation, including a Governmental Authority;

"Pro Forma Assignment" means a simple form of assignment containing solely the language required by the applicable law of an issuing jurisdiction to effectuate recordal of the assignment of the Patents as per this Deed; and

"Subsidiary" means, with respect to any Person, another Person, directly or indirectly Controlled by the first Person, whether now or in the future, provided that for purposes of this Deed, the Company and any of its Subsidiaries shall be deemed not to be a Subsidiary of Royal Philips or any of its Affiliates and vice versa.

2 TRANSFER OF OWNERSHIP OF PATENTS

In consideration of a sum of € 1.00 (one Euro), the receipt and sufficiency of which is hereby acknowledged and effective as of the date first written above, Royal Philips has assigned and agreed to transfer, and has caused its relevant Affiliates to assign and transfer, and Royal Philips hereby assigns and will cause its relevant Affiliates to assign and transfer to the Company all of Royal Philips' and, as applicable, its Affiliates' rights, title and interest in and to the Patents listed in the Annex, including all rights (a) in and to causes of action and enforcement rights for such Patents to pursue damages, injunctive relief and other remedies for past, present and future infringement of such Patents; and (b) all rights to apply in any and all countries in the world for Patents for any inventions disclosed in the Patents listed in the Annex. The Company has accepted, and hereby accepts, such assignment and Philips and its Affiliates have retained (or been granted) an irrevocable, perpetual, world-wide, royalty- free, fully paid-up license under such Patents.

3 AMENDMENTS

No variation, extension, cancellation or translation of any expressed terms of this Deed shall be binding upon Royal Philips or the Company unless made in writing and signed by a duly authorised representative each of Royal Philips and the Company.

4 EFFECTUATION

The Company will be responsible for effectuating the recordal of the assignment and transfer of the Patents listed in the Annex. In the event that, in addition to this Deed, the Company needs to submit other documents to any patent authorities in order to effectuate the recordal of the assignment and transfer of the Patents listed in the Annex, the Company hereby warrants and guarantees that such other documents will not contain language that in any way prejudices the provisions of this Deed. The Parties shall, at each other's request, (and shall cause their relevant Affiliates to) execute and deliver such written instruments and otherwise do whatever may from time to time reasonably be necessary to fully effectuate the recordal of the assignment and transfer of the Patents listed in the Annex. The Parties may also agree in good faith, for purposes of recordal of the assignment of the Patents as per this Deed, to execute *Pro Forma* Assignments or adjust this Deed provided that the Company hereby warrants and guarantees that such other documents will not contain language that in any way prejudices the provisions of this Deed.

5 OBSERVANCE OF LEGAL REQUIREMENTS

The Company undertakes to observe, and act in accordance with, all applicable legal requirements relating to the effectuation of the recordal of the assignment and transfer of the Patents listed in the Annex.

6 COSTS FOR REFERRAL

Any costs related to the recordal of the assignment and transfer of the Patents listed in the Annex in the relevant registers will be borne by the Company.

7 APPLICABLE LAW AND JURISDICTION

This Deed and the documents to be entered into pursuant to it, save as expressly otherwise provided therein, shall be governed by and construed in accordance with the laws of the Netherlands, provided that to the extent that any provisions of the law of the issuing jurisdiction are mandatory for assignment of Patents, such specific provisions of that law shall prevail.

The Parties shall attempt in good faith to resolve promptly any dispute arising out of or relating to this Deed by negotiation between a duly authorised representative of each Party, including disputes concerning the existence, validity and termination of this Deed, within forty-five (45) business days of the matter being referred to them, following and upon the written request of either of the Parties.

If the Parties are unable to resolve any such dispute as provided above, any such dispute arising out of or relating to this Deed shall be submitted to the Court of The Hague, the Netherlands.

IN EVIDENCE WHEREOF, the Parties have caused this Deed to be signed by their duly authorised representatives the day and year first written above.

Koninklijke Philips N.V.

STATE OF THE PARTY OF THE PARTY

Name: Poul de Haan Name:

Title: Authorized Representative Title:

Lumileds LLC

Name: : Keaton Parekh Name:

Title: Authorized Representative Title:

ANNEX

| Country | | | | Grant | |
|---------|---|------------|--------------------|-----------|------------------------------|
| code | Filing date | Grant date | Application number | number | Assignee |
| US | 5/4/2009 | 2/14/2012 | 12/513,382 | 8,113,675 | Koninklijke Philips N.V. |
| US | 2/3/2012 | 9/4/2012 | 13/365,668 | 8,256,914 | Koninklijke Philips N.V. |
| US | 5/23/2016 | | 15/161,571 | | Koninklijke Philips N.V. |
| US | 9/29/2010 | | 61/387,681 | | Koninklijke Philips N.V. |
| US | 11/2/2010 | | 61/409,153 | | Koninklijke Philips N.V. |
| US | 4/7/2017 | | 15/482,350 | | Koninklijke Philips N.V. |
| US | 11/2/2010 | W. | 61/409,160 | | Koninklijke Philips N.V. |
| US | 11/20/2015 | 7/18/2017 | 14/948,042 | 9,711,687 | Koninklijke Philips N.V. |
| US | 5/24/2011 | | 61/489,280 | | Koninklijke Philips N.V. |
| US | 12/21/2015 | 8/1/2017 | 14/977,565 | 9,722,161 | Koninklijke Philips N.V. |
| US | 2/22/2016 | | 62/298,355 | | Koninklijke Philips N.V. |
| US | 2/21/2017 | | 15/437,872 | | Koninklíjke Philips N.V. and |
| | *************************************** | | | | Lumileds LLC |
| US | 8/26/2011 | | 61/527,634 | | Koninklijke Philips N.V. |
| US | 8/30/2011 | | 61/528,886 | | Koninklijke Philips N.V. |
| US | 7/15/2011 | | 61/508,211 | | Koninklijke Philips N.V. |
| US | 3/23/2012 | | 61/614,578 | | Koninklijke Philips N.V. |
| US | 5/6/2016 | | 15/148,135 | | Koninklijke Philips N.V. |
| US | 3/19/2012 | | 61/612,536 | | Koninklijke Philips N.V. |
| US | 1/10/2012 | | 61/584,836 | | Koninklijke Philips N.V. |
| US | 7/5/2012 | | 61/668,053 | | Koninklijke Philips N.V. |
| US | 6/28/2016 | | 15/195,004 | | Koninklijke Philips N.V. |
| US | 6/7/2012 | | 61/656,691 | | Koninklijke Philips N.V. |
| US | 7/20/2012 | | 61/673,810 | | Koninklijke Philips N.V. |
| U5 | 6/1/2016 | | 15/170,442 | | Koninklijke Philips N.V. |
| US | 9/17/2012 | | 61/701,742 | | Koninklijke Philips N.V. |
| US | 1/8/2016 | | 14/903,727 | | Koninklijke Philips N.V. |
| US | 10/6/2015 | | 14/782,774 | | Koninklijke Philips N.V. |
| US | 12/4/2015 | | 14/896,371 | | Koninklíjke Philíps N.V. |
| US | 7/28/2015 | | 14/763,873 | | Koninklijke Philips N.V. |
| US | 1/20/2016 | | 14/906,539 | | Koninklijke Philips N.V. |
| US | 4/22/2016 | 8/1/2017 | 15/031,612 | 9,722,138 | Koninklijke Philips N.V. |
| US | 3/7/2016 | 7/4/2017 | 14/917,217 | 9,698,323 | Koninklijke Philips N.V. |
| US | 1/19/2016 | | 14/906,256 | | Koninklijke Philips N.V. |
| US | 6/10/2016 | | 15/103,474 | | Koninklijke Philips N.V. |
| US | 6/20/2016 | | 15/106,667 | | Koninklijke Philips N.V. |
| US | 6/23/2016 | 4/25/2017 | 15/107,867 | 9,634,208 | Koninklijke Philips N.V. |

| Country code | Filing date | Grant date | Application number | Grant number | Assignee |
|-----------------|-------------|------------|--------------------|-----------------|--|
| US | 4/24/2017 | | 15/495,425 | | Koninklijke Philips N.V. |
| US | 7/22/2016 | 5/30/2017 | 15/113,738 | 9,666,771 | Koninklijke Philips N.V. |
| US | 5/26/2017 | | 15/607,180 | | Koninklijke Philips N.V. |
| U5 | 11/7/2013 | | 61/901,072 | | Koninklijke Philips N.V. |
| US | 4/25/2016 | | 15/032,021 | | Koninklijke Philips N.V. |
| US | 3/13/2017 | | 15/510,999 | | Koninklijke Philips N.V. |
| US | 9/14/2015 | 11/29/2016 | 14/853,102 | 9,508,907 | Koninklijke Philips N.V. |
| US | 10/31/2016 | | 15/339,637 | | Koninklijke Philips N.V. |
| US | 10/7/2015 | | 62/238,664 | | Koninklijke Philips N.V. |
| US | 10/7/2015 | 19 | 62/238,666 | | Koninklijke Philips N.V. |
| US | 3/14/2011 | | 61/452,181 | | Koninklijke Philips N.V. |
| US | 1/12/2016 | 8/1/2017 | 14/994,106 | 9,722,137 | Koninklijke Philips N.V. |
| US | 2/10/2012 | | 61/597,366 | | Koninklijke Philips N.V. |
| US | 11/20/2015 | | 62/258,385 | | Koninklijke Philips N.V. |
| US | 12/29/2015 | | 62/272,416 | | Koninklijke Philips N.V. |
| US | 12/2/2015 | | 62/262,311 | | Koninklijke Philips N.V. |
| US | 6/14/2016 | | 15/104,475 | | Koninklijke Philips N.V. |
| US | 3/30/2012 | | 61/617,903 | | Koninklijke Philips N.V. |
| US | 3/30/2012 | | 61/617,919 | | Koninklijke Philips N.V. |
| US | 12/23/2015 | | 14/392,345 | | Koninklijke Philips N.V. |
| US | 2/17/2017 | | 15/504,796 | | Koninklijke Philips N.V. |
| US | 12/29/2015 | 5/2/2017 | 14/902,001 | 9,640,729 | Koninklijke Philips N.V. |
| US | 4/28/2017 | | 15/581,204 | | Koninklijke Philips N.V. |
| US | 9/5/2012 | | 61/696,943 | | |
| US | 10/23/2015 | | 14/921,938 | | |
| US | 11/19/2010 | | 61/415,395 | | Koninklijke Philips Electronics N.V. |
| US | 6/9/2015 | | 62/172,834 | | Koninklijke Philips N.V. |
| US | 3/17/2008 | | 12/050,082 | | |
| US | 9/29/2015 | 8/30/2016 | 14/869,625 | 9,431,581 | |
| US | 3/10/2016 | 7/11/2017 | 15/066,237 | 9,705,047 | |
| US | 6/13/2016 | | 15/104,220 | | |
| US | 12/15/2016 | | 15/319,095 | | |
| US | 6/1/2011 | | 61/491,918 | | |
| US | 2/4/2016 | | 15/016,019 | | |
| US | 6/25/2009 | | 12/491,976 | | Koninklijke Philips N.V. and Lumileds LLC |
| US | 10/12/2010 | | 61/392,378 | | Koninklijke Philips Electronics N.V. |

| Country code | Filing date | Grant date | Application number | Grant number | Assignee |
|-----------------|-------------|------------|--------------------|-----------------|---|
| US | 11/2/2010 | | 61/409,158 | | Koninklijke Philips |
| | 22/6/6020 | | 02/100/200 | | Electronics N.V. |
| US | 6/1/2011 | | 61/491,920 | | Koninklijke Philips |
| | | | | | Electronics N.V. |
| US | 10/30/2013 | | 14/114,809 | | Koninklijke Philips Electronics N.V. |
| | | | | | Koninklijke Philips |
| US | 1/17/2012 | | 61/587,156 | | Electronics N.V. |
| US | 3/16/2016 | 2/28/2017 | 15/071,792 | 9,583,679 | |
| US | 11/7/2011 | | 61/556,343 | | |
| US | 2/28/2012 | | 61/603,985 | | ······································ |
| : ; c | a lan lanac | | 14/007 712 | | Koninklijke Philips |
| US | 1/18/2016 | | 14/997,713 | | Electronics N.V. |
| US | 2/10/2012 | | 61/597,358 | | Koninklijke Philips |
| | | | | | Electronics N.V. |
| US | 11/7/2012 | | 61/723,341 | | |
| US | 7/24/2012 | | 61/674,883 | | |
| US | 7/30/2012 | | 61/677,107 | | |
| US | 12/28/2015 | 12/27/2016 | 14/901,705 | 9,530,949 | Koninklijke Philips N.V. |
| US | 12/9/2016 | 9/26/2017 | 15/373,710 | 9,773,762 | |
| US | 7/22/2015 | | 14/762,576 | | Koninklijke Philips N.V. |
| US | 11/18/2015 | 5/23/2017 | 14/892,193 | 9,660,154 | Koninklijke Philips N.V. |
| US | 2/16/2017 | | 15/434,969 | | |
| US | 6/13/2016 | | 15/103,991 | | Koninklijke Philips N.V. |
| US | 11/18/2016 | | 15/312,608 | | Koninklijke Philips N.V. |
| US | 11/14/2015 | | 14/891,332 | | Koninklijke Philips N.V. |
| US | 6/20/2017 | | 15/538,048 | | Koninklijke Philips N.V. |
| US | 7/29/2015 | 10/25/2016 | 14/764,202 | 9,478,712 | Koninklijke Philips N.V. |
| US | 10/6/2016 | | 15/287,623 | | |
| US | 2/10/2016 | | 62/293,741 | | |
| US | 10/10/2016 | | 15/289,548 | | |
| US | 6/5/2017 | | 15/533,158 | | Koninklijke Philips N.V. |
| US | 10/19/2015 | | 62/243,470 | | Koninklijke Philips N.V. |
| US | 11/20/2015 | | 62/258,318 | | |
| US | 6/9/2016 | | 15/102,986 | | Koninklijke Philips N.V. |
| US | 6/16/2016 | | 15/105,096 | | Koninklijke Philips N.V. |
| US | 8/30/2016 | | 15/122,599 | | Koninklijke Philips N.V. |
| US | 3/30/2012 | | 61/617,689 | | \$ |
| US | 11/14/2015 | 11/29/2016 | 14/891,344 | 9,508,908 | Koninklijke Philips N.V. |
| US | 10/26/2016 | | 15/335,354 | 2,230,300 | |

RECORDED: 11/10/2017