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PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4805082

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MARKUS MAUTE	01/12/2018
LUTZ HÖPPEL	01/08/2018
JÜRGEN MOOSBURGER	01/08/2018
THOMAS SCHWARTZ	01/09/2018
MATTHIAS SABATHIL	01/09/2018
RALPH WIRTH	01/25/2018
ALEXANDER LINKOV	01/08/2018
JOHANNES BAUR	01/22/2018

RECEIVING PARTY DATA

Name:	OSRAM OPTO SEMICONDUCTORS GMBH
Street Address:	LEIBNIZSTR. 4
City:	REGENSBURG
State/Country:	GERMANY
Postal Code:	93055

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15738427

CORRESPONDENCE DATA

Fax Number: (215)656-2498

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Correspondent Name: T. DANIEL CHRISTENBURY

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ATTORNEY DOCKET NUMBER:	EHF-17-1596
NAME OF SUBMITTER:	CAROL CONEY
SIGNATURE:	/cc/

DATE SIGNED:	02/01/2018
Total Attachments: 28	
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ASSIGNMENT

For good and valuable consideration, I (We),

Markus <u>Maute</u>, / residing at Köferinger Weg 15 93087 Alteglofsheim Germany citizen of Germany

Lutz Höppel, residing at Lessingstr. 1 93087 Alteglofsheim Germany citizen of Germany

Jürgen Moosburger, residing at D.-Martin-Luther-Str. 7 a 93138 Lappersdorf Germany citizen of Germany

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(B)(i) to the extent such laws of GERMANY or such Patent & Secrecy Agreement or similar legal document failed or fails, in whole or part, to have assigned, sold or transferred the entire right (including priority rights), title and interest, in and for the United States and all foreign countries, in and to all inventions or improvements which are disclosed in the below-identified application(s) or pending application(s) or granted Letters Patent, or (ii) if no such agreement(s) exist assigning, selling or transferring any such right (including priority rights), title or interest; then for good and valuable consideration, Assignor(s) now and hereby, effective Nunc Pro Tunc on the filing date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assign, sell and transfer(s) to Assignee, its successors, assigns and legal representatives, the entire right, (including all priority rights), title and interest in and for the United States and all foreign countries, in and to any and all inventions and/or improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s)

Patent Application Title: COMPONENT HAVING IMPROVED COUPLING-OUT

PROPERTIES

Filing Date: 12/20/2017 (MM/DD/YYYY)

Filing Number: 15/738,427

Internal Case Number(s): EHF-17-1596

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Docket No.: EHF-17-1596 P2015,0724 US N / 2015P00161WOUS

(THN/HBA) Page 4 of 4

Witness Signature	Matthias Sabathil
printed name of witness	Date
Witness Signature	Ralph Wirth
printed name of witness	Date
Witness Signature	Alexander Linkov
printed name of witness	Date
Witness Signature	Johannes Baur
Printed name of witness	January 22 d 2018 Date
	Companies Representative(s) OSRAM Opto Semiconductors GmbH
	Signature Name
	Date
	Signature Name
	Date

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Filing Number: 15/738,427

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Docket No.: EHF-17-1596 P2015,0724 US N / 2015P00161WOUS

(THN/HBA) Page 4 of 4

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printed name of witness	Date
Witness Signature	Ralph Wirth
printed name of witness	Date
Witness Signature	Alexander Linkov
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Witness Signature	Johannes Baur
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	Signature Name Date

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Patent Application Title: COMPONENT HAVING IMPROVED COUPLING-OUT

PROPERTIES

Filing Date: 12/20/2017 (MM/DD/YYYY)

Filing Number: 15/738,427

Internal Case Number(s): EHF-17-1596

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Matthias Sabathil Witness Signature Date printed name of witness Ralph Wirth Witness Signature Date printed name of witness Alexander Linkov Witness Signature Date printed name of witness Johannes Baur Witness Signature Date printed name of witness Companies Representative(s) OSRAM Opto Semiconductors GmbH Signature Name Date Signature Name Date

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printed name of witness	Date
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	Page 4 of 4
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Schwarz Thomas	Date January 2018
printed name of witness	Date V
Witness Signature	Ralph Wirth
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printed name of witness	Date
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R. but	Alexander Linkov
Witness Signature	Alexander Linkov
	08 of January 2018 Date
RALPH BERTRAM	08 of January 2018
printed name of witness	Date
Witness Signature	Johannes Baur
printed name of witness	Date
	Companies Representative(s) OSRAM Opto Semiconductors GmbH
	·
	Signature Name
	Date
	Olan atura
	Signature Name
	Date

ASSIGNMENT

For good and valuable consideration, I (We),

Markus <u>Maute</u>, residing at Köferinger Weg 15 93087 Alteglofsheim Germany citizen of Germany

Lutz Höppel, residing at Lessingstr. 1 93087 Alteglofsheim Germany citizen of Germany

Jürgen Moosburger, residing at D.-Martin-Luther-Str. 7 a 93138 Lappersdorf Germany citizen of Germany

Thomas <u>Schwarz</u>, residing at Steinfederweg 4 93055 Regensburg Germany citizen of Germany

Matthias <u>Sabathil</u>, residing at Glasbläserstr. 2 93059 Regensburg Germany citizen of Germany

Ralph <u>Wirth</u>, residing at Am Schlag 33 93138 Lappersdorf Germany citizen of Germany

Alexander <u>Linkov</u>, residing at Paarstr. 61 b 93059 Regensburg Germany citizen of Russian Federation

Johannes <u>Baur</u>, residing at Burgfriedenweg 32 93051 Regensburg Germany citizen of Germany

hereafter individually or collectively referred to as "Assignor(s)";

Hereby, (I) acknowledge having previously assigned, sold and transferred to OSRAM Opto Semiconductors GmbH, a corporation organized and existing under the laws of GERMANY, having its principal place of business at Leibnizstr. 4 in 93055 Regensburg, hereinafter "Assignee", its successors, assigns and legal representatives, or to a predecessor of Assignee, pursuant to (A)(i) the laws of GERMANY or (ii) a Patent & Secrecy Agreement or similar legal document such as, without limitation, an employee agreement executed at the time of entering into the employment of, or executed as a condition of continuing employment with, the Assignee or a predecessor of the Assignee, the entire right, including any and all priority rights, title and interest, in and for the United States and all foreign countries, in and to any and all inventions or improvements which are disclosed in an invention disclosure and/or in the below-identified documents currently filed with this Assignment, already filed or granted for Letters Patent (in which case, any provision of the subject Assignment that is in conflict with or is in addition to any provision in the prior agreement(s) or assignment(s) then this Assignment shall govern, take precedence, and be of legal effect), or

(B)(i) to the extent such laws of GERMANY or such Patent & Secrecy Agreement or similar legal document failed or fails, in whole or part, to have assigned, sold or transferred the entire right (including priority rights), title and interest, in and for the United States and all foreign countries, in and to all inventions or improvements which are disclosed in the below-identified application(s) or pending application(s) or granted Letters Patent, or (ii) if no such agreement(s) exist assigning, selling or transferring any such right (including priority rights), title or interest; then for good and valuable consideration, Assignor(s) now and hereby, effective Nunc Pro Tunc on the filing date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assign, sell and transfer(s) to Assignee, its successors, assigns and legal representatives, the entire right, (including all priority rights), title and interest in and for the United States and all foreign countries, in and to any and all inventions and/or improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s)

Patent Application Title: COMPONENT HAVING IMPROVED COUPLING-OUT

PROPERTIES

Filing Date: 12/20/2017 (MM/DD/YYYY)

Filing Number: 15/738,427

Internal Case Number(s): EHF-17-1596

and in and to said application(s) or granted patents and all applications claiming priority to said application or granted patent, including, without limitation, and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of the inventions and/or improvements; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on the inventions and/or improvements;

(II) Agree that said Assignee may apply for and receive Letters Patent for said inventions and/or improvements in its own name; and that, when requested, without charge to but at the expense of said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions and/or improvements; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns, and legal representatives, all facts known to the undersigned relating to said inventions and/or improvements and the history thereof; and generally do everything possible which said Assignee, its successors, assigns or legal representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said inventions and/or improvements and for vesting title to said inventions and or

improvements and all applications for patents and all patents on said inventions and/or improvements, in said Assignee, its successors, assigns and legal representatives; and

(III) Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Witness Signature	Markus Maute
printed name of witness	Date
Witness Signature	Lutz Höppel
printed name of witness	Date
Witness Signature	Jürgen Moosburger
printed name of witness	Date
Witness Signature	Thomas Schwarz
printed name of witness	Date

Witness Signature	Matthias Sabathil
printed name of witness	Date
Tulc Signature Witness Signature Janua Stephan printed name of witness	Ralph Wirth Sauvary 25th 2018 Date
Witness Signature	Alexander Linkov
printed name of witness	Date
Witness Signature	Johannes Baur
printed name of witness	Date
	Companies Representative(s) OSRAM Opto Semiconductors GmbH Signature Name Date Signature Name Date

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(B)(i) to the extent such laws of GERMANY or such Patent & Secrecy Agreement or similar legal document failed or fails, in whole or part, to have assigned, sold or transferred the entire right (including priority rights), title and interest, in and for the United States and all foreign countries, in and to all inventions or improvements which are disclosed in the below-identified application(s) or pending application(s) or granted Letters Patent, or (ii) if no such agreement(s) exist assigning, selling or transferring any such right (including priority rights), title or interest; then for good and valuable consideration, Assignor(s) now and hereby, effective Nunc Pro Tunc on the filling date of the below identified patent application(s), pending patent application(s) or granted Letter Patent(s), assign, sell and transfer(s) to Assignee, its successors, assigns and legal representatives, the entire right, (including all priority rights), title and interest in and for the United States and all foreign countries, in and to any and all inventions and/or improvements which are disclosed in the following identified; patent application(s), pending patent application(s) or granted Letter Patent(s)

Patent Application Title: COMPONENT HAVING IMPROVED COUPLING-OUT

PROPERTIES

Filing Date: 12/20/2017 (MM/DD/YYYY)

Filing Number: 15/738,427

Internal Case Number(s): EHF-17-1596

and in and to said application(s) or granted patents and all applications claiming priority to said application or granted patent, including, without limitation, and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of the inventions and/or improvements; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on the inventions and/or improvements;

(II) Agree that said Assignee may apply for and receive Letters Patent for said inventions and/or improvements in its own name; and that, when requested, without charge to but at the expense of said Assignee, its successors, assigns and legal representatives, to carry out in good faith the intent and purpose of this assignment, the undersigned will execute all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions and/or improvements; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to said Assignee, its successors, assigns, and legal representatives, all facts known to the undersigned relating to said inventions and/or improvements and the history thereof; and generally do everything possible which said Assignee, its successors, assigns or legal representatives shall consider desirable for aiding in securing and maintaining proper patent protection for said inventions and/or improvements and for vesting title to said inventions and or

improvements and all applications for patents and all patents on said inventions and/or improvements, in said Assignee, its successors, assigns and legal representatives; and

(III) Covenant with said Assignee, its successors, assigns and legal representatives that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

Witness Signature

Markus Maute

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printed name of witness	Date
Witness Signature	Lutz Höppel
printed name of witness	Date
Witness Signature	Jürgen Moosburger
printed name of witness	Date
Witness Signature	Thomas Schwarz
printed name of witness	Date

Docket No.: EHF-17-1596 P2015,0724 US N / 2015P00161WOUS

(THN/HBA) Page 4 of 4

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printed name of witness	Date
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printed name of witness	Date
Witness Signature	Alexander Linkov
printed name of witness	Date
Witness Signature	Johannes Baur
printed name of witness	Date
	Companies Representative(s) OSRAM Opto Semiconductors GmbH Signature Name Nikojaus Gmelnwieser Senior Manager Tricallectual Property Date O 9, JAN. 2018 Signature Name Andress Lockschmidt Senior Manager Intellectual Property Date O 8, JAN. 2018

PATENT REEL: 045222 FRAME: 0091

RECORDED: 02/01/2018